

Case Studies in Development Aid - Perfection or Practicality

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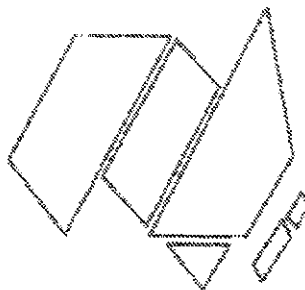
Abstract:

There is no point in Consultants or international aid organisations for that matter, insisting on advice and standards of the highest order, when the recipients are incapable of meeting their cost. Examples of such excessive zeal can be listed but the main thrust of the paper will be that Consultants, developmental aid organisations, even volunteer assistance schemes must be more pragmatic in their approach, settling for the possible where the ideal is clearly out of reach.

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1. INTRODUCTION

Transportation plays a major part in the daily lives of the people of the South Pacific, and the economies of the newly emerging Island nations are often influenced disproportionately by transport matters and the "tyranny of distance"

The more developed nations of the world and various aid organisations have recognised such problems and have targeted transportation to a marked degree in aid programmes over the last thirty (30) years.

Much has been achieved in the advancement of native lifestyles over the years but in many cases funding has undoubtedly been wasted. We are all familiar with the anecdotal examples trotted out at dinner or the cocktail party. The tractors rotting on the docks still in their cases, the roads to nowhere, the five (5) year plans which never get past year one (1) etc, the list is endless

Cultural differences, climatic, conditions, differing standards, laziness of the recipients, government corruption, internal ethnic tensions, and wars are often convenient scapegoats for the failure of aid projects and there can be little doubt that some or all of these factors have contributed to the substantial proportion of foreign aid to developing countries which has been wasted.

Much of this waste however occurs in situations where there are few of the problems referred to above. All parties are committed to the success of the project and work conscientiously towards a common goal, and yet the outcome falls well short of the target

Why do such projects fail? In the following paper I hope to provide some of the reasons based on my personal involvement in some such projects and on observations made over a number of years in Malaysia, Papua New Guinea and the South Pacific islands.

2. AUSTRALIAN DEVELOPMENT AID 1960-1993

Australia is justifiably proud of its assistance to developing countries. Despite some criticism from lobby groups and a reduction in real terms in the amount of foreign aid provided in recent years due to economic problems, we continue to provide technical and financial aid to less developed countries in the region at a rate well in excess of that of many of our O.E.C.D counterparts

Such aid is of course not entirely altruistic, Papua New Guinea the major recipient of Australia's foreign aid provides Australia with a considerable annual surplus in bi-lateral trade, and most of our South Pacific neighbours buy more than they sell to Australia. It would be difficult to estimate the extent to which bi-lateral aid influences political and economic relations between Australia and its neighbours, but there can be little doubt that exposure to Australian based technology or ideas must play some part in the overall process, although in some instances its effect may be negative.

In the sixties and seventies Australia enjoyed a reputation in the international community for the proportion of "untied" aid provided to developing countries and to the World Bank, Asian Development Bank and similar organisations. Whilst such a policy earned Australia considerable praise in certain quarters, Australia's trade organisations, manufacturers and more particularly consultant groups were highly critical of a process which provided Australian money for projects benefiting foreign competitors. These organisations cited, with some justification, the preponderance of work provided to American enterprises from World Bank financed projects, and the similar benefits to Japanese firms emanating from Asian Development Bank development projects. This is not to say Australia totally washed its hands of the funds it provided in development aid. In negotiations with the World Bank and Asian Bank on behalf of the Papua New Guinea Government I was often advised that funds provided from Australia were available for suitable projects, so it must be assumed that a degree of string pulling often applied to such funds. Nevertheless it must be conceded that for many years Australian firms received relatively few benefits or commissions related directly to Australian funded development in the Pacific region. Whether this situation arose from the alleged monopoly situation of the United States and Japan, a perception by international aid organisations that Australian expertise was inferior to that of its competitors, or the fact that in a booming local economy most Australian businesses did not see a need for overseas expansion, is difficult to judge.

Australia's steadily deteriorating domestic economy since the early eighties has been accompanied by a growing interest in overseas markets of all types. The consultant study field has kept pace with, and in many cases outstripped this growth, with some major consultant organisations now dependent on overseas work for the bulk of their income. With the growth of Australian involvement there appears to have been a shift in government funding towards the aid package comprising work linked to an Australian controlled project utilising Australian products and expertise wherever possible. Even the more non-commercial projects such as infrastructure and training are now often provided by teams recruited from the Public Service or the Military on a contractual basis.

In these days of economic stringency, even the volunteer under Australian Volunteer Abroad or the Australian Executive Overseas Program is encouraged to promote Australia and its products in his/her day to day contact with our South Pacific neighbours and whilst this policy is clearly one that must be pursued if foreign aid is seen as a means to an (economic) end, it must also be understood that a high profile identification of a country with its aid can often have negative as well as positive outcomes.

Whether a person is a volunteer working and living in squalid surroundings, or a highly paid expert funded by his Government and living in luxury at a five star hotel, there is a common expectation that the aid recipient will appreciate and be grateful for the particular assistance provided. When such recognition falls short of expectations there is often a feeling of "why bother" or "its all a waste of time". Such attitudes tend to be more prevalent in those consultants/volunteers undertaking longer term assignments and are consequently more damaging to the image of the person and, by association, the country and the organisations he/she represents.

In the South Pacific at least this perceived lack of gratitude has some of its origins in the colonial past so recently shed by many island states. For all its failings, the colonial system could never be accused of adopting a "user pays" approach to its infrastructure provision. Over decades the indigenous

population have come to expect roads, wharfs, airfields and services to be funded from somewhere over the water and in a region where the cargo cult can become a way of life, why question or even acknowledge the source of funds providing these facilities now?

The largesse of most developed countries in the seventies and eighties, funded by the booming economies of that period did much to fuel this indifference, with countries actively competing with each other to establish bridge heads in the region and international aid organisations only interested in fulfilling quotas whatever the merits of projects funded. If the high spending aid programmes of the seventies and eighties did not engender warm feelings for the donor countries, it is not too difficult to anticipate that the reduction in aid funding over the late eighties and early nineties has brought with it a sense of resentment in many countries against their former benefactors, be they individual countries, or international aid organisation. Whilst the astute politician may understand the inability of many developed countries to provide aid at the scale of the sixties and seventies, if he hopes to remain in politics he may not feel obliged to acknowledge such understanding in the face of a hostile electorate. Recent problems for Australian companies in Papua New Guinea provide a good example of this and there are countless other examples throughout the South Pacific. Biting the (foreign aid) hand that feeds you is often seen as a way to re-election in the South Pacific nations.

