



- PD-ABG-789 -

ISN 84429

BOTSWANA

SMALL CITIZEN CONTRACTOR TECHNICAL ASSISTANCE PROGRAM

June 1992

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BOTSWANA

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	Index	Page
1.	Summary	1
2.	Introduction	3
3.	The 1990 Jenkinson/DeGroot Report	3
3.1	RHUDO/ES&A	3
3.2	Integrated Field Services (IFS)	3
3.3	Tshipidi Badiri Builders' Association (TBBA)	3
3.4	Association of Botswana Building and Civil Engineering Contractors (ABCON)	4
3.5	Architects Anderson and Anderson	4
3.6	Madirelo Training and Testing Centre (MTTC)	4
3.7	Brigades Development Centre (BRIDEC)	5
3.8	Botswana Housing Corporation (BHC)	5
3.9	Euroconsult BV	5
3.10	Department of Architecture and Building Services, Ministry of Works, Transport and Communication (DABS)	6
4.	Assistance/Training Fees and Possible Cost Recovery	6
4.1	Anticipated Fee Levels	6
4.2	Cost Recovery	7
4.3	Contractor Association-based CAP	7
4.4	Willingness to Pay for Assistance	7
5.	Programme Funding	8
6.	Technical Training and Assistance Modes	8
6.1	Botswana Housing Corporation	8
6.2	Integrated Field Services	8
6.3	Madirelo Training and Testing Centre	9
6.4	Brigades Development Centre	9
6.5	Botswana Polytechnic	10
6.6	Tswelelo (Pty) Ltd	10
6.7	Private Sector Training Companies	10
6.8	Matrix Development Consultants	11
6.9	Possible Linkages	11

7.	Work Site for Training/Assistance	11
8.	Recommendation	13
8.1	Technical Comparison	13
8.2	Assistance or Training Programme Delivery	15
8.3	Financial Comparison	16
8.3.1	Formal Training (Promatra)	16
8.3.2	On-the job Construction Assistance Programme (Matrix)	17
8.4	Financial Options	18
9.	Implementation Proposal	18
9.1	Formal Training	18
9.2	On-the-job Construction Assistance (CAP)	18
9.2.1	Office and Personnel	18
9.2.2	Number of CAP Client Contractors	19
9.2.3	The CAP Target Group	19
9.2.4	Client Contractor Selection	21
9.2.5	Reference Group	22
9.2.6	Matrix Methodology	22
9.2.7	CAP Aims	23
9.2.8	Longer-term CAP Aims	24
9.2.9	CAP Fees	24
9.2.10	Programme Duration	24
9.2.11	Other CAP Issues	25
	ANNEX I Integrated Field Services Work Plan 1992/93	26
	ANNEX II Construction Assistance Budget Estimate - Option 1	27
	ANNEX III Construction Assistance Budget Estimate - Option 2	29
	ANNEX IV Persons met	31

(This is an internal report for USAID Botswana and RHUDO/E&SA)

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1. Summary

This report reviews and updates the preliminary study of the Botswana construction sector carried out in 1990 by Graham Jenkinson and Barbara DeGroot, following the commencement of the implementation of the BPED. Discussion during the visit confirmed Botswana Confederation of Commerce, Industry and Manpower (BOCCIM) proposals and preferences for supporting the construction industry and the intention to establish a construction sector membership within BOCCIM.

Meetings with the Madirelo Training and Testing Centre, Brigades Development Centre, Botswana Housing Corporation, private consultants, the Association of Botswana Building and Civil Engineering Contractors (ABCON), the Integrated Field Services (IFS) unit of the Ministry of Commerce and Industry (MCI), and the Director of the Department of Architecture and Building Services (DABS), confirmed the capacity or planned capacity of existing Botswana training institutions to meet sector needs. These meetings also reconfirmed support for the 1990 recommendations for an on-the-job, business-orientated construction assistance programme (CAP).

BOCCIM supports the on-the-job assistance approach but also finds merit in more formal training course systems. An analysis and comparison of the training course and on-the-job options and their related costs has been prepared to show the benefits of an on-the-job approach to develop the capacity of Botswana construction companies. Training firms in the region are mainly South Africa-based, and the analysis in this report was limited to services provided by two firms. It is possible that these firms also have on-the-job assistance programme similar to that provided by Matrix Development Consultants. However, the conclusion is that though classroom-based training courses are quicker and more economical, there are no guarantees that they will cause citizen construction businesses to grow. The on-the-job construction assistance approach is longer term, but growth will be realized and can be monitored and recorded.

It was unfortunate that no meetings took place with Tshipidi Badiri Builders Association (TBBA) who represent some 900 contractors (700 in Gaborone) in the target group. This was due to non-availability of the Chairman, and the reluctance of committee members to represent the association without the Chairman's agreement. This meant that the consultant was unable to verify the suitability of the various recommended methods of support, methods of delivery and programme organization, eligibility criteria or fee levels.

The report recommends levels of fees which client contractors should pay for training or assistance services. It is generally considered that clients in Botswana will be reluctant to pay for assistance services, and that complete cost recovery may be difficult to achieve.

Representatives of the training institutions, DABS and IFS considered the assistance programme should be delivered through TBBA. If this is not the

case, the role of TBBA in representing the interests of the citizen-owned building construction firms would be diminished. ABCON with a membership of only twenty, represents mainly the larger international and expatriate-owned companies, admittedly these few firms are probably responsible for the majority of construction work carried out in the country.

This report recommends that the assistance programme be sponsored by the Botswana Confederation of Commerce, Industry and Manpower (BOCCIM), delivered by TBBA, with the joint assistance of the Integrated Field Services and additional construction advisers provided under the project.

There are approximately sixty registered construction firms in Gaborone who form the target group firms. These firms are not the larger, well established and experienced Botswana firms, nor are they the very small, one man firms who do not have the potential for the high level growth required by the programme.

Selected client construction firms will meet minimum and maximum criteria to confirm their eligibility and suitability, they will also be individually interviewed. In the first year twenty five firms will be drawn from the group of eligible firms.

Budgets and implementation proposals are prepared in detail in this report. but figures for an on-the-job assistance programme similar to USAID programmes underway in Swaziland and Zimbabwe are unable to match the BOCCIM budget of US\$ 150,000¹. BOCCIM have limited funds which they wish to share with other deserving industries.

The budget will finance training course facilities for approximately one hundred individuals. For Matrix Development Consultants to provide assistance to sixty construction firms over three years, the cost would be US\$ 567,460.

A second implementation option is recommended that would provide on-the-job assistance to twenty five construction firms over a one year period, at a cost of US\$ 145,000. This option would rely on technical assistance and transport provided by IFS. In one year the programme will improve a client contractor's marketing and tender opportunities, workmanship, physical and financial planning and programming, relationships with supervising consultants and clients, and construction administration. The results of these interventions will be measured in increased turnover², larger jobs, and increased employment and plant.

An implementation proposal for the Matrix Development Consultants on-the-job assistance option, details and reconfirms the required personnel, the office accommodation and back-up resources, selection process, the reference group, and the short and longer term aims of the programme.

1 BOCCIM will allocate between 25% and 35% of the available on-site consultancy to the construction sector. The figure mentioned is 30% of US\$450,000.

2 During the first five months of the assistance programme in Swaziland, the average turnover of fifteen contractors increased by 10 percent.

2. Introduction

This report follows the scope of works headings included in the Matrix Development Consultants' terms of reference and draft details prepared by consultant Graham Jenkinson and discussed on June 1, 1992 with Will Cain, BOCCIM Training Adviser and Peter Riley, USAID/Botswana Private Sector Advisor.

3. The 1990 Jenkinson/DeGroot Report

The contractor shall meet interested parties, such as small citizen contractors, architects and training institutions, to confirm the diagnosis of the 1990 Jenkinson/DeGroot report on the type of technical assistance/training required.

