

Contract documents for small contracts in the road sector

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The Employment-Intensive Investment Programme (EIIP) is a sub-programme within the Recovery and Reconstruction Department (EMP/RECON) of the ILO. The EIIP is managed by the Employment Intensive Investment Branch (EMP/INVEST). Its objective, in the context of mainstreaming strategies for poverty alleviation, is to promote the use of local resource based technologies in infrastructure investments in developing countries and to strengthen their capacity to apply such technologies.

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Contents

List of abbreviations and definitions.....	vi
1 Background	1
<i>Implementation of roadworks</i>	<i>1</i>
<i>Private sector capacity</i>	<i>1</i>
<i>The labour-intensive approach</i>	<i>2</i>
<i>Forms of contract</i>	<i>2</i>
2 The key requirements.....	4
<i>Client interests</i>	<i>4</i>
<i>Contractor interests</i>	<i>4</i>
<i>Worker interests</i>	<i>5</i>
3 The Contracts	6
3.1 FIDIC CONDITIONS OF CONTRACT FOR WORKS OF CIVIL CONSTRUCTION, PARTS I AND II, 4 TH EDITION, 1987	6
<i>Advantages.....</i>	<i>6</i>
<i>Disadvantages</i>	<i>6</i>
3.2 THE WORLD BANK PROCUREMENT OF WORKS, SMALLER CONTRACTS, 1995	7
<i>Comparison with FIDIC</i>	<i>7</i>
<i>Conclusion</i>	<i>7</i>
3.3 ICE CONDITIONS OF CONTRACT, MINOR WORKS, 2 ND EDITION, 1995	8
<i>Main provisions</i>	<i>8</i>
<i>Limitations</i>	<i>8</i>
3.4 FIDIC SHORT FORM OF CONTRACT, 1998	9
<i>Main provisions</i>	<i>9</i>
<i>Settlement of disputes</i>	<i>9</i>
<i>Workers' rights</i>	<i>10</i>
<i>Late payments</i>	<i>10</i>
<i>Conclusion</i>	<i>10</i>
3.5 THE NEC ENGINEERING AND CONSTRUCTION SHORT CONTRACT (DRAFT 1998).....	10
<i>Scope</i>	<i>11</i>
<i>Main provisions</i>	<i>11</i>
<i>Possible improvements.....</i>	<i>12</i>
<i>Provisions for disputes.....</i>	<i>12</i>
4 Conclusions	14

List of abbreviations and definitions

CCSJC	Conditions of Contract Standing Joint Committee
ECC	Engineering and Construction Contract
FIDIC	Federation Internationale des Ingenieurs-Conseils
Force account	Work done by a directly-hired labour force
IBRD	International Bank for Reconstruction and Development
ICB	International Competitive Bidding
ICE	Institution of Civil Engineers (UK)
IDA	International Development Association
ILO	International Labour Organisation
Labour-based	<i>'Labour-based'</i> is used to describe a technology in which labour, supported by light equipment, is used as a cost effective method of providing or maintaining infrastructure to a specified standard
Labour-intensive	<i>'Labour-intensive'</i> is used as a generic term to describe all manner of local resources based, and employment-intensive, activities related to the provision and maintenance of publicly or communally owned infrastructure
MART	Management of Appropriate Road Technology
NCB	National Competitive Bidding
NEC	New Engineering Contract
UK	United Kingdom

1 Background

Increasing the size and scope of operations of private sector involvement in road construction and maintenance is now acknowledged as a priority in many developing countries. However, there is often limited exposure and experience with modern contracting procedures and practice in these countries. This applies mainly to new contractors entering the sector, but also to professional engineers and managers in many client organisations. As a contribution to the private sector development process, this paper looks at some of the currently available contract documentation for Works of Civil Engineering Construction, and comments on its suitability for use by Road Agencies with respect to local small or 'emerging' contractors.