3. EFFECTIVE USE OF AID FUNDS

The world wide economic downturn has brought with it a need for more effective use of the development dollar. In the absence of the seemingly limitless funds to buy a way out of problems the various aid organisations have to rely more on an understanding of local problems, reducing the scope of projects to "local scale", rather than the high profile schemes which proliferated in the sixties, seventies and early eighties.

Above all there is a need to recognise the mistakes of the past and seek to ensure they do not occur again. To illustrate some such failings I would like to put forward two (2) case studies, one old (1968-69) and a more recent example (1985-92).

CASE STUDY 1 - ACCESS TO THE NEW GUINEA HIGHLANDS:

(a) Access to the New Guinea Highlands:

The Study of the Transportation Process in Papua New Guinea was a comprehensive study funded by the United Nations Development Programme and conducted by a team of consultants assembled by Sir William Halcrow & Partners of London.

In the 1968/69 period the teams examined all aspects of transport in the country and brought forward a comprehensive programme of improvements to roads, ports, coastal shipping.

Civil aviation received considerably less attention since it was considered to be the province of Australia's Department of Civil Aviation. Subsequently, in pre-independence days, a more co-operative D.C.A. assisted in the establishment of Air Niugini and the upgrading of Port Moresby and Lae airports.

In the late 1960's it became apparent that transportation costs to the New Guinea highlands were escalating at an unacceptable level. The problem was further compounded by frequent closures of both Daulo and Kassem Passes on the Highlands Highway (Lae to Mount Hagen) and port congestion at Lae which required considerable investment in port infrastructure.

It was decided to investigate a number of alternative routes to the Highlands together with options of upgrading the existing Highlands Highway route and the usual "do nothing" case. Although six (6) alternatives were considered the eventual choice always lay between:-

- (i) upgrading the existing Highlands Highway
- (ii) a new route from Madang via Bundi to Mt. Hagen.
(Figure 1 refers)

This latter option had the added attraction of using port facilities at Madang which were at that time under utilized.

In the circumstances therefore, it was not unexpected that, when the initial U.N.D.P. Report came up with a recommendation for an upgraded Highlands Highway, further studies utilizing items euphemistically referred to as "secondary benefits" were commissioned.

The second report from the U.N.D.P. team came up with marginal benefit/cost advantages to the Bundi Route and this became the preferred option. At the time of my joining the then Directorate of Transport in 1969 development of the Bundi route had a high priority and (more importantly) the implied promise of World Bank financial support.

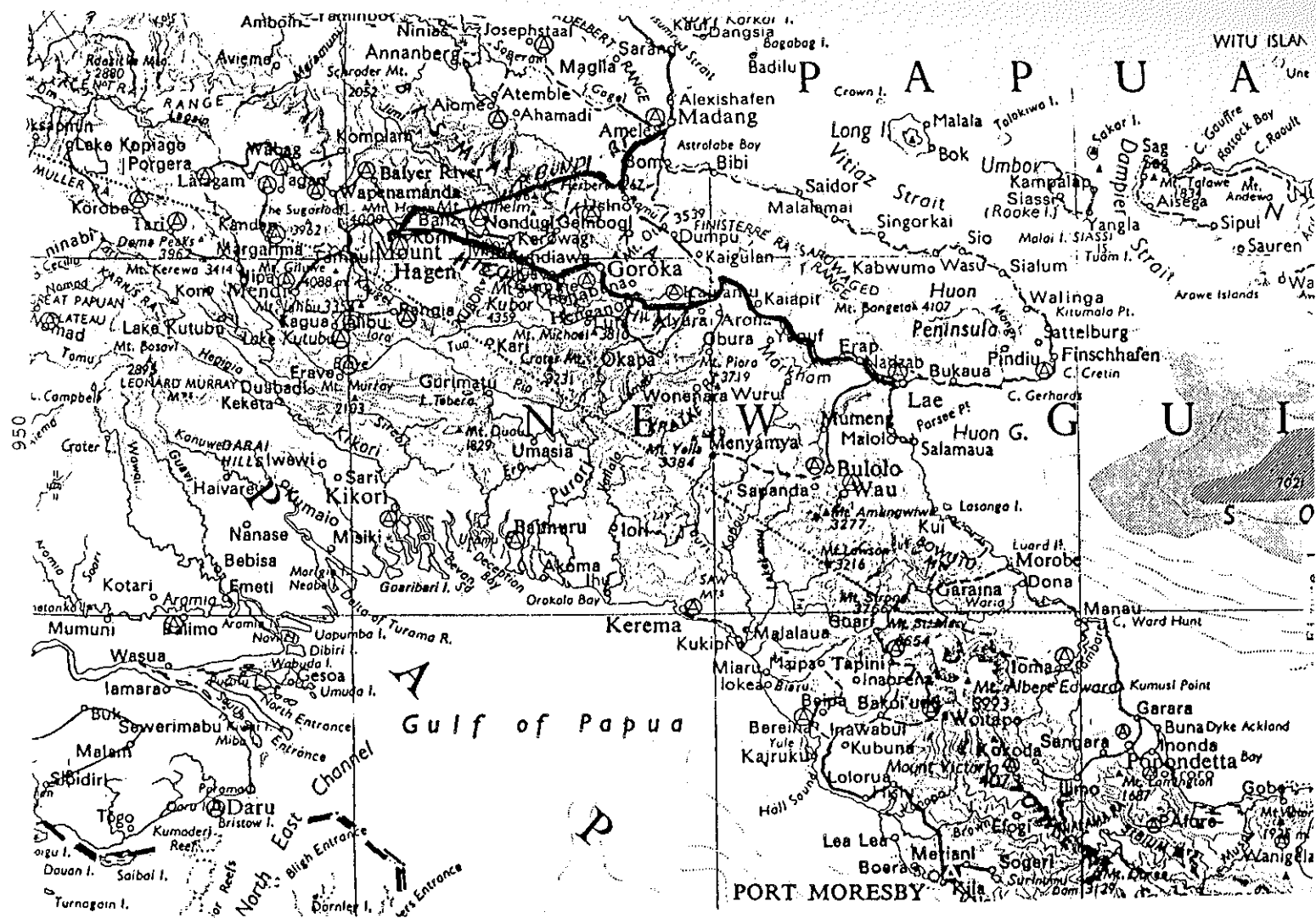
In early 1970 I undertook to prepare a paper on the U.N.D.P. study for presentation at an A.N.Z.A.A.S. conference in Port Moresby but subsequently, becoming too closely identified with the project, I withdrew the paper before the conference was held.