3.1 RHUDO/ESA. Richard Martin (RHUDO/ESA) confirmed February 27/28, 1992 following a meeting of representatives of the small citizen contractors' association, Tshipidi Badiri Builders' Association (TBBA) that there remains an interest in an on-the-job construction assistance programme subject to agreement on detail. The assistance approach devised by Matrix Development Consultants and adopted by USAID in Swaziland and Zimbabwe was considered acceptable. Due to non-availability of the TBBA Chairman, it was not possible to arrange a further meeting of representative building contractors.

3.2 Integrated Field Service (IFS). In 1987, the Department of Industrial Affairs in the Ministry of Commerce and Industry, formed a unit called the Integrated Field Services Unit. This was part of the Botswana Enterprise Development Unit (BEDU) and has operated under the guidance of Senior Architect Dr A S Charway since 1989. The IFS offices has been a meeting place, and IFS has provided support to TBBA and the development of citizen building construction companies in Botswana.

The consultant met again with Dr Charway who has continued to develop the unit's activities despite IFS being seriously under-resourced. The on-the-job construction assistance approach was re-described and though there was some over-lap, Charway supported the proposal and confirmed that IFS could not provide the required comprehensive service to a core of selected contractors.

IFS had anticipated that since the CAP was to be directed to small builders, they together with TBBA would have been involved in the CAP and would have benefitted from possible donor assistance. Charway was concerned that BOCCIM should propose to create a further contractor-representing body when there was already separation of the industry's representative associations. The consultant explained that it was anticipated that the BOCCIM-based CAP would eventually become the unified association representing building contractors of all sizes.

3.3 Tshipidi Badiri Builders' Association (TBBA). Mr Seretse the Chairman of TBBA was unfortunately unavailable for the two weeks of the visit. Attempts kindly made by Dr Charway of IFS to convene a meeting failed after TBBA committee members advised that they could not represent TBBA views

without the prior agreement of the Chairman. This has resulted in the presentation of proposals in this report which could not be discussed or agreed with TBBA.

3.4 Association of Botswana Building and Civil Engineering Contractors (ABCON). Mr L J Whyte replaced Mr S J Halsall as Chairman in 1991. The new Chairman is an expatriate and the Managing Director of L J Whyte (Botswana) Ltd, an earthmoving and road construction company.

ABCON has not altered or developed greatly in the last two years. It has twenty paid-up members, of which three to four are wholly citizen-owned. The remainder are expatriate or international firms.

Mr Whyte supported an on-the-job approach, but admitted that as a larger firm he preferred the approach which provided training course opportunities for his staff. The ABCON Chairman remains interested in supporting the smaller building construction firms, but is concerned that if ABCON and TBBA were to unify, the organization would be run entirely by citizens. ABCON does not have a secretariat and lacks financial resources. The Chairman represents the members from time to time, and has recently advised GoB that if ABCON members were found to have been involved in recent BHC corruption occurrences, the member would be expelled. Whyte would like to see ABCON as a self-regulatory body creating new standards of performance for its member's clients.

Mr Whyte confirmed that a meeting was expected to take place which would bring BOCCIM, TBBA and ABCON together to discuss the establishment of a construction membership within BOCCIM. The main interest of ABCON was to have finance made available for the establishment of a secretariat, but details could not be finalized until BOCCIM advised them of the membership conditions and costs.

3.5 Architects Anderson and Anderson. Richard Sampson was supportive of the CAP aims and considered there was high potential for citizen building contractors to participate in private and public sector projects. Sampson considered the limited involvement of citizen contractors to date was partly due to poor marketing, but also due to the perception of private sector consultants that employment of international firms reduced possibilities of failure. He recommended involvement of the professional association once the CAP was running. He was not aware of a basic skills shortage, and believed existing training institutions met the requirements of the industry. He particularly supported increased knowledge of contract conditions by small contractors as a gradual learning and experience process.

3.6 Madirelo Training and Testing Centre (MTTC). A meeting was held with Hans Banspach (GTZ), Director of Apprenticeship and Industrial Training, and Mphaphi Tibone Director Designate. The CAP and training course options were described and discussed and MTTC were firmly in support of the CAP approach. This was partly because they need a vehicle to direct trained apprentices and National Craft Certificate holders into construction firms at the lower levels of the industry, but also because they felt that there was now an adequate

capacity for institution-based technical training. MTTC are aware of an urgent need to support the smaller firms by providing them with skilled staff.

MTTC have received support from ABCON in the curricula development for their crash trade training programme. They recognized the need to support a unified building contractor association, but did not support the delivery of the CAP through BOCCIM. Recent critical comments by BOCCIM regarding the MTTC apprenticeship scheme contributed to this negative opinion.

3.7 Brigades Development Centre (BRIDEC) Ministry of Education. Senior Technical Education Officer Leo Bacher and Senior Technical Training Officer Ambrose Chongo provided an up-date on BRIDEC activities. They have an urgent need to place large numbers of trainees into permanent employment due to GoB demands for them to provide vocational training to increasing numbers of school leavers. Bacher and Chongo considered the CAP approach would be similar to the BRIDEC on-the-job programme, but would have the added benefit of being business-orientated.

3.8 Botswana Housing Corporation (BHC). Developments over the last three months have caused disruption to normal BHC activities and have contributed to a sudden severe construction recession throughout Botswana. A meeting was held with Mr Brian Davey (Quantity Surveyor), who was temporarily filling the Development Manager role. Though Davey was supportive of the CAP this was a personal view. He reconfirmed that it remained BHC policy to support citizen contractors and that there were two on-going contracts currently being carried out by smaller construction firms.

Davey considered BHC would be unable to provide constructive comment on the proposed CAP for at least three months. His personal opinion was that reliance should not be placed on BHC providing the only base for on-site contractor assistance and training.

3.9 Euroconsult B.V.. Euroconsult are consultants to the Ministry of Local Government, Lands and Housing for the Accelerated Land Servicing Programme (ALSP). In 1990 the ALSP was considered a major reason for supporting the development of citizen construction firms. Whereas it was accepted that apart from sub-contracts, the infrastructure work would go to international companies, there were encouraging prospects for smaller contractor involvement in the development of some 27,000 individual plots.

Euroconsult Team Leader Jon Metcalfe advised that these prospects were still good. There have been hold-ups on the infrastructure implementation, and there continue to be problems with land allocation, title deeds, etc., but solutions are being found. BHC will not be allocated all the plots, e.g. approximately 12,000 plots will be available for private development in Gaborone, 3,400 in Lobatse, 3,200 in Selibi Phikwe, etc.. Metcalfe considered there were good market prospects for small- to medium-size citizen contractors for at least five years.

3.10 Department of Architecture and Building Services (DABS), Ministry of Works, Transport and Communications. A meeting was held with Director Mrs Mmapula Johnson. The Director was interested in the proposed CAP having been recently placed under pressure to encourage greater participation by small, particularly the opportunity category (OC) building contractors. Though not all are registered with the Central Tender Board⁴, the Director is experiencing a problem with an open tender system that attracts too many participants (there are possibly 700 small contractors operating in Gaborone alone). The Director was quite adamant that there were adequate training facilities in the country without introducing further training schemes from South Africa.

Though more concerned with the smaller, opportunity category firms, the Director appreciated that the target group for an on-the-job programme would have to be drawn from categories A-D for participants to have the greatest growth potential. The Director reconfirmed the support of DABS for any programme that would strengthen the local construction capability. She did not support the programme being delivered directly by BOCCIM, no reason was given.

4. Assistance/Training Fees and Possible Cost Recovery

The contractor shall determine the extent to which the beneficiaries are willing and able to contribute to the cost of the technical assistance/training.

4.1 Anticipated Fee Levels. Fees would be applied differently for programmes based on training courses and for on-the-job assistance. Fees should not be a deterrent to client contractor participation, initial fee charges and income should therefore not be high.