Implementation of roadworks

To put this into context, the planning and implementation of roadworks in developing countries has until very recently been mainly the responsibility of government force account (direct labour) operations. Contracting-out of works has normally been restricted to large-scale operations, usually involving international firms and overseas development aid.

However, as in the developed world, force account operations have proved increasingly difficult to maintain at efficient levels. Indeed, the African Road Maintenance Initiative¹ identified the inefficiency of in-house road agency operations as a major contributing cause to Africa's current road maintenance crisis. Road departments where 95% of the recurrent budget goes to covering the wage bill, and plant pools with equipment availabilities of 20%, are now commonplace. To quote from a connected study "Competition is seen as the primary factor to motivate managers to cut waste, improve operational efficiency, and allocate resources efficiently"², and the trend now is to recommend commercial, contract orientated implementation.

Private sector capacity

Unfortunately, the private sector in many of these countries is not in a much better shape than the government roads department it seeks to replace. Local consultants and

¹ World Bank. 1991. *The Road Maintenance Initiative: Building Capacity for Policy Reform, Sub-Saharan Africa Transport Program*. Vols. I-III. World Bank, Economic Development Institute, Washington, D.C.

² Shirley, Mary. 1989. *The Reform of State-Owned Enterprises: Lessons from World Bank Lending*. World Bank Policy and Research Series 4. World Bank, Washington, D.C.

contractors usually lack experience outside the building sector, contractors are poorly equipped, and the whole sector has limited access to private finance. In addition the client, usually a government agency, is often not familiar with modern contracting procedures. As a first priority a new conducive environment needs to be created if the private sector is to be effectively developed. This will require substantial investment in technical and managerial training for the key actors in government and the private sector, and the introduction of new and appropriate procedures and practices.

In general, the introduction of procedures for large scale projects, such as upgrading major highways, reconstructing bridges, or overlaying or resurfacing bitumen roads, is more or less in hand. The contracts are high value, the work is of interest to the larger national and international firms, and the scale is such that finance institutions are more likely to be interested. However most road agencies have an equally pressing need to contract out works on their gravel and earth road networks. This type of work is ideal for the small-scale contractor; the nature of the work is often very straightforward and the risks are very low for the client. (In contrast the risks can be high for the small contractor with only a monopoly client in the sector). Unfortunately very little attention has been given to this area.

The labour-intensive approach

To complete this introduction it should be noted that a particular concern in the development process is to encourage a sustainable approach that utilises local resources as much as possible. The low wage level in most of the developing world, and the high cost of imported machinery and the poor availability of spares, tends to mean encouraging a labour-intensive approach. Local labour is usually supported with simple or intermediate equipment, with relatively low capital costs compared to conventional heavy civil engineering plant. This approach is of course commonplace in the building sector, but has been quite a novelty in the roads and water sectors, particularly in Africa. Contracts and contract documentation thus have to reflect that approach, and often are required to have in-built measures to give active encouragement to alternative technology methods.

Forms of contract

A number of forms of contract have been developed for different agencies and governments, directed to small labour-based contracts. But what has tended to happen is that either more clauses are added to already complex documentation; or more worryingly, one-off 'simplified' documents are tailor-made; but these may have doubtful legal standing or omit important key contractual clauses in their effort to be simple. A recent survey

of contracting practice found that special clauses added to existing documents were often “rather weak and poorly drafted”³. This is hindering the effective development of the local private sector for smaller civil engineering works. There is certainly a need for a new ‘common’ set of documents, and especially a set that has international standing and credibility.

It must be emphasised that appropriate contract documents alone cannot solve the problem, which can be broadly defined as ‘creating a conducive environment for small contractor development’. However, they are an essential component. The reader is referred to an ILO guideline on the subject⁴ for a more comprehensive treatment of all the inputs and changes necessary to ensure some certainty of success.