At that time, two (2) basic flaws in the study concerned me, namely:-

- (i) the questionable nature of some of the "secondary benefits" which had helped boost the claims of the Bundi route
- (ii) the unacceptable premise that substantial funds would not be expended on the Lae-Goroka-Mt. Hagen road, irrespective of any decision to build the alternative route from Madang to Mt. Hagen. (In the 1969-70 period, substantial funds had in fact already been expended on Kassem Pass by Comworks, and substantial upgrading between Lae and Nadzab was proposed)

My promotion to Secretary for Transport in December 1970 allowed me to express some of my misgivings more forcefully, but the Administration remained committed to the project and (equally importantly) was seen to be, by the World Bank and U.N. agencies.

With the World Bank funding, my department commissioned Valentine, Laurie and Davie to carry out detailed location and design of the Bundi route in 1971 and, as if to emphasise the doubtful nature of the initial cost/benefit study, three (3) local firms of consultants were retained to redesign sections of the Highlands Highway between Mt. Hagen and Goroka at the same time.



Geological surveys along the Bundi route soon established potential stability problems not apparent in the somewhat superficial investigation on which U.N.D.P. had to base its estimates. After several months work costing over half a million dollars it was conceded that a high standard highway capable of carrying heavy transport was not economically feasible.

The decision to abandon the scheme coincided with the election of the first Somare led government and ironically it fell to the member for the Usino/Bundi area, Bruce Jephcott, to announce this as Minister for Transport.

Requests to the World Bank for funding for the upgrading of the Highlands Highway were initiated by mid 1972 but the Bank insisted on further benefit/cost studies before agreeing to fund such works. Although I was most reluctant to expend further funds in proving what should have been self evident from the start, the department expended nearly \$200,000 on the project before justifying the loans which were secured subsequent to my departure.

Abortive design costs for Bundi, plus the benefit/cost study for upgrading the existing Highlands Highway totalled about \$800,000 although I don't know how much of the Bundi design survey work was utilized in the low grade connector road Bruce Jephcott finally secured. (Nor am I aware of the value of this route, which I have never travelled). Whilst in retrospect it is easy to find basic errors in the strategy adopted, it must be remembered that many of the decisions were dictated by political pressure, and even the view of visiting U.N. or World Bank personnel. In this latter respect there were glaring inconsistencies between shipping and roading recommendations in the 1969 report where upgrading strategies for Lae port facilities conflicted directly with plans to divert the bulk of western Highlands traffic through Madang.

One problem foreseen by nobody was the serious incidence of hijacking and robbery along the Highlands Highway now that it carries increased and heavier traffic. Given the nature of surrounding populations it seems that, in this respect at least, the Bundi route would have been preferable.

The political interests that sought to force the Madang - Mount Hagen route through must take the majority of the blame for an initiative that achieved little other than a waste of scarce resources and valuable time, but some blame must be shared by the UNDP Study's Consultants in the questionable cost/benefit study conducted to justify an option previously rejected by their own investigation.

In their defence however it must be conceded that they produced their dubious conclusions at the instigation of an administration of mainly European/Australian origin, both elected and contracted, so they can hardly be accused of misleading predominantly inexperienced native government by their actions.

The intransigence of World and Asian Bank appraisal teams to any perceived deviation from recommendations of the U.N.D.P. Study, even when a recommendation was clearly wrong, did much to compound the problem. Indigenous members of the administration were highly critical of the cost of studies forced on the government by such intransigence, and resented the intrusion into what were considered domestic decisions.

The tendency of lending agencies to interfere in local decision making became more intolerable to the administration as independence grew closer and

indigenous representation grew. In 1972, as a pre-condition for a loan for port development the World Bank indicated a requirement that port charges be raised substantially at a time when copra prices were at an all-time low.

Not unnaturally the predominantly indigenous assembly voted to reject this demand, and the negotiation team, headed by myself, was informed by Australian Treasury that the World Bank had indicated there was no point in our going to Washington. Whether such information was fact, or an over-pessimistic assessment by embassy staff was never clarified but a potentially damaging conflict of interest was avoided when, with the reluctant agreement of Treasury we were allowed to go to Washington and subsequently negotiate a \$10 million loan at 0.75% p.a. interest rate.

I would not like to suggest that mistakes in the planning and development of transport infrastructure in Papua New Guinea were confined to those overseas agencies providing development aid, or the consultant organisations they employed to do it. Despite ample world wide evidence to the contrary, my department along with most others in administration planned for a post-independence future at least equal to the euphoric years preceding it. That we grossly over estimated, is evident in some, but fortunately not all, of the initiatives undertaken in the 1970-75 period.

Lessons which can be learned from transportation planning and the foreign aid which facilitated it in the 1965-75 period could be summarised as follows:-

(i) avoid preconceptions, efforts to duplicate previous successful solutions in one developing country in another can often be disastrous. My personal impression was that World Bank appraisal teams were often prone to such snap judgements

(ii) although there is an obvious need to consult meaningfully with the client, the temptation to compromise professional integrity to meet their perceived needs can be disastrous, as the case study I have quoted clearly demonstrates.

(iii) above all, keep recommended solutions within the technical and fiscal capabilities of the client.

These observations are based on experiences now over twenty (20) years old and it would be reasonable to assume that with lessons learned, processes have improved with time. Whether such processes have improved the effective placement of the development dollar is difficult to judge. One personal experience, relating to the 1985-92 period, would seem to indicate that development aid for transport infrastructure still occasionally missed the mark.

CASE STUDY NO. 2 - LAUTOKA - FIJI:

In 1984 the New Zealand Government funded a study of the transportation needs of the City of Lautoka. The study was undertaken by two (2) consultant firms and oversight of the project was conducted by a Steering Committee comprising Government and Local Government staff and senior representatives of the two (2) consultant firms conducting the Study. Interim reports were provided throughout a two (2) year period with final acceptance of the Report by its New Zealand sponsor department occurring early in 1987.

Due to the traumas created by two (2) military coups and the subsequent economic downturn, Lautoka City Council acted on none of the recommendations of the Study and a substantial investment in time and skills remained untouched until Council made a request to the Australian Executive Service Overseas Programme for assistance in preparing a Traffic Management Scheme for the city in 1992.

As the consultant assigned by A.E.S.O.P. to this project I arrived in Lautoka expecting to find little in the way of usable data with which to conduct the study. Advised by Council staff that a comprehensive study had been conducted, I searched high and low for this documentation for many weeks both in Lautoka and in various Government Departments in Suva before Council's office cleaner proudly produced the missing documents from his storeroom. I provide this little anecdote to illustrate the stunning impact this comprehensive and expensive study had made on a relatively sophisticated team of Local Government professionals in the 1987-92 period.

In an effort to establish a basis for utilizing some aspects of the original study, I spent a couple of weeks updating population, vehicle registrations, traffic or arterial routes, etc. My task was facilitated by a comprehensive census conducted in 1986 and projected to 1989, and a range of other Government statistics that reflect credit on the British Civil Service background that still pervades much of Fiji public service.