- a) On-the-job Assistance. Item 9.2.9 of this report describes the proposed fee charging method for the on-the-job assistance. The amount payable every month by an average client contractor would be about P 125 (based on 0.5% of a turnover of P 25,000 per month) for as long as the client remains in the assistance programme.
- b) Training Course. The cost per person of a complete training course, will be approximately P 3,100⁵, and would be completed within one year.

On-the-job assistance is heavy on adviser resources and costs per building construction firm will be high. However due to *potentially* high levels of

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Only 9 Opportunity Category contractors are included in the 1991 Tender Board registration records, this would suggest that DABS may have a separate list of contractors suitable for small building and maintenance work.

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Based on 'Promatra Training Services (Pty) Ltd' of South Africa, 1991 rates for an eleven course programme.

employment in the construction sector, it is expected that job creation costs through the CAP will be relatively low.

4.2 Cost Recovery. BOCCIM would like to see a cost recovery plan which would gradually lead up to total cost recovery after say three years.

	CAP Costs ⁶	No. of Contractors	On-the-job Income	Advisory Income
YR 1	P340,584	25	37,500	-
YR 2	334,723	40	60,000	20,000
YR 3	358,154	60	90,000	30,000

The above assessment assumes a fee charge of 0.5% of a minimum turnover of P25,000 per month. These turnover rate is ambitious, so the shortfall of P238,154 at the end of Year Three may increase. However, if TBBA-claimed potential membership of 900 small construction firms pay a nominal P100 annual subscription, the shortfall will reduce to P148,154. The amounts of P20,000 and P30,000 in Years Two and Three are estimates of possible income from charges for advisory services to members and for sale of goods such as forms of contract and other sales and services.

In Year Four, consultant input may continue on a reduced basis, providing only training of trainer and advisory services. It is expected that subscription and other income will be sufficient to finance secretariat costs in Year Four.

4.3 Contractor Association-Based CAP. The consultant believes that revenue from the CAP cannot reasonably be expected to cover all the assistance costs. Income should be sufficient only to meet the costs of developing and running an effective, sector-specific representative association and secretariat. If this is the aim, it is anticipated that client contractors may be more willing to pay CAP fees.

4.4 Willingness to Pay for Assistance. Meetings with TBBA and ABCON were intended to confirm a willingness to contribute and to confirm an appropriate method of charging client contractors for CAP services. TBBA agreed in principle to a charging system of approximately 0.1% of monthly turnover during an earlier meeting.

The ABCON Chairman was doubtful if collection of more than nominal commitment fees would be feasible. It was unfortunate that a TBBA meeting could not be arranged. Peter Riley of USAID Botswana offered to follow-up with the TBBA on this matter. Dr Charway of IFS was quite adamant, in his view client contractors would not expect to pay anything.

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Assumes Budget Option 1, see Annex II.

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Meeting convened by BOCCIM on February 28, 1992, attended by representatives of TBBA, Will Cain (BOCCIM), Richard Martin (RHUDO/E&SA), and Peter Riley (USAID).

5. Programme Funding

The contractor shall consult with USAID and BOCCIM to determine the possible source of funds from BPED to finance the program.

BOCCIM have a budget of US\$ 450,000 to be spent over 4-5 years on on-site consultancies. This to be spent on assisting 75 firms for approximately eight weeks each. BOCCIM propose to use part of the funds to benefit other industries and estimate only 25-35%⁸ will be available for the construction sector.

There are no other funds for this item, so US\$ 112,500 to 157,500 is assumed to be available for construction assistance or training.

6. Technical Training and Assistance Modes

The contractor shall identify alternative modes by which technical assistance and training can be delivered, and prepare an approximate budget for each option. As a part of this activity, the contractor shall consult with parties such as the Ministry of Local Government, Lands and Housing, the Ministry of Labour, and the Botswana Housing Corporation whose cooperation may be required in implementing the program.

Present and possible future training and assistance programmes are described here to demonstrate how the 'training' or the 'on-the-job assistance' approaches fit into the overall picture.

6.1 Botswana Housing Corporation. Richard Martin, RHUDO/ES&A Senior Technical Adviser visited BHC in January 1992 and it was explained that BHC have a policy to support small citizen contractors by awarding contracts of 4-15 houses to firms with proven records. Sometimes BHC negotiate tenders where pricing is erratic. There are also advance credit arrangements which facilitate purchasing of materials. Contractors receive technical training in quality control which is financed by a 10% grant from Government. No further information was available from the caretaker management at BHC.

This approach is financed by BHC and GOB and would not benefit from further external assistance.

6.2 Integrated Field Services (IFS). IFS has been providing free support services to citizen building contractors since 1987. Funding is provided through GoB but has been insufficient to reach its target group estimated at 900 small registered and unregistered citizen building firms. The main role of IFS has been to provide workshops in Gaborone and other main towns, covering aspects of construction management with particular accent on cost estimating. Some citizen contractors are provided with free advisory services on an as-required basis.

A meeting was held with the IFS Principal Dr Charway. Dr Charway's employment was until recently supported by the Commonwealth Secretariat, he is now locally employed and expects to leave Botswana at the end of 1992, he is not aware of plans to replace him. There are only two other specialist technical officers (electrical and plumbing). IFS have an ambitious programme of services and workshops. It was not possible to discuss the future plans for IFS with the Ministry of Commerce and Industry. In the light of later proposals in this report, this may be an essential next step.

The IFS assistance approach is similar to the Matrix-devised CAP, but has not been able to achieve its goals due to lack of finance and loss of instructors to higher-income employment. Expenditure estimates would be very high if the full extent of the IFS programme was to be comprehensively covered country-wide. IFS workshops are well attended, a recent one in Francistown was attended by 83 contractors.

It was agreed that continued workshops and advisory services delivered by IFS would remain an important service for the development of the sector, and would supplement the proposed assistance programme.

It is conceivable that IFS could be more effective with increased funding and staffing. However, as a GOB organization it is unlikely that their clients would receive the business- and profit-orientated assistance and advice they require.

6.3 Madirelo Training and Testing Centre. MTTC currently have 600 building apprentices, and they process 1,200 to 1,500 trade tests at three levels every year. At present there is a backlog of some 3,000 candidates requiring trade tests. This is partly due to staff shortages (75% of required strength), but it is also a positive signal that the construction sector is attractive as a potential employer and career.

Two years ago MTTC were to commence an urgent crash programme to provide large numbers of artisans. Skill shortages at that time had resulted in an unavoidable need to import skilled and semi-skilled workers from other countries in the region. Two years later the crash programme is about to commence and will produce 1,500 skilled workers over two years. With the currently depressed market the solution to the original problem now runs the risk of resulting in an over-supply.

There is a need for any CAP to maintain close contacts with MTTC as a support organization to the industry. MTTC are planning a new course which will concentrate more on entrepreneurial development and will include identification and testing to establish the potential of existing students.

6.4 Brigades Development Centre (BRIDEC). Started in 1965, BRIDEC aims to provide employment and training to students who are unable to attend secondary school. Approximately 1,800 trainees learn skills to National Craft

Certificate B and C level. Financed by GoB, BRIDEC is unable to maintain adequate numbers of local qualified instructors due to more attractive salaries offered by private contractors.

BRIDEC is a major provider of technical vocational training to school leavers who have failed to gain secondary school places. Their activities have a rural orientation and they provide construction training on classroom construction for the Ministry of Education and building projects for the Botswana Defence Force, local councils and some private clients. In 1990 BRIDEC was short of skilled trainers, regularly losing staff to the private construction industry. Now they have the trainers but their skills are inadequate. They rely heavily on donor-supported technical assistance.

BRIDEC currently has 850 building trainees which by 1997 will increase to 1,100. In 1997 it is expected that there will be 20,000 Junior Certificate (JC) level school leavers. BRIDEC is required to increase its vocational training intake proportion from 9% to 50-60% of school leavers by that time. At present there is no industry placement officer because there are very few jobs in the rural areas. BRIDEC plan to improve liaison with the industry to increase employment opportunities for their trainees.