³ Bentall, Twumasi-Boakye, Watermeyer. 1995. *Labour-based Contracting. A Study to Develop Guidelines for Project Formulation and Implementation*. ILO Geneva

⁴ Bentall, Beusch & de Veen. 1998. *Contractor Development for Labour-based Works, Summary Guidelines*. ILO Geneva

2 The key requirements

This paper will not give a detailed analysis of all available contract documents. Civil engineering works can be complex and varied, and most well established documents have evolved through many editions to cover all eventualities. We will instead concentrate on some general aspects as they affect both the small inexperienced contractor, and a road agency unused to administering many small contracts, and then see how the new shorter contracts help (or hinder) the situation.

Client interests

The first essential pre-requisite is that the document must protect the client's interests. The contract must ensure that the contractor produces work of the required quality, in the stated time, and at the agreed price. This is especially important, as many shorter contracts are not very rigorous on the requirements for a detailed work programme, method of working, or proof of skills of the contractor's employees. The reasoning is that if the nature of the works is relatively simple, and the contract period short, the risk for the client should be low and thus contract clauses can be safely simplified. However, for labour-based work, particularly where new methods and procedures have been introduced, it is often necessary to have the method of working clearly spelt out, and the contractor's experience guaranteed. These issues will be looked at under each relevant contract.

Contractor interests

Secondly the contractor's position must be secured. As previously noted, most of these works will be awarded by one agency. The contractor is thus in quite an exposed position with possibly only one major client. Making claims or complaints in this situation can spell commercial suicide. Conversely, if the contractor is not paid on time his or her financial situation is probably sufficiently parlous as to also guarantee ruin. It must be recognised that substantial delays in payment are commonplace for government contracts in many developing countries.

While it is not the intention to shield the new contractor from the normal problems of business, it is essential that the contractor has some chance of discussing and negotiating with the client at a more equal level. Modern contract documents are moving away from the confrontational approach of variation orders and claims, settled by arbitration or the courts. There is a new emphasis on partnerships and 'Compensation Events', which can be referred to a neutral adjudicator. Although the terms are probably unfamiliar to

most road agency staff in developing countries, the concepts are actually quite straightforward and provide some hope for a middle way in client/contractor relationships.

Worker interests

Lastly, there is the issue of the workers. In the ICE (Institution of Civil Engineers) Conditions of Contract up to the 5th Edition there was a clause for fair wages resolution; and the protection of labour is covered by FIDIC (Federation Internationale des Ingenieurs-Conseils) 4th edition under clause 34. However, even this clause is open to abuse and many projects have included additional requirements based on guidance given by the ILO. Similarly, there is no explicit mention of health and safety under most modern contracts.

Workers in Europe are well covered by existing legislation, so presumably it was no longer felt necessary to include that provision in recent editions of the ICE and FIDIC contracts. This is not the case in the developing world, where laws are often arcane and poorly applied. Child labour for instance is commonplace, and health and safety inspectors would seldom visit a rural road contract. Workers often suffer from poor or even dangerous working conditions, and Trade Unions are rare for casual workers. Government employees usually have some protection, but the employees of small-scale contractors are potentially very exposed to abuse. Suitable clauses are very necessary for wage rates and conditions of labour for use in developing countries.

3 The Contracts

3.1 FIDIC CONDITIONS OF CONTRACT FOR WORKS OF CIVIL CONSTRUCTION, PARTS I AND II, 4TH EDITION, 1987

These conditions are probably the definitive set for contracts tendered internationally. As such they are universally accepted by Roads Agencies, and have become the model set for many developing countries. They have been adopted and adapted for numerous labour-based road programmes in Africa and Asia.

Advantages

The strong point of these conditions is that, together with the options in Part II, they can be assembled to cover almost any contingency with well designed and tested clauses. These conditions have to be the ones against which all others are compared.

There are particularly strong clauses (70.1 and 70.2) to cover variation in price linked to labour and material rates. There is even a clause to cover 'subsequent legislation' for price changes caused by government edicts after the contract is signed.