Generally the updated figures were remarkably close to the studies predictions in many cases. Lautoka's population at 1989 of 42,803 compared favourably with a study estimate of 41,343, household formation of 8,068 households was close to the estimate of 8,120 in the Transport Study, and vehicle ownership at 0.49 household was almost equidistant from the optimistic and pessimistic projections of vehicle ownership predicted in the Study.

Development in tourism, industry and primary production was substantially lower than projected levels for these sectors in the Study, but two military coups could hardly have been anticipated by the consultant. Since the abovementioned factors appeared to have been largely ignored in computer input, the prospect of re-running the T-MODEL EX programme utilised in the original network analysis with amended data was considered, though more suitable programmes of this type have since been devised. Such a course of action would have afforded Council the option to analyse a network of local distributor roads south of the city at periodic intervals in the future to establish upgrading priorities.

The study had (mistakenly in my view) totally ignored this network in its analysis. It was argued that these roads already existed and would be upgraded by Council as need arose. At target dates it was assumed that these roads had been upgraded to a level that permitted traffic assigned to them to feed into the studied network of arterial routes without restriction.

In the absence of suitable computers to run the programmes and experienced staff to handle the periodic updates required I reluctantly abandoned this option but not before I had discovered a number of aspects of the Study which I felt made it totally unsuited to Council's needs, not only in 1992 but probably in 1985-87 when it was first prepared.

As already noted, the Study provided no programme of staged development for the network of collector/distributor roads located south of the city centre, even though a number of radial routes already carry significant traffic.

volumes. In totally ignoring this network, the Study deprived Council of valuable information in planning its future roads investment programmes. If as I suspect, cost was the factor in determining this omission I believe it to be on false economy.

An even more serious omission was the failure of the Study to address the problems already being experienced in the central city area bounded by Vitogo Parade, Namoli Avenue and Tukani Street (see fig.2 overleaf). In the original submission the traffic consultants undertook to provide a full analysis of the inner city network together with a detailed programme of improvements to the various component roads and junctions, but by the final report this part of the Study had been totally discarded, the reasons for which were given as:-

(i) the limited value of the computer programmes utilized in detailed analysis of intersection traffic movements

(ii) the failure of Council to provide the consultant with a central area development strategy. In support of this latter deficiency the Study stated "Our investigation aimed at identifying an appropriate arterial structure sympathetic to the roads of the future central area has been greatly hindered by the lack of a clear development strategy that makes proper provision for the very large increase in central area activities predicted by the planning report"

This statement can be interpreted, at least in part, as an attempt to rationalise the Study's failure to prove the Town Centre Options plan originally proposed, although it must be conceded that there was an ambiguity in Council's Centre area strategy which still applied at the time of my investigations in 1992.

Having disposed of what Council (and I for that matter) considered to be the two (2) most critical traffic issues without a recommendation capable of being acted upon, the consultant provided a detailed analysis complete with cost-benefit analysis of traffic routes immediately north and south of the city centre, routes which the network analysis had shown to be deficient (i.e. ratio of traffic volume to capacity exceeded 0.9). Intersections along such routes were also considered to be deficient where the volume/capacity ratio exceeded 0.7 (See figure 3.).

To overcome the deficiencies mentioned, the consultant examined four (4) alternative strategies:-

(i) The Drasa Avenue Option essentially consisted of an upgrading of that section of Drasa Avenue, west of the Thomson Crescent junction, together with a connection of similar standard into the port area

An allowance of 0.85 million in the estimated cost of \$3.4 million apparently covered services relocation and included \$260,000 for the Vomo/Drasa/Namoli junction.

(ii) The full Waterfront Option linked the existing Queens Road through to a connection to Kings Road east of the Drasa/Vitogo junction. The route followed the line of Marine Drive for much of its length providing inner city connections to Vakabale Street, Namoli Avenue and Nava Street.

(iii) Partial Waterfront Option essentially provided a western connection from Queens Road to Vakabale Street and a Kings Road to Ravouvou Street