Senior Technical Education Officer Leo Bacher and Senior Technical Training Officer Ambrose Chongo were supportive of the proposed on-the-job CAP. Chongo has worked closely with IFS who have provided workshops for BRIDEC building brigades on specific subjects. They considered the formal training institutions were meeting the requirements of the industry, but more needed to be done to increase private sector jobs.

6.5 Botswana Polytechnic. The Polytechnic concentrates on higher technical qualifications. Graduates generally have aspirations outside the scope of the small developing contractor.

6.6 Tswelelo (Pty) Ltd. A finance and consultancy company owned jointly by the Botswana Development Company, National Development Bank and the Netherlands Investment Bank, with technical assistance provided by the German Government. Construction sector support is provided to selected building contractors (9 companies in 1990), and the main thrust is strict financial control. Contractors pay an annual fee plus a variable financing charge. Tswelelo facilitates the purchase and pays for building materials on their clients' contracts, and they provide performance bonds and financial advances of up to P 0.5 million.

6.7 Private Sector Training Companies. There are at present no known private firms providing construction training services in Botswana, but there is interest from South African-based companies, some of which have experience in training individuals in the classroom, and on construction projects. Entrepreneurial Development (Southern Africa) and Promatra Training Services are firms which have shown interest in Botswana.

Fees are charged to participants, normally on a course basis, and courses are broken-up into sessions which typically last from one to four hours. Fees, e.g. for Promatra, vary from R100 to R1,200 (\$36-436) per course, and up to

R3,900 (\$1,418) for all the construction courses. Courses are often held outside normal working hours to make it easier for working contractors to attend. Costs for the training approach are described further in Section 8. below.

6.8 Matrix Development Consultants. Matrix participated with RHUDO in a study of the Botswana construction sector in 1990 and after evaluating existing institutional and support programmes, it was concluded that formal training facilities were adequate but failed to provide the business support necessary for the development of the industry.

The study recommended an on-the-job assistance programme concentrating on the need for a business- and profit-orientated assistance approach. The study recommended that advice leading to cash gains was more likely to be retained by small building contractors. The recommendations were for a longer-term assistance with regular monitoring of progress and achievements, and a concentration on market development.

Construction advice would be delivered by advisors drawn either from the construction industry or from professional consultants with specific skills related to the industry. The programme would include informal workshops to bring client contractors together to meet key industry players and for group discussions.

6.9 Possible Linkages. IFS, Madirelo and BRIDEC are the main organizations participating in development of the smaller scale construction industry in Botswana. An on-the-job assistance programme should maintain strong links with Madirelo and Briddec, but would ideally work together with IFS.

IFS have considerable knowledge of the general problems of a target group of approximately 900 small firms, and have practical experience running basic skill and management workshops. They have provided advisory services and have visited contractor's sites in the major Botswana towns. Due to the strong relationship with TBBA, IFS has been able to provide an effective link between the Ministry of Commerce and Industry and the small contractors.

7. Work Site for Training/Assistance

The contractor shall be responsible for meeting with representatives of the Botswana Housing Corporation (BHC) or other appropriate entity to work out exact arrangements for securing an appropriate work site and construction contract to serve as the basis for provision of the proposed on-the-job technical assistance and training program for small citizen contractors.

In 1990 it was recommended that in the absence of a more suitable training base, and to optimize adviser time, the proposed on-the-job assistance would best be provided by bringing a number of client contractors to work on one site. BHC at that time had a near monopoly for residential construction work in Botswana, and though no commitments were made, the possibility of new

construction projects related to the Accelerated Land Servicing Project (ALSP) appeared good.

BHC already have a policy to support local contractors, it may therefore be preferable to supplement BHC's efforts by introducing a new on-the-job assistance programme rather than join them in their on-going programme. This approach was supported by Brian Davey the Acting Development Manager of BHC. No 'exact' arrangements can be made with BHC at the present time. Client contractors who are currently working on BHC contracts, or who may work with them in the future, will benefit from both support programmes.

The Director of Architecture and Building Services (DABS) confirmed the proposed CAP would have GoB support to ensure eligible candidates were provided with opportunities to tender for public sector projects.

Architects Anderson and Anderson considered a market would be available for the type of contracts that would suit smaller local contractors,, e.g. small private individual or groups of houses. They confirmed that they were receiving increased enquiries for designs for one-off houses.

The proposed CAP aims to increase workloads, turnover, workmanship quality and employment levels. Increases are more likely to be realized by selecting client contractors who have an on-going work load, or proven access to work, and who can demonstrate minimum levels of capability and aptitude to grow. Eligibility will be discussed further under 'client contractor selection'. Matrix experience¹⁰ has shown that a CAP can provide immediate support on existing client contractor contracts and that growth can be achieved, or at the very least, financial failure or delays can be avoided.

An important component of the proposed CAP is the marketing of client contractor services. Apart from company profile preparation and general client contractor marketing to consultants and prospective public and private sector clients, CAP advisers maintain contact with prospective clients on behalf of the total group of client contractors to encourage greater awareness of citizen contractor capability. As a service to the group, the proposed CAP will bring tender and prequalification opportunities to the attention of client contractors. Eventually contractors will appreciate the need for active marketing and regular response to tender opportunities.

Finally, it should be recorded that in 1990 with the implementation of the ALSP, a construction boom was anticipated as new serviced residential, public and commercial serviced plots became available. This boom has not occurred as expected. Reduced foreign exchange earnings, increased interest rates, and the temporary removal of BHC as a major client has brought a sudden slump in construction activity. However, indications are that residential and commercial plots will soon be released¹¹, and that current high rentals would suggest that demand will ensure plenty of construction activity.

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Swaziland Construction Assistance Programme, January to May 1992.

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Discussions with ALSP consultants Euroconsult BV June 5, 1992.

Reduced access to tender opportunities may have a negative impact on a proposed CAP in the short term. However in the medium term large companies with high overheads may be forced to reduce their commitments or close business in Botswana, possibly opening up the market for smaller firms.

8. Recommendation

The contractor shall recommend which technical assistance and training mode(s) are likely to be most cost effective and shall identify suppliers of such training expertise.

8.1 Technical Comparison. The main comparison here is between course-orientated contractor training, and an on-the-job assistance programme. Existing institutional courses will continue to provide valuable support for the development of the industry.

Most training organizations run courses where trainees attend sessions of varying length, covering all stages of the construction process. BOCCIM have received a proposal from 'Entrepreneurial Development (Southern Africa)' in September 1991, but details were not provided for this review. Another South Africa-based company providing training courses is Promatra Training Services (Pty) Ltd.. Samples of some of the services provided by these two firms form the basis of a comparison with the Matrix Development Consultants' technical assistance approach.

The table on the following pages compares the two main modes of technical assistance or training, the aims, the constraints and the opportunities:

CONSTRUCTION TRAINING COURSES	ON-THE-JOB CONSTRUCTION ASSISTANCE
<p>TARGET GROUP:</p> <ul style="list-style-type: none"> - Trade-skilled individuals - Trade skills plus management experience. - Contract management 	<ul style="list-style-type: none"> - Small- to medium-size building construction companies who show an aptitude and capability for growth..
<p>DURATION:</p> <ul style="list-style-type: none"> - Introduction 10 weeks - Intermediate 16 weeks - Advanced 24 weeks 	<ul style="list-style-type: none"> - One to five years

CONSTRUCTION TRAINING COURSES	ON-THE-JOB CONSTRUCTION ASSISTANCE
<p>MAIN AIMS OF APPROACH:</p> <ul style="list-style-type: none"> - To learn through lectures and group discussion all aspects of the construction process including business concepts, calculation, estimating, practical building skill knowledge, business management, and construction planning and programming. 	<ul style="list-style-type: none"> - To identify specific problems and needs on a one-to-one, as-required basis, and by demonstration and advice, recommend actions and solutions, and monitor results. - To concentrate effort on problems and needs aimed at reducing losses and increasing income.
<p>CONSTRAINTS:</p> <ul style="list-style-type: none"> - Concentrates on needs of individuals rather than businesses. - Does not monitor contractor development and improvements. - Requires participants to spend time away from their business or to use their spare time. - Contractors are often intimidated by formal classroom lectures and discussions. - By covering areas of already-established knowledge and skills, contractors may lose interest. - Increases skills of individuals, but does not ensure sector growth. - Difficult to recruit suitable local instructors. - A certificate does not guarantee employment or knowledge retention. - Skills development through existing training institutions has failed to develop sector. 	<ul style="list-style-type: none"> - Difficult to economically deliver assistance to large numbers of businesses over large geographical areas. - Success highly dependent on skills and communication qualities of construction advisers.