On the labour side, as well as specific reference to insurance against accident to workmen (24.1 and 24.2), clause 34 covers everything from rates of wages and conditions, to supply of water, burial of the dead, and observance of festivals and religious customs.

Disadvantages

On the down side, the contract has 145 clauses and over 200 sub-clauses. This is not a problem for an experienced contracts department, but in less experienced hands such a document can be misunderstood, wrongly applied, or often simply ignored. Newer forms of contract, particularly the shorter forms, are being written in simpler language using shorter sentences in a style more accessible to the non-legal reader.

In the same spirit of accessibility, the concept of the engineer who acts both as the employer's agent and as an impartial decision-maker is being replaced by the concept of a neutral adjudicator. The client will still have his or her representative to administer the contract, but the adjudicator exists to resolve disputes between the client and the contractor. FIDIC 4th Edition is still firmly in the 'engineer as decision maker' mould. The contractor's only recourse in disputes is through the arbitration process. This is not conducive to amicable settlements in the setting of roadworks in developing countries.

Any recourse to arbitration will inevitably be seen as a challenge to the authority of Road Agency staff, even if the issue is fairly minor. In the author's experience there has been no recorded instance of a small labour-based contractor taking a government agency to arbitration.

3.2 THE WORLD BANK PROCUREMENT OF WORKS, SMALLER CONTRACTS, 1995

This set of documents is primarily designed for procurement under projects financed by the IBRD and the IDA. Specifically, they are intended for works valued at less than \$10 million to be procured by International Competitive Bidding (ICB). National Competitive Bidding (where works are only advertised within the employer's country) apparently require substantive changes to these Conditions. It is also recommended that more complex works such as marine works or water treatment plants use the Standard Bidding Document.

Comparison with FIDIC

The contract contains several innovations over FIDIC 4th Edition. The Project Manager replaces the Engineer, although the role and function is substantially the same. However, the concept of an adjudicator is introduced as an independent person to resolve disputes, before resorting to the arbitration process. The Adjudicator does not have to be named in the project document, just the Appointing Authority⁵, which is used to appoint an adjudicator if the employer and the contractor cannot agree on a choice.

Comprehensive clauses are included for currencies, price variation, advances, and approval of contractor's staff. Generally, the interests of the client and contractor are catered for as well as under FIDIC. However no clauses are included for worker conditions, and even the insurance clause is less specific (although just as legally binding).

Conclusion

To summarise, this document is still a large document with 63 main clauses and 117 sub-clauses. It is specifically aimed at ICB and would need to be modified for NCB, which would be more in line with the nature of works in developing countries. Although it is up-to-date on some of the management concepts, it would appear to offer no substantial advantages over FIDIC for the specific purpose of developing the local contracting industry in the road sector.

⁵ an independent professional institution or a representative of that institution)

3.3 ICE CONDITIONS OF CONTRACT, MINOR WORKS, 2ND EDITION, 1995

This contract is essentially a shortened form of the ICE Conditions of Contract 6th Edition, and follows the concepts and definitions of the 6th Edition, the FIDIC 4th Edition⁶ and previous editions. The Minor Works Guidelines summarise the limitations for use as follows:

- the potential risks are judged to be small
- the works are simple and straightforward
- the contractor has no responsibility for the design of the permanent works
- nominated sub-contractors are not used
- the contract value does not exceed £250,000
- the period of completion does not exceed six months.

Main provisions

This results in a document of 13 main clauses and 69 sub-clauses, which would seem ideal for the type of work envisaged for small-scale contractors. The contract allows the engineer to instruct for variations, and to suspend the progress of works if necessary. Clauses are included for a programme of works, contractor's performance and insurances, retention money, liquidated damages for late completion, and a defects correction period. The contractor is covered by clauses for adverse physical conditions, interest on overdue payments, and a procedure for settlement of disputes. Although there is a provision for valuation of additional work, there is no excess limitation on the value of such work.