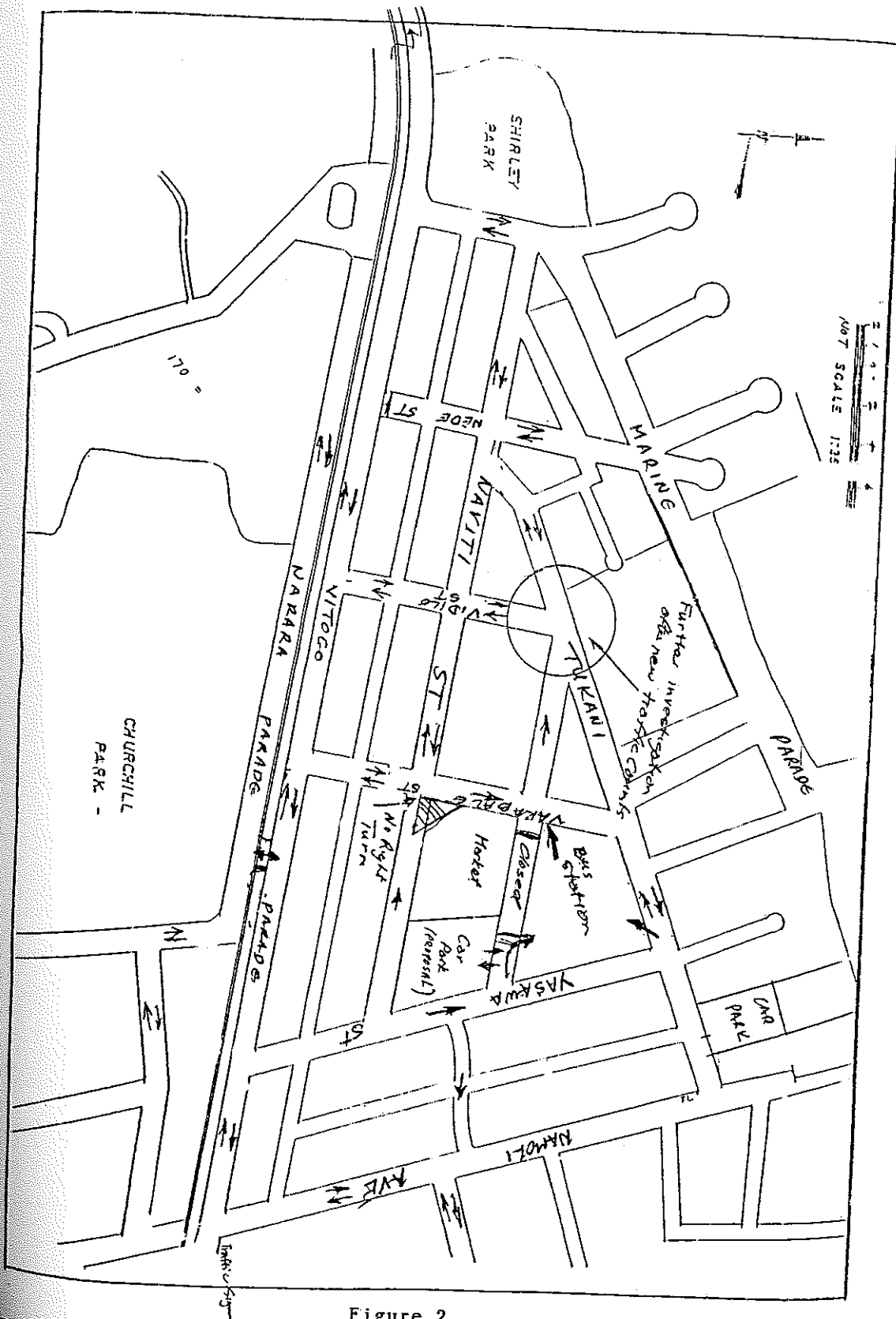
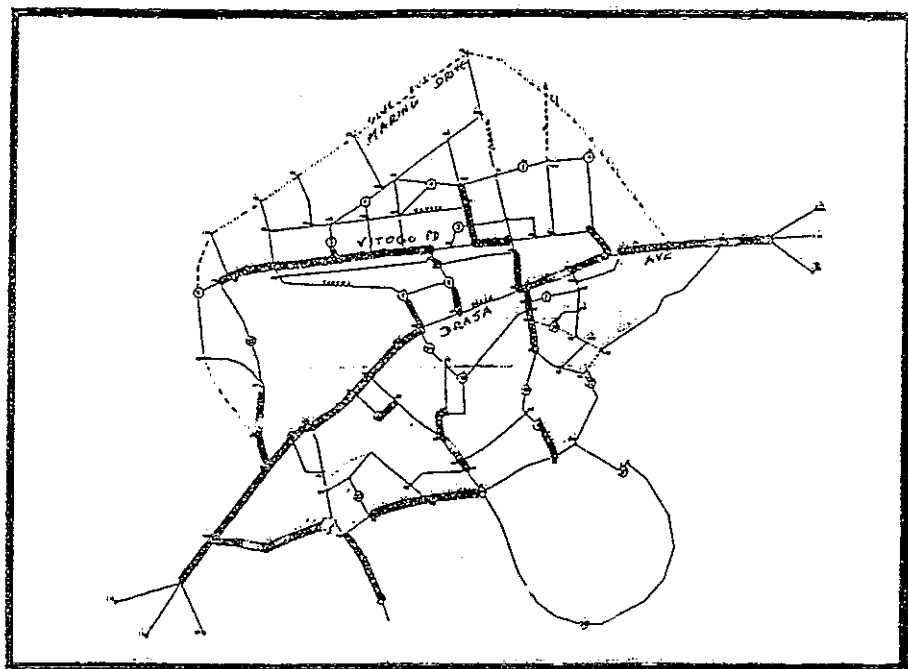
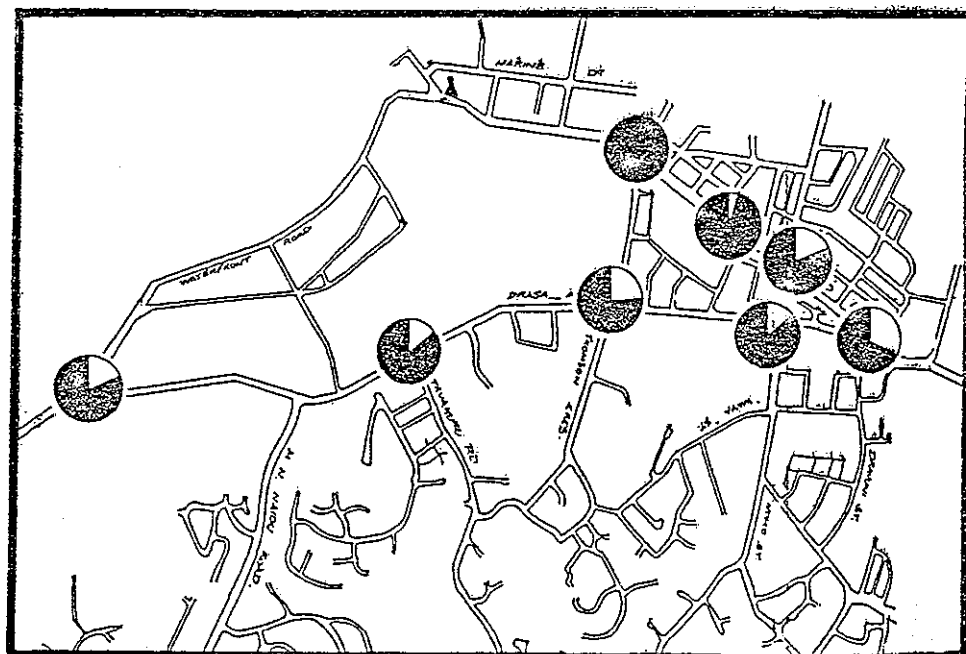


Figure 2



PROJECTION 2 DEFICIENCIES



PROJECTION 2 INTERSECTION LOADINGS

FIGURE 3

connection in the east. Estimated costs for the Full Waterfront Option (\$7.35 million) were reduced to \$6.05 million and the study concluded "the central area deficiencies predicted under Projection 2 are quite small, indicating that a partial Waterfront route is only marginally less effective in relieving central area congestion than the much more elaborate proposal"

(iv) Both Routes Option combined the Drasa Avenue Option with the Partial Waterfront route

Although Traffic Design Group traffic engineers to the Project did not test the full Waterfront Route and Drasa Avenue option having concluded "the Partial Waterfront Route is only marginally less effective" (than the continuous Waterfront route) they argued strongly in its favour in the same report on environmental grounds.

The latter option became the recommended scheme in the Final Report which concluded "The analysis is concluded largely on environmental grounds in favour of the continuous Waterfront route (plus the Drasa Avenue upgrading)."

The Cost-Benefit Analysis:

Table 1 sets out a comparative cost/benefit study for the four (4) options described above.

Whilst the first year rate of return for the combined options was high (29% on the Projection 2 assessment) it is probably more pertinent to examine the added benefit inclusion of the Waterfront route provided over and above the Drasa Avenue option and the first year rate of return this additional expenditure generated

Net annual benefits under the Drasa and Both Options were \$1.81 million and \$2.29 million respectively giving a net benefit gain of \$0.48 million due to the waterfront link.