CONSTRUCTION TRAINING COURSES	ON-THE-JOB CONSTRUCTION ASSISTANCE
<p>OPPORTUNITIES:</p> <ul style="list-style-type: none"> - Allows a large number of individuals to benefit at minimum cost. - Provides possibility for a long-term training base, by training trainers. - Increases the pool of skilled construction operatives and managers. - Particularly suitable for advancement of staff from large companies. 	<ul style="list-style-type: none"> - Assistance programme only works with eligible contractors who meet minimum criteria for growth. - Improves business-orientated decision making by demonstration rather than training. - Establishes one-to-one business trust. - Knowledge related to cash income is more likely to be retained. - Does not target areas of established knowledge. - Actual business growth easily monitored. - Identifies common problems, provides group representation to clients and consultants. - Improves client/consultant relations by careful cost and progress planning, and on-site workmanship. - Assists companies to develop markets. - Helps contractors to make prudent decisions regarding material procurement, and labour and plant deployment. - Provides an advisory service to more developed businesses, or for those facing specific problems. - Allows improved knowledge of contract conditions by practical application. - Provides a basis for the establishment of a sustainable contractor association.

8.2 Assistance or Training Programme Delivery. BOCCIM are the sponsors of the proposed programme, they also wish to increase their proposed construction sector membership. GoB (DABS/IFS) and the contractor's associations are also interested in expanding the strength of the wholly citizen-owned construction industry.

ABCON represent mainly international and expatriate companies, and though interested in a small citizen contractor membership, they are concerned that ABCON management should remain with the more experienced representatives of larger firms.

The target group is mainly represented by TBBA and is presently assisted by IFS. It is therefore recommended that training or assistance be:

- Sponsored and managed by BOCCIM
- Delivered through TBBA
- Provided by IFS with support from consultant construction advisors

IFS have offices and secretarial facilities, a meeting room, telephone, etc.. They also have GoB technical and support staff which can actively participate in the training or assistance programme. If an on-the-job assistance programme is selected, the IFS technical staff will benefit through counter-part experience with construction assistance advisers, provide continuity and follow-up in the periods between consultant visits, and continue with on-the-job assistance after the consultant advisers have completed their assignment.

This recommended structure where IFS would work together with the consultant construction assistance advisers, would require further discussion and development with IFS. It would also require the agreement and support of the Ministry of Commerce and Industry. Dr Charway's continued participation is important and it would be advisable to discuss his continued employment with his sponsors, the Commonwealth Secretariat.

8.3 **Financial Comparison.** The review period did not permit a detailed analysis of alternative modes of the training systems delivered by commercial training companies and their related costs. The majority of firms who deliver these services in the region, are South Africa-based. It also has to be appreciated that the consultant, being the Project Director for the RHUDO/E&SA/USAID Regional Emerging Construction Assistance Programme, has previously evaluated the various methods for developing small- and medium-size building contractors in a number of Southern Africa countries, and has recommended adoption of an on-the-job assistance as the most suitable method for business-orientated development of the sector. The following financial evaluation therefore compares the costs of formal training and on-the-job assistance with costing details that were available to the consultant at the time of the review.

8.3.1 Formal Training (Promatra). Taking the rates of a training firm such as Promatra, course attendance fees will cost approximately R3,900 (US\$ 1,418) per person for a course covering course preparation, marketing, obtaining tender documents, site investigation, quantities, estimating, profit and overheads, tender preparation, planning and programming. These fees are for once-only sessions with no follow-up or group discussion work, and no on-site work (Promatra may have other courses which include on-site follow-up work). The coursework will be completed within one year. Promatra offer discounts for larger groups.

8.3.2 On-the Job Construction Assistance Programme (Matrix).

Option One

The following is a summary of estimated costs based on Matrix contract rates for three years¹²:

Total for Year One	US\$ 183,618	(P399,170)
Total for Year Two	US\$ 185,430	(P403,110)
Total for Year Three	US\$ 198,410	(P431,326)

Three Year Budget US\$ 567,460

In Year One the cost of assisting 30 building construction firms will be approximately P13,305 (US\$ 6,120) per annum per firm.

The above figures exceeds the BOCCIM budget by over \$400,000.

Option Two

If IFS can provide construction advisers and local transport, a second option can be proposed. Summary costs, with the deduction of costs of a Matrix-employed local adviser and transportation, would be:

Year One	US\$ 145,503	(P316,311)
Year Two	US\$ 142,438	(P309,648)
Year Three	US\$ 152,409	(P331,324)

Three Year Budget US\$ 440,550

In Swaziland after five months of the CAP in 1992, the average increase in monthly turnover of fifteen client contractors was 10%. This is equivalent to an increase of almost US\$1,000 per contractor per month. Though this rate of increase cannot be guaranteed, it does show that there can be short-term benefits from the assistance programme.

If this approach can be agreed with IFS, a one year programme costing \$145,503 would provide:

- (i) On-the-job assistance to 25 construction firms to enable them to:
- Prepare and present a company profile to prospective clients and consultants.
 - Research and respond to tender opportunities.
 - Be able to complete a prequalification application.
 - Meet and discuss financing arrangements with his banker.

¹²

These costs are based on rates included in the Matrix/RHUDO consultancy contract. See ANNEX II for details. The contract is for a three year period commencing September 1991 with an option for USAID to extend for a further two years.

- Prepare a computer-based works programme, a cashflow and a procurement plan for materials.
- Write letters confirming or requesting instructions.
- Measure work and present claims for adjustments.
- Value work and present claims for payment.
- Submit claims for justifiable extensions of time.

(ii) Training of trainer services to IFS field staff.

(iii) The groundwork for the establishment of an effective TBBA.

8.4 Financial Options. Technically it has been shown that the training and assistance modes of support are different, the expected results are different, and the costs too are different. With the BOCCIM budget ceiling of US\$ 150,000, the options are:

- (a) Approximately 100 individual participants in a training programme
- (b) A one year on-the-job assistance programme for up to 25 construction companies

9. Implementation Proposal

The contractor shall prepare a plan of action to be followed by USAID and BOCCIM in order to establish the training program.

9.1 Formal Training. The training of approximately 95 individual builders, can be initiated by preparing terms of reference and by inviting technical and financial proposals from suitable training organizations. Entrepreneurial Developments (Southern Africa) and Promatra Training Services (Pty) Limited have been identified as two possible firms.

9.2 On-the-Job Construction Assistance Programme (CAP). The Matrix CAP can commence immediately. The following plan of action would establish the programme in Botswana:

9.2.1 Office and Personnel. The CAP will be sponsored by BOCCIM, and delivered through TBBA from the IFS offices (this is a similar structure to the USAID construction assistance programme designed for Zimbabwe).

The Programme Director will visit every three months to monitor progress and to prepare and hold informal workshop gatherings. A Senior Construction Adviser who has been approved under the Matrix IQC with RHUDO/ USAID (and who is based in Swaziland), will spend 12 working days in Botswana every month. He will either be supported by a fulltime locally-employed construction adviser, or he will work with advisers already working with IFS.

Business development advice can also be provided by BOCCIM Outreach Workers¹³.