Limitations

However, there are a number of important omissions. There is no provision for provisional sums, price fluctuations or advance payments. There is no obligation for the contractor to have a full-time supervisor on site. There is no specific reference to worker conditions. Special risks such as outbreak of war (FIDIC clause 65.5) are not explicitly dealt with, although they do appear as an exception for contractor's liability under 'excepted risks'. Perhaps most importantly there are no particular clauses for default of the contractor or the employer (as with clauses 63.1 and 69.1 of FIDIC). The contractor's only remedy for non-payment is compounded interest on the outstanding amount at 2% above the bank lending rate.

⁶ The FIDIC Conditions up to the 4th edition are virtually identical to the ICE Conditions of Contract, with additional clauses to cover risks and price issues peculiar to international contracting

Finally, the guidelines note that “there is no provision for amendment or addition to the Conditions of Contract and this should be avoided”. As such, these conditions are probably too limited and restrictive for our particular application needs.

3.4 FIDIC SHORT FORM OF CONTRACT, 1998

This short form of contract was only released as a Test Edition in September 1998. It is recommended for works of a “relatively small capital value”, and is considered most suitable for “fairly simple or repetitive work of small duration”. However, the document may be used for all types of engineering work with a variety of administrative arrangements, and “all essential commercial provisions” are included. Most importantly, users are able to introduce Particular Conditions to cater for special cases or circumstances.

Main provisions

The document consists of 15 main clauses and 55 sub-clauses. For the employer, all the key clauses exist as noted for the ICE Minor Works contract, with the addition of more specific information on the contractor’s obligations, the particulars of the contractor’s representative, and more detailed requirements for the contractor’s Programme. Most importantly, there is also a comprehensive section on defaults by the employer or the contractor, with details of payment on termination by either party.

The defects section is very brief, and the employer will need to ensure that routine testing of works is properly covered in the specification. The problem of languages is addressed under clause 1.5 (Communications), with the provision for a “ruling language” in the Appendix.

There is no provision for advance payments to the contractor, but the Notes for Guidance recommend that the provision in the full conditions of contract can be included as a particular condition. Similarly, although there is no specific clause for inflation, the Notes for Guidance suggest the insertion of a clause 11.1 for the rise or fall in the cost of labour, materials, *etc.*, for works of a longer duration. The employer’s responsibilities under Force Majeur are clearly spelled out in clauses 6.1 and 13.2.

Settlement of disputes

The Settlement of Disputes introduces the concept of a neutral adjudicator, as with the World Bank document. Rules for Adjudication and an Adjudicator’s Agreement are included in the Short Form of Contract. The Adjudicator only has to be appointed once a dispute needs to be settled. However, the

Notes for Guidance recommend that the Employer proposes an Adjudicator at tender stage to avoid delays. This would also ensure that the Adjudicator becomes part of normal practice rather than a special circumstance. Arbitration can only be resorted to after adjudication fails. Arbitration is covered by essentially the same provisions as in the FIDIC 4th edition.

Workers' rights

Workers' conditions are not included, but it should be straightforward to import clauses from the FIDIC 4th Edition as required. Insurances for the workers are specifically included as an item in the Appendix.

Late payments

The only item that appears at variance with the needs for small contractors is the provision for late payment by the employer. The contractor is not covered by a compound interest clause, his only recourse is to suspend or terminate the works. This appears to be too drastic for our circumstances, and may not be a very viable option for a contractor with a large labour force to pay. It would be useful if the provision for interest was included as in clause 60.10 of the FIDIC 4th edition.

Conclusion

To conclude, taking into account the few points mentioned above, this contract document would seem to be the ideal starting point for future small works contracts. The document is obviously new and untested, but given the underlying experience with FIDIC conditions there are unlikely to be any problems with individual clauses.