Cost of the modified waterfront link can be derived by subtracting the cost of the Drasa Avenue Option from the cost of the Both Routes Option. On this basis the first year rate of return on funds expended in building the Waterfront link would have been:

<u>0.48</u> (in millions)	<u>or 10.8%</u>
4.45	

The Network Analysis established only marginal benefit to traffic flow between the full and partial Waterfront routes, so it follows that construction of the continuous waterfront road recommended in the Final Report would show even lower return on funds expended in its construction. I would estimate 6.5% to 8.5% dependent on the standard of construction adopted.

Whilst a return of 6.5% to 8.5% may seem acceptable in today's depressed markets, such returns would never have earned international aid, even if Council had the financial capacity to borrow, and repay \$7.35 million. Although Drasa Avenue was acknowledged as a responsibility of Public Works Department, that Department although a participant in the Study gave the upgrading of Drasa Avenue a low priority in 1987 and continued to do so in 1992, when my Study commenced.

Annual Operating Costs (x millions)	DRASA		WATERFRONT		PART WATERFRONT		BOTH	
Projection	01	02	01	02	01	02	01	02
Base Option	\$23.16	\$22.40	\$24.16	\$22.40	\$24.16	\$22.40	\$24.16	\$22.40
Option	\$23.06	\$20.59	\$22.52	\$20.55	\$22.80	\$20.81	\$22.19	\$20.11
Nett Annual Benefit	\$1.10	\$1.81	\$1.64	\$1.85	\$1.36	\$1.59	\$1.97	\$2.29
Investment Costs	\$3.40		\$7.35		\$6.05		\$7.85	
First Year Rate	32%	53%	22%	25%	22%	26%	25%	29%

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TABLE 1

LEGEND:

Projection 01 Medium Growth

Projection 02 High Growth

Base Option No major roadworks

Option Specified roadworks

Although technically correct in its methodology, the Lautoka Transportation Study provided little guidance to Council on its more pressing problems of inner city traffic, or a programme of road improvements in areas south of Drasa Avenue

Such suggestions as were provided for inner city traffic were assumed to take place within a framework of improved or new roads which Council and (to a lesser degree) Public Works Department seem unlikely to implement fully for many years. Secondly, adoption of the "committed road network" as a fait-accompli by 1999 deprived Council of a properly structured and costed programme of works designed to translate the sub-standard residential road network of 1984 to the adequate 1999 "committed network"

With little prospect of implementing any of the major recommendations of the Transportation Study it became imperative to provide interim and affordable solutions to a number of individual critical traffic problems. Although all these problems had been identified in the Study, their significance appears to have been submerged in the ultimate (and unaffordable) grand plan.

The particular solutions outlined below were, with one exception, relatively inexpensive but intended to extend the effective life of the individual facilities and/or to reduce accidents at notorious black spots

Drasa Avenue/Thomson Crescent/Taveua Avenue:

Although a simple roundabout with no visibility problems, this junction had a high concentration of vehicular accidents

The problem was clearly exacerbated by a miniscule central island which created cross-road conditions with no signalisation. Although I have no subsequent data to confirm this, I believe the suggested modification can only have reduce to accidents at this location (Figure 4 refers).

Drasa Avenue - Namoli Avenue - Vomo Street:

A complicated road pattern with heavy traffic volumes at peak hour on all legs, this junction was manned by two point duty policemen for both morning and evening peaks. The design suggested for a roundabout was essentially a modification of a P.W.D. approved design for which fortunately the truncation of the N.E. corner had been obtained during redevelopment (Figure 5 refers)

At this stage I have no information whether the suggested treatment of this junction has been undertaken

Central City Network - Vitogo Parade:

By far the most difficult situation the central city traffic problem was essentially:

- (i) a trial one-way system which had been designed to frustrate illegal corners plying for hire, but was apparently only succeeding in frustrating everybody, and,
- (ii) chaotic traffic conditions in Vitogo Parade, Lautoka's main retail street and the inner city link between the two arms of the coastal highway

With shops and offices along its northern side and the sugar rail line on its southern side, the prospect of widening Vitogo Parade was clearly impractical