To reduce costs, the possibility of providing experienced volunteers to provide the on-the-job assistance was investigated. USAID Zimbabwe are currently recruiting volunteers from the British organization Voluntary Service Overseas (VSO). VSO are not represented in Botswana.

Discussions were held with Peace Corps Director Maureen Carroll. It will take approximately twelve months to recruit suitable construction advisers, and the Director was concerned that Peace Corps construction workers did not adapt well to the British construction methodology and contractual system which is adopted in Botswana. This is confirmed by unsuccessful attempts to recruit suitable Peace Corps construction advisers in Swaziland.

BOCCIM, TBBA or IFS will provide office space and a telephone and message service to CAP personnel and, subject to agreement, facilities available to client contractors. The office will be established as a resource base and will eventually include an association secretary, computer and printer and a reference library.

9.2.2 Number of CAP Client Contractors. Each client contractor will have contact with an adviser at a fixed time every two weeks. The contact period will be for either a quarter or half a day, depending on needs. Experience has shown that 50% of clients will require half-day assistance. On this basis, and with assistance limited to the Gaborone area, twenty five client contractors can participate in the CAP during Year One. If the programme extends for a second year the number could increase to fifty client contractors.

Despite careful screening, it can be expected that 15-20% of clients will fail to respond to the CAP. Failure will be indicated by non-attendance at agreed contact times, persistent refusal to follow advice, or disinterest in responding to market opportunities. An agreement will be entered into between the client contractor and BOCCIM/TBBA which will set out conditions including the extent of the assistance to be provided and fees to be paid. A client contractors who fail to gain from the assistance programme or who are considered non-responsive for other legitimate reasons, will be free to leave the programme, and to make way for new clients.

9.2.3 The CAP Target Group. There is a need to respond to the construction requirements resulting from the (ALSP) which is currently providing new serviced residential and related public building plots for private development. Without the proposed CAP most new construction work will continue to be carried out by international firms.

The need to carry out a detailed survey of the distribution and capacity of the building contractors was identified in 1990 and this information is still

13

BOCCIM charge their clients P100 per hour (US46) for outreach services. These charges have not been included in the Matrix estimates.

limited. The TBBA and IFS claim there are 900 small- to medium-size building contractors in Botswana. 1991 Central Tender Board details provide the following details which help to establish a target group of 100% citizen-owned building construction companies for a CAP:

<u>Category</u>	<u>Expatriate</u>	<u>100% Citizen</u>	<u>Location</u>
E/unlimited	25	2	Gaborone
D	5	4	Gaborone
C	4	11	Gab/Lobatse (5) Francistown (2) Ghanzi (2) Remote (2)
B	-	16	Gaborone (9) Francistown (4) Kanye (3)
A	-	30	Gaborone (16) Francistown (3) Remote (11)
O (opportunity)	-	9	Gaborone

The category limits have recently been changed¹⁴:

Category	E	unlimited
	D	up to P4.0 million
	C	P2.0
	B	P1.2
	A	P0.45
	O	P0.15

If the construction assistance programme is established initially in Gaborone, selection of building contractors would be from the 61 contractors currently registered in categories A-D. In three years all these firms, plus new firms that may become registered, would be able to benefit from the proposed assistance programme. Provided they meet the eligibility requirements and respond to the on-the-job assistance.

Discussions with the ABCON Chairman confirmed that this was a realistic starting point, but he considered there were a number of firms who were not registered, but were also majority citizen-owned, who may also be eligible. Before this 'majority citizen-owned category can be considered, the '100% citizen-owned companies' will be evaluated.

¹⁴

Details provided by Dr Charway, IFS.

9.2.4 Client Contractor Selection. Approximately 25 building contractors will join the CAP in Year One. Unless agreed to the contrary, specialist subcontractors will not be included. Building contractors with potential for growth will not be the very small firms. Successful candidates will be those that satisfy the following selection criteria.

Eligible client contractors will:

- Have an average minimum monthly turnover of P 25,000 and a maximum P 200,000¹⁵.
- Have, or have ready access to, a separate office with a telephone and secretary.
- Be an owner director/partner/manager, solely in the business of building construction.
- Own at least one bakkie and one concrete mixer.
- Have a separate business bank account.
- Be based within 25 kms of Gaborone.
- Be willing to contribute to the assistance programme and to enter into an agreement with BOCCIM or TBBA.
- Employ between at least 4 permanent staff.
- Be a paid-up member of TBBA¹⁶.
- Not already receiving assistance through the Tswelelo or other contractor assistance programme.

TBBA and BOCCIM will, by newsletter or circular to their members, advise them of the CAP and the eligibility criteria. Applications will be invited and screened jointly by BOCCIM/TBBA/Matrix. From this pool of eligible contractors, 25 client contractors will be random selected for initial inclusion in the CAP. New contractors will be able to apply for inclusion at anytime, but random selection would only be made when the CAP finds additional capacity. It would not be appropriate to overlap with Tswelelo clients (see 6.6 above), as this would be a duplication of effort.

The Matrix construction advisers will interview each candidate client contractor to verify suitability and eligibility. Successful candidates will enter into an agreement with BOCCIM/TBBA.

15

Mr Whyte Chairman of ABCON considered the upper limit would be appropriate for a contractor constructing four houses.

16

This amount will have to be agreed with TBBA. It may be appropriate for a portion of the TBBA subscription to be paid to BOCCIM.

Due to the non-availability of representatives of TBBA, none of the above criteria could be discussed or agreed. This remains a priority.

9.2.5 **Reference Group.** The CAP will be guided by policies and decisions supported by a reference group representing various interested parties. It is recommended that representatives be selected from the following organizations:

BOCCIM
Assoc. of Botswana Building and Civil Engineering Contractors
Tshipidi Badiri Builders Association
Integrated Field Services, Min. of Commerce and Industry
Madirelo Training and Testing Section
Brigades Development Centre
A commercial bank
USAID
DABS
BHC
Secretary to Central Tender Board

9.2.6 **Matrix Methodology.** The on-the-job assistance programme devised by Matrix Development Consultants operates on a one-to-one basis with selected client contractors. It is essentially business- and profit-orientated and delivered by advisers experienced in commercial building construction. Advisers spend at least a quarter or half a day every two weeks with each client contractor either on site or in his office, depending on his current needs. Site visits will coincide with consultant site meetings wherever possible.

The Matrix CAP aims to identify problems and weaknesses and to recommend methods for improvement which result in financial gain and improved profits. Small contractors in Botswana have limited knowledge of formal contracts, and are often taken advantage of by their clients and particularly by supervising consultants. The regular reporting system adopted by Matrix will identify the problem or need, recommend a solution, advise on the action to be taken, and record the result of the action. Every month, the construction advisers will up-date baseline data to record movements in turnover, plant, staff, new contracts, etc..

Contractors who progress through the on-the-job programme will require reduced contact and will be encouraged to use the CAP as an advisory service. This may occur after one or three years, it is not necessary to be specific on this time period. In time, the advisory service will become a normal revenue-earning service provided by a properly resourced contractors' association.

Informal workshops will be held every three months and will coincide with monitoring visits by the Program Director from Nairobi. The first workshop will be a gathering of selected client contractors to reconfirm the CAP aims and to provide a forum for discussion. Further workshops will focus on specific industry-related matters such as banking and finance, extensions of time, increased cost claims, materials procurement, etc..

Each client contractor's business affairs are confidential and private and will not be divulged to anyone. CAP advice is provided in the contractor's best interest but the contractor remains fully and legally responsible for all his business decisions.

9.2.7 CAP Aims. The CAP is available to building contractors of varying ability and varying workload. There will be times when a client contractor may have little or no work. The CAP approach improves and corrects its clients procedures and actions, it will not train them or provide advice in fields which are already familiar to them. Unlike the training approach a specific field will not be comprehensively covered by the CAP. This means that no target dates or stages can be pre-programmed, i.e. the CAP will not be able to say that, at a particular time, a contractor will be fully conversant in, say tender preparation.