3.5 THE NEC ENGINEERING AND CONSTRUCTION SHORT CONTRACT (DRAFT 1998)

To give some history, the NEC Engineering and Construction Contract is a radical departure from the CCSJC's⁷ series of ICE Conditions of Contract. In response to a commission in the UK into the workings of the construction industry⁸, the NEC contract was designed to foster a more partnership and less confrontational approach, with an emphasis on Compensation Events to cover all the usual areas for claims resulting from variation orders, delays, ground conditions *etc.* In fact clause 10.1 of the core clauses requires the Employer and Contractor to "act in a spirit of mutual trust and cooperation".

⁷ Conditions of Contract Standing Joint Committee, representing the UK Institution of Civil Engineers, Federation of Civil Engineering Contractors and the Association of Consulting Engineers

⁸ Sir Michael Latham, 1994. *Constructing the Team*. HMSO

Scope

The Engineering and Construction Contract (ECC) is not a single contract, but a suite of contracts which share a core body of definitions and inter-relationships. The 2nd Edition was published in November 1995⁹. The NEC Panel has subsequently been developing a short form known as the Short Contract. Unfortunately, this contract is not yet finalised, although publication was anticipated in January 1999.

The intention of the short contract is to provide an alternative to the Engineering and Construction Contract for works which:

- do not require sophisticated management techniques
- comprise straightforward work
- impose low risks on both the employer and the contractor.

The resultant document is still under scrutiny by the panel and external experts. Currently the 15th Draft is just about to be finalised. As an aside, it is a salutary experience to observe the amount of expert attention that is necessary to produce a sound document. It brings home the point that *ad hoc* clauses drafted for individual project requirements are not the best approach for developing a local construction industry, no matter how worthy the intentions.

Main provisions

Currently, the Short Contract has nine Clauses and 88 Sub-Clauses. In terms of depth of coverage it falls somewhere between the Minor Works Contract and the FIDIC Short Form of Contract. The document was studied by a number of experts involved in small contractor development to assess its relevance outside the UK market¹⁰. Their conclusion was that there would be considerable benefit in adopting this contract because of its simplified form, and the opportunity for developing a better and more harmonious relationship between the contractors and the employers. However, as with the Minor Works Contract, there were a number of items that would need to be included to make the contract viable for international use. Unfortunately, as with the Minor Works Contract, it was not straightforward to simply include extra clauses without distorting its intention. The proposals are still being considered by the drafting committee.

⁹ The first edition published in 1993 was known as the New Engineering Contract (NEC)

¹⁰ Stiedl et al, 1997. *Note on the consultation draft ICE Short Contract*. MART Working Paper No 11

Possible improvements

Areas of the contract that need reinforcement are very similar to those under the Minor Works Contract. The following points are extracted from MART Working Paper No 11.

- To ensure compliance with a labour-based approach where this is government or road authority policy, it would help to specify the key representative of the contractor on site and his or her experience, as well as details of intended equipment and labour components of the works. Ideally, we suggest something as comprehensive as FIDIC 4th edition clause 14 which allows proper monitoring of the proposed method of working. This is one of the primary instruments for ensuring that the labour-intensive aspects are being adhered to by the contractor.
- A Clause similar to 18.1 of the ECC on health and safety would help considerably to protect workers' rights. Some countries do not even have satisfactory guidelines in this area and it might be necessary to specify them. It would also be necessary to include a clause similar to the FIDIC 4th edition clause 34 to cover general conditions of labour.
- There is also need for a provision similar to option N of the ECC for price adjustment for inflation. Even though typical contracts will not exceed a year, inflation events of 100% mid-contract are not uncommon. For example, a government may impose increases in official minimum wage rates by more than this amount with no consultation or notice.
- There is need for inclusion of a provision for an advanced payment, as with option J of the ECC. This is not so much to provide for mobilisation, but to ensure sufficient cash flow so that small-scale contractors can pay their labour wages, which are typically 40% to 60% of their expenditure. These contractors will have very limited liquidity and usually be faced with prohibitive bank charges¹¹.

Currently, it seems that these provisions can only be allowed for in the Works Information section. The drafters would not approve the addition or modification of the actual Conditions.

Provisions for disputes

The most important aspect of this document for those involved in small contractor development is probably the provisions under section nine for disputes and termination. In much of the developing world the *Employer* is still usually the government in one form or other, and the contractor is in a very weak

¹¹ MART Working Paper No 2 found that bank interest rates were between 15 and 48 % per annum in seven African and Asian countries surveyed with labour-based roadworks projects.

position regarding any form of negotiation. The *Employer's representative* will also tend to be a government employee rather than an independent consultant, and thus have vested interests. To compound the situation the government employee is probably very poorly paid and may seek means to supplement his salary. Thus he may view even a small contractor as relatively affluent and a suitable source of potential 'revenue'. The contractor can of course resort to the courts, but with the government having a monopoly on contracts (and probably undue influence in the courts) this would not always be a wise move.

The role of independent *adjudicator*, to be nominated in the contract document, could be one way out of this impasse. It should be much easier for a contractor to seek help without resorting to law, and it might help to encourage contractors that some form of two-sided dialogue (other than bribes)¹² is possible. However, it will not be easy to introduce without considerable changes to existing practice. The key will be to get this process accepted by government agencies, and to agree the procedure for identifying and remunerating the adjudicator. In many countries the consulting sector is only starting to develop, but small firms are beginning to emerge, often staffed by retired government officials who, while not equipped to undertake large scale supervision works, would be ideal to provide adjudicator inputs.

The above comments also apply to the adjudicator in the FIDIC Short Form of Contract. However, in the ECC Short Form the adjudicator has a much higher profile, and must be appointed at the start of the contract. In addition, there is no automatic referral to Arbitration. If the adjudicator's decision is not accepted, the dispute is referred to a Tribunal. The nature of the Tribunal must be specified in the Works Information, and may be Arbitration or a Binding Expert Decision or Disputed Review Panel. If there is no Tribunal specified, the matter will be dealt with in the law courts.

¹² If this seems a little extreme it should be noted that FIDIC 4th Edition includes a specific optional clause covering bribes

4 Conclusions

Both the FIDIC Short Form of Contract and the NEC Short Contract offer attractive alternatives to full FIDIC Conditions of Contract for the development of small and labour-based contractors in the road sector. The World Bank Procurement of Works for Smaller Contracts is not significantly less complex than FIDIC, and is mainly geared to International Competitive Bidding procedures. The ICE Minor Works contract is really too limited in scope for the type of work envisaged.

The choice is thus between the FIDIC and NEC contracts, and really comes down to attitude and acceptance. Most engineers actively involved in the developing world are more familiar with the FIDIC 4th edition contract document, which is essentially the 5th Edition of the ICE Conditions of Contract in content and style. Most existing contract documentation, especially in anglophone countries, also reflects the 4th Edition. Many of the terms already accepted as part of the NEC family of contracts will be unfamiliar outside the UK. This is not to say that they are inappropriate, but just to recognise the need for extensive supporting guideline documentation and training to accompany and encourage their introduction.

From this perspective the most cost effective approach may be to concentrate on the FIDIC Short Form of Contract, including a set of Particular Conditions that would be appropriate for small contractor development as outlined in sections 3.4 and 3.5. It should also be feasible to take account of some of the comments from the MART Working Paper No 11¹³, and from the ILO's guidelines¹⁴, to agree on one additional Condition to ensure that labour-based techniques are adopted by the contractor where employment creation is a government priority.

¹³ Stiedl et al, 1997. *Op. Cit.*

¹⁴ Bentall, Beusch & de Veen. 1998. *Op. Cit.*