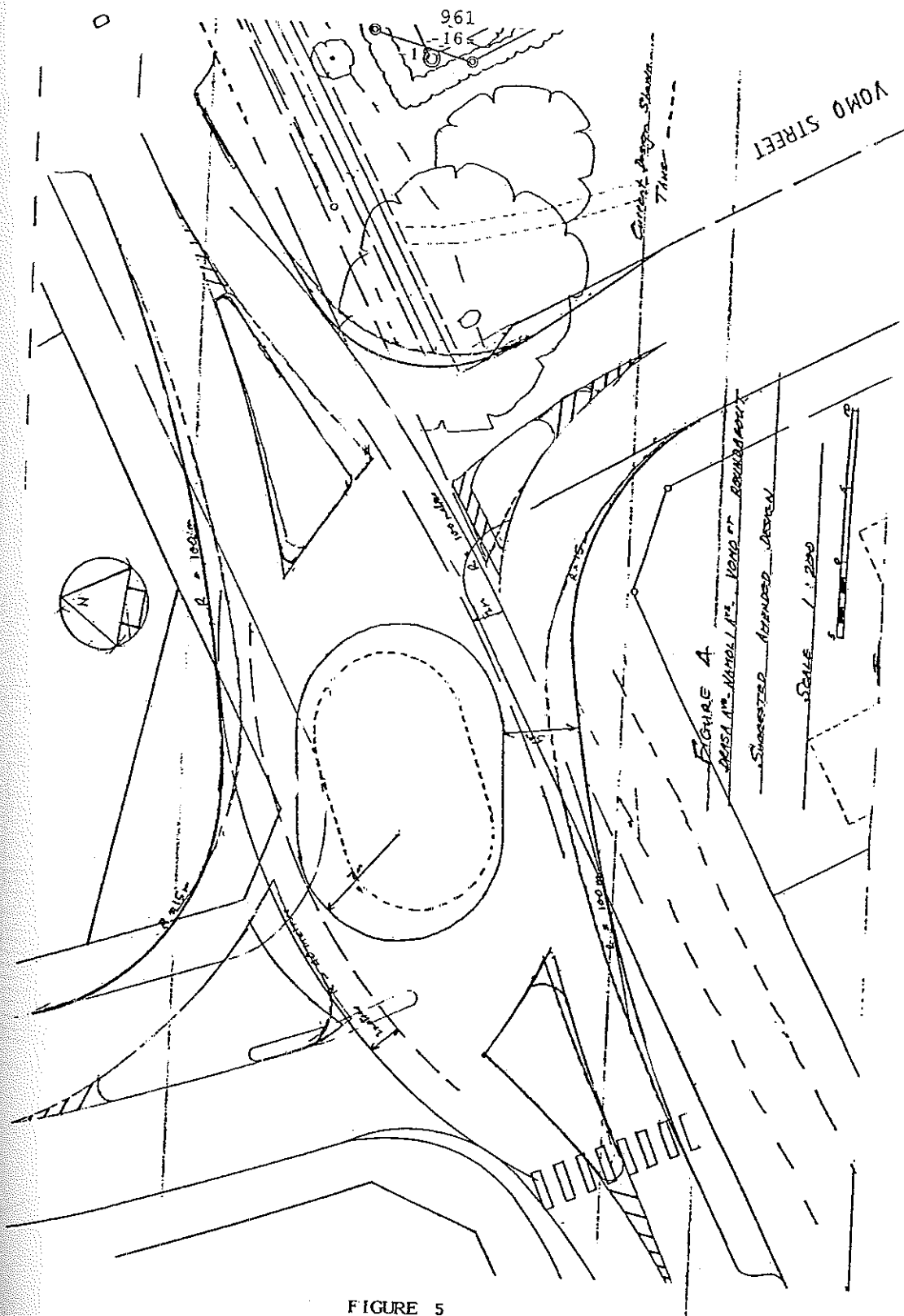


FIGURE 5

but the under utilised Navara Parade running parallel to Vitogo Parade on the southern side of the railway provided an opportunity to convert these two roads to a dual carriageway. Whilst, the prospect of a dual carriageway with a sugar rail line down its median may seem impractical to the traffic purists it should be realised that the sugar crushing season is relatively short with many trains scheduled for the late evening/early morning.

An outline of the suggested geometrics for the proposed modifications to Vitogo Parade and a traffic circulation pattern for the network of roads in the central city is shown at Figure 6. Whilst the one-way system designed to it is shown at Figure 7.

So far as I am aware the circulation pattern has been successfully implemented, but to date I have had no confirmation of the re-construction of Vitogo Parade or its effectiveness.

Estimated cost of the three (3) projects discussed was approximately \$500,000, a relatively small outlay for the improvements in traffic flow and (hopefully) accident reduction they should provide.

My purpose in outlining these particular options however is to illustrate that technical solutions need not be aimed at the perfect and often unattainable.

4. DEVELOPMENT AID IN FUTURE YEARS:

If the economic signs are accurate it will be decades before the developed countries of the world will be able to assist the third world in the manner it sought to do in the 1960's to the early 1980's. With the diminished global rivalries between east and west which characterised that earlier period it is questionable whether these countries will ever see the need to fund development in those third world countries with little to offer in the way of trade and economic opportunities.

The small emerging nations of the South Pacific probably have less to offer and more economic problems than the rapidly expanding countries of S.E. Asia, and face the immediate future with uncertainty. That foreign aid is likely to dwindle seems inevitable and the Australian investment strategies seem aimed steadily to the north.

In this economic climate, such investment as does occur in the South Pacific region particularly that invested in transport infrastructure must be targeted where its effect is most beneficial, both to donor and recipient alike. There seems little future for the broad sweeping programmes of two decades or more ago. The cold-war strategic value of small pacific atolls has evaporated and the need now is for economic pragmatism and a reliance on small scale solutions, voluntary assistance where practical, and an emphasis on the achievable solution at all times.

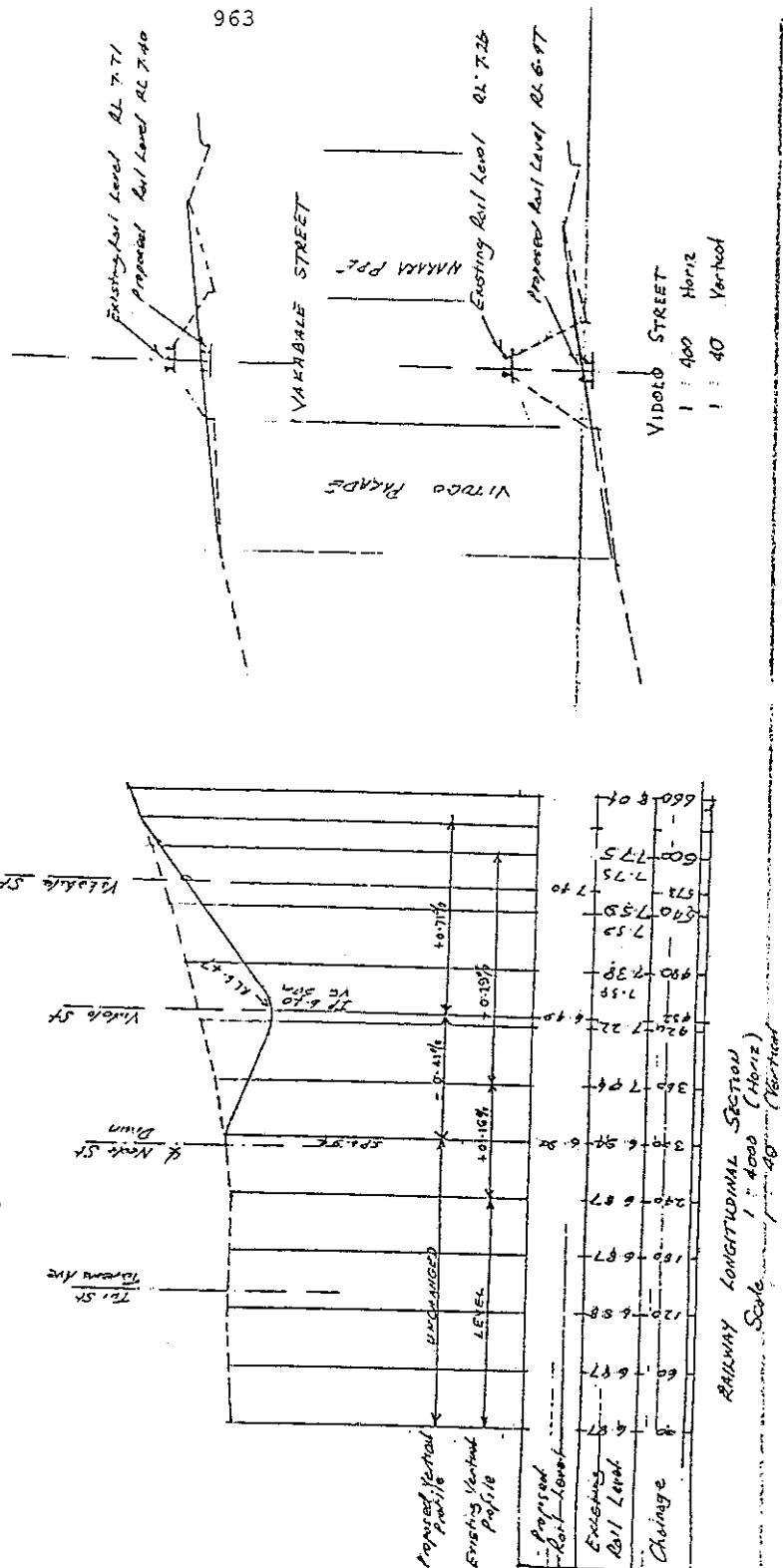
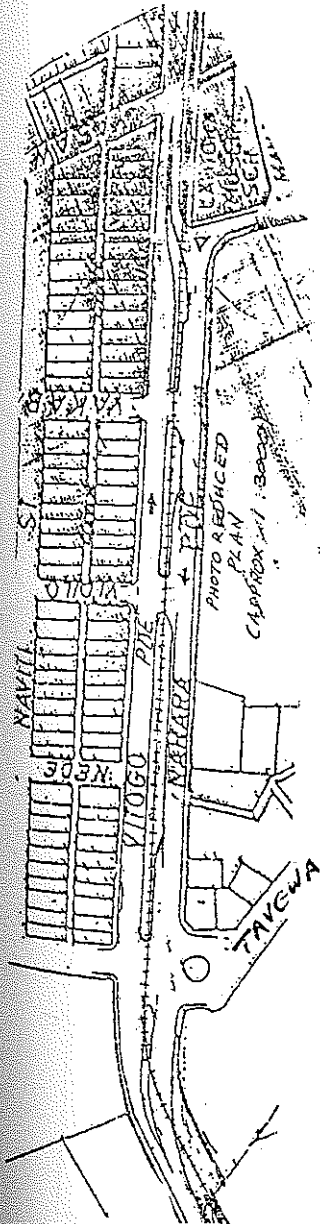