However, within one year of a contractor joining the CAP he is expected to be able to:

- Prepare and present a company profile to prospective clients and consultants.
- Research and respond to tender opportunities.
- Be able to complete a prequalification application.
- Meet and discuss financing arrangements with his banker.
- Prepare a computer-based works programme, a cashflow and a procurement plan for materials.
- Write letters confirming or requesting instructions.
- Measure work and present claims for adjustments.
- Value work and present claims for payment.
- Submit claims for justifiable extensions of time.

The Matrix CAP is a new programme, it has a flexible approach and it will continue to develop to suit different clients and different countries. The main aims are to improve:

- turnover and profits.
- employment levels.
- plant and other resources.
- the size of largest contract.
- workmanship quality.
- completion times.
- market opportunities.

The construction advisers will assist client contractors to develop their markets and to focus on alternative private or public sector clients. Each

client contractor will develop and present a company profile to prospective clients. The advisers will encourage responses to advertised tender and prequalification opportunities.

Matrix advisers will make representation on behalf of the group of client contractors to GoB, parastatal and private organizations and consultants, to improve access to tender opportunities. Such representation will concentrate on the group of client contractors who respond well to the assistance programme and to those who would benefit from an increased workload.

Performance of the construction assistance programme will be affected by a general down-turn in the construction market. However, a reduction in workload could result in the larger international firms leaving Botswana, opening up new markets for local contractors.

9.2.8 Longer-term CAP Aims. The on-the-job programme will develop into an advisory service for those client contractors who find the regular assistance has achieved its aims, and who would prefer to call on the construction advisers for advice on specific subjects. The construction advisers will assist in the possible provision of a reference library, computers and software, and for arranging meetings with other contractors to discuss topical or common problems affecting the industry. The reference library will be funded from contractor association income.

In other words the construction assistance programme will evolve into a provider of the services which would normally be expected from a properly organized contractors' association. This may not all be possible in a short one-year programme, but after a three year period the requirements of the on-the-job assistance would be re-assessed and if a need can be substantiated, a delivery method will be devised to ensure BOCCIM/TBBA will be able to recover the cost, or at least a major part of the cost. BOCCIM/ TBBA will also initiate plans to improve the collection of revenue through subscriptions and the sale of goods and services.

9.2.9 CAP Fees. Apart from annual subscriptions, client contractors will be required to pay a fee for CAP services. A standard payment would not be equitable for the differing sizes and capacities of the target group. Larger and busier clients require more adviser time and they should pay proportionally more. A client who has, for various reason, run out of work should not be discouraged by unaffordable fee payments.

A fee is proposed which will be based of 0.5% of the contractor's monthly certified payments. This amount will be assessed by the construction advisers/IFS/TBBA and advised to BOCCIM or the contractors' association for collection. The fee level needs to be discussed and agreed with TBBA.

9.2.10 Programme Duration. Proposals have been prepared for either one or three year options. Following agreement to the details in this report and implementation methodology, Matrix would immediately request the first reference group meeting to confirm the eligibility criteria. Invitations to interested contractors can be sent out immediately. The first screening will be carried out jointly by TBBA/IFS. This done, the first 25 client

contractors will be selected and interviewed by Matrix. The on-the-job assistance can commence immediately the first client contractors have been selected.

The assistance programme proposed by Matrix is a rolling programme involving client contractors of varying ability and stages of development. Ideally a contractor should be assisted through a complete contract cycle and into the commencement of his next contract. Three years is estimated to be the time period required to assist approximately sixty construction firms and to put a self-supporting contractors' association on its feet.

The alternative one year programme will assist 25 contractors to achieve the targets detailed in 9.2.7.

9.2.11 Other CAP Issues. The CAP will also address the following:

- a) The programme will support free and open competition without financial and other concessions.
- b) Construction advisers will contact financial and insurance institutions on behalf of the group of client contractors, to develop credit arrangements with commercial banks, and access to performance bond services which reduce the need for collateral security.
- c) Large foreign-owned contractors obtain credit arrangements and low prices for bulk materials, which are not generally available to the smaller citizen contractors. The construction advisers will investigate methods for improving the supply service to client contractors, and for supporting the citizen-owned material and component supply and manufacturing organizations.
- d) Following the problems at the BHC, the construction industry has gone into recession. Consultants, contractors and building material manufacturers and suppliers have all suffered, and some firms may go out of business. GoB are apparently intent on getting BHC back into business as soon as possible, but they have failed to appreciate that the monopoly enjoyed by BHC has been a constraint to the growth of the private housing industry on which citizen contractors will gain experience and develop. Competition in the housing market will help to meet the housing demand and will in time help to strengthen the Botswana construction industry. The CAP will liaise with GoB to ensure that opportunities for private sector construction continue to be available.

Integrated Field Services - Annual Work Plan 1992/93

The following is a summary of major activities:

- Consulting and advisory services to small and medium scale citizen building contractors, electrical contractors and brick/block manufacturers - Gaborone (continuous).
- Mini-construction management workshop for citizen contractors on estimating and tendering procedures - Gaborone (Apr 92)
- Building materials testing - Francistown (continuous).
- Low-cost housing committee meetings - Gaborone (annual).
- Remedial construction management workshop - calculating concrete and blockwork quantities (May 92) - Gaborone.
- Monitoring/fact finding northern and southern districts (May 92).
- Construction remedial workshop estimating (May 92) - Gaborone.
- Site visits to citizen contractors - Mochudi, Molepolole, Ramotswa (Jun 92).
- Construction management workshops (Jun 92) - Kasane/Francistown.
- Remedial workshop on estimating (continuous) - Gaborone and other locations.
- Construction management workshop project planning and concrete quality control (Jul 92) - Kanye.
- Monitoring/fact finding in central districts (Jul 92).
- Construction management workshop on project planning (Aug 92) - Selibi-Phikwe.
- Monitoring/fact finding (Aug 92) - Francistown (continuous thro' remainder of year to various areas).
- Construction management workshop on site on concrete technology (Sep/Oct 92) - Gantsi/Tsabong.
- Site visits to citizen contractors on BHC/CTB/local council contracts in Central District (Sep 92).
- Ditto to Chobe District (Nov 92).
- Continuing advisory services and workshops in various locations (remainder of year)

RECAP - BOTSWANA - BUDGET ESTIMATE - OPTION 1

ANNEX II

<u>TOTAL</u>	<u>WORKDAYS</u>			<u>EXPENSES</u>			
<u>Month</u>	<u>Input</u>	<u>Days</u>	<u>Rate</u>	<u>Cost</u>	<u>Item</u>	<u>Rate</u>	<u>Cost</u>
Oct 92	Contractor selection						
	GJ	13	529.65	6,885.45	Carhire	55	770
	AA	7	485.50	3,398.50	Airfare	550	1,100
					Per diem	114	2,166
							<u>14,319.95</u>
Nov 92	On-the-job start-up/Initial workshop						
	GJ	13	529.65	6,885.45	Airfare	860	860
	AA	24	485.50	11,652.00	Per diem	115	4,600
	L/A	F/T		2,000.00	Carhire	55	1,540
					Local kms	.45	450
							<u>27,987.45</u>
Dec 92	On-the-job assistance						
	AA	13	485.50	6,311.50	Airfare	310	310
	L/A	F/T		2,000.00	Per diem	115	1,495
					Carhire	55	770
					Local kms	.45	450
							<u>11,336.50</u>
Jan 93	On-the-job assistance						
	AA	13	485.50	6,311.50	Airfare	310	310
	L/A	F/T		2,000.00	Per diem	115	1,495
					Carhire	55	770
					Local kms	.45	450
							<u>11,336.50</u>
Feb 93	On-the-job assistance/workshop						
	GJ	13	529.65	6,885.45	Airfare	860	860
	AA	13	485.50	6,311.50	Per diem	115	2,990
	L/A	F/T		2,000.00	Car hire	55	1,155
					Local kms	.45	450
							<u>20,651.95</u>
Mar 93	On-the-job assistance						
	AA	13	485.50	6,311.50	Airfare	310	310
	L/A	F/T		2,000.00	Per diem	115	1,495
					Carhire	55	770
					Local kms	.45	450
							<u>11,336.50</u>
Apr 93	On-the-job assistance						
	AA	13	485.50	6,311.50	Airfare	310	310
	L/A	F/T		2,000.00	Per diem	115	1,495
					Carhire	55	770
					Local kms	.45	450
							<u>11,336.50</u>

May 93	On-the-job assistance/workshop					
	GJ	13	529.65	6,885.45	Airfare	860
	AA	13	485.50	6,311.50	Per diem	115
	L/A	F/T		2,000.00	Car hire	55
					Local kms	.45
						20,651.95
Jun 93	On-the-job assistance					
	AA	13	485.50	6,311.50	Airfare	310
	L/A	F/T		2,000.00	Per diem	115
					Carhire	55
					Local kms	.45
						11,336.50
Jul 93	On-the-job assistance					
	AA	13	485.50	6,311.50	Airfare	310
	L/A	F/T		2,000.00	Per diem	115
					Carhire	55
					Local kms	.45
						11,336.50
Aug 93	On-the-job assistance/workshop					
	GJ	13	529.65	6,885.45	Airfare	860
	AA	13	485.50	6,311.50	Per diem	115
	L/A	F/T		2,000.00	Car hire	55
					Local kms	.45
						20,651.95
Sep 93	On-the-job assistance					
	AA	13	485.50	6,311.50	Airfare	310
	L/A	F/T		2,000.00	Per diem	115
					Carhire	55
					Local kms	.45
						11,336.50

Note: GJ - Jenkinson, AA - Artenstein, L/A - Local Adviser, F/T - full time

The above figures are based on rates included in the MATRIX/RHUDDO IQC. The rates are effective October 1 - September 30 each year and are subject to adjustments for 1992/93. Logistical costs will be shared between country projects wherever possible. The above includes 464 annual work days, and logistical costs account for 26% of total expenditure.

<u>Total for Year One</u>	<u>US\$ 183,618</u>	(P340,584)
<u>Total for Year Two</u>	<u>US\$ 185,430</u>	(P334,723)
<u>Total for Year Three</u>	<u>US\$ 198,410</u>	(P358,154)
 <u>Three Year Budget</u>	 <u>US\$ 567,460</u>	

Note: Over three years US\$ 40,040 will be spent on local transport and US\$ 84,233 on per diems. If these items could be funded separately, the Matrix cost would reduce to US\$ 443,187. Office space will be provided either by BOCCIM, the contractor associations or IFS for Matrix construction advisers. USAID will provide a suitable desktop PC, a notebook computer for field work, printer and software for use by CAP staff and client contractors for monitoring, project planning, etc..

RECAP - BOTSWANA - BUDGET ESTIMATE - OPTION 2

ANNEX III

<u>TOTAL</u>	<u>WORKDAYS</u>			<u>EXPENSES</u>			
<u>Month</u>	<u>Input</u>	<u>Days</u>	<u>Rate</u>	<u>Cost</u>	<u>Item</u>	<u>Rate</u>	<u>Cost</u>
Oct 92	Contractor selection						
	GJ	13	529.65	6,885.45	Airfare	550	1,100
	AA	7	485.50	3,398.50	Per diem	114	2,166
							<u>13,549.95</u>
Nov 92	On-the-job start-up/Initial workshop						
	GJ	13	529.65	6,885.45	Airfare	860	860
	AA	24	485.50	11,652.00	Per diem	115	4,600
							<u>23,997.45</u>
Dec 92	On-the-job assistance						
	AA	13	485.50	6,311.50	Airfare	310	310
					Per diem	115	1,495
							<u>8,116.50</u>
Jan 93	On-the-job assistance						
	AA	13	485.50	6,311.50	Airfare	310	310
					Per diem	115	1,495
							<u>8,116.50</u>
Feb 93	On-the-job assistance/workshop						
	GJ	13	529.65	6,885.45	Airfare	860	860
	AA	13	485.50	6,311.50	Per diem	115	2,990
							<u>17,046.95</u>
Mar 93	On-the-job assistance						
	AA	13	485.50	6,311.50	Airfare	310	310
					Per diem	115	1,495
							<u>8,116.50</u>
Apr 93	On-the-job assistance						
	AA	13	485.50	6,311.50	Airfare	310	310
					Per diem	115	1,495
							<u>8,116.50</u>
May 93	On-the-job assistance/workshop						
	GJ	13	529.65	6,885.45	Airfare	860	860
	AA	13	485.50	6,311.50	Per diem	115	2,990
							<u>17,046.95</u>
Jun 93	On-the-job assistance						
	AA	13	485.50	6,311.50	Airfare	310	310
					Per diem	115	1,495
							<u>8,116.50</u>
Jul 93	On-the-job assistance						
	AA	13	485.50	6,311.50	Airfare	310	310
					Per diem	115	1,495
							<u>8,116.50</u>
Aug 93	On-the-job assistance/workshop						
	GJ	13	529.65	6,885.45	Airfare	860	860
	AA	13	485.50	6,311.50	Per diem	115	2,990
							<u>17,046.95</u>

Sep 93	On-the-job assistance					
	AA	13	485.50	6,311.50	Airfare	310
					Per diem	115
						310
						1,495
						<u>8,116.50</u>

Note: GJ - Jenkinson, AA - Artenstein

The above figures are based on rates included in the MATRIX/RHUDO IQC with estimated increases for 1992/93. The rates are effective October 1 - September 30 each year. Logistical costs will be shared between country projects wherever possible i.e. airfares. The above includes 226 annual work days, and logistical costs account for 23% of total expenditure.

<u>Total for Year One</u>	<u>US\$ 145,503</u>	(P316,312)
<u>Total for Year Two</u>	<u>US\$ 142,438</u>	(P309,648)
<u>Total for Year Three</u>	<u>US\$ 152,409</u>	(P331,132)
 <u>Three Year Budget</u>	 <u>US\$ 440,350</u>	

Office space will be provided either by BOCCIM, the contractor associations or IFS for Matrix construction advisers. USAID will provide a suitable desktop PC, a notebook computer for field work, printer and software for use by CAP staff and client contractors for monitoring, project planning, etc..

PERSONS MET

ANNEX IV

BOTSWANA CONFEDERATION OF COMMERCE INDUSTRY & MANPOWER (BOCCIM)

Mr E M Dewah Deputy Director
Mr W M Cain Training Adviser

MINISTRY OF COMMERCE AND INDUSTRY
DEPT. OF INDUSTRIAL AFFAIRS - INTEGRATED FIELD SERVICES (IFS)
Dr A S Charway Senior Architect, IFS Construction

BRIGADES DEVELOPMENT CENTRE (MINISTRY OF EDUCATION)
Mr L Bacher Senior Technical Education Officer
Mr A Chongo Senior Technical Training Officer (Building)

MADIRELO TRAINING AND TESTING CENTRE (MINISTRY OF LABOUR AND HOME AFFAIRS)
Mr H Bacher Director of Apprenticeship and Industrial Training
Mr M Tibone Director Designate

EUROCONSULT BV
Mr J Metcalfe ALSP Urban Finance Specialist

ANDERSON & ANDERSON
Mr R Sampson Senior Partner

BOTSWANA HOUSING CORPORATION
Mr B Davey Acting Development Manager

ASSOCIATION OF BOTSWANA BUILDING AND CIVIL ENGINEERING CONTRACTORS
Mr L J Whyte Chairman

DEPARTMENT OF ARCHITECTURE & BUILDING SERVICES (MIN. OF WORKS, TRANSPORT &
COMMUNICATIONS)
Mrs Mmapula Johnson Director

PEACE CORPS
Ms Maureen Carroll Director