

NOTICE 554 OF 2004
DEPARTMENT OF PUBLIC WORKS

**Guidelines for the Implementation of Labour
Intensive Infrastructure Projects under the
Expanded Public Works Programme (EPWP)**

18 March 2004

Guidelines for the Implementation of Labour Intensive Projects under the Expanded Public Works Programme (EPWP