FIGURE 6

RAILWAY LONGITUDINAL SECTION
Scale 1" = 400' (Horizontal)
1" = 40' (Vertical)

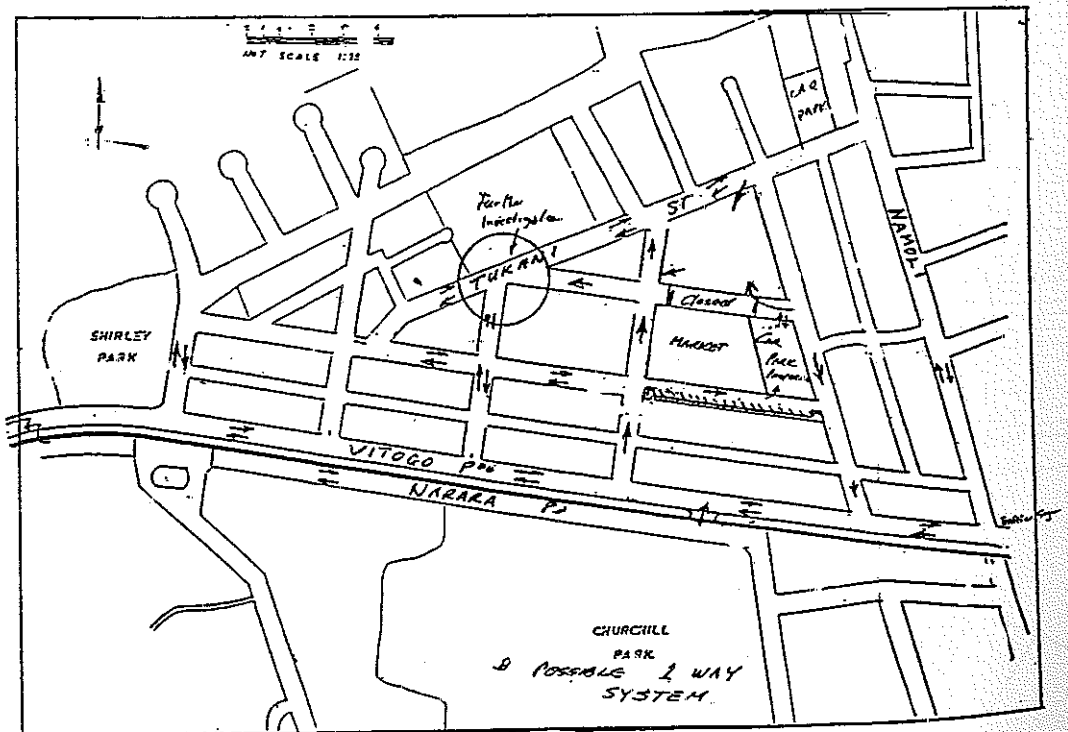
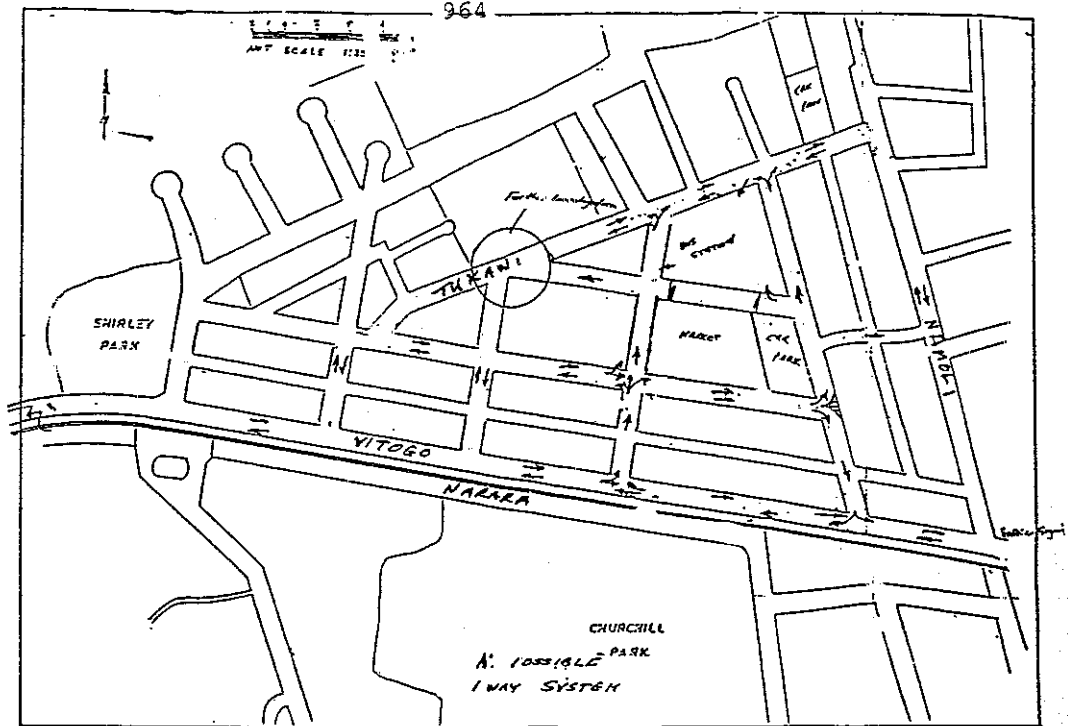


FIGURE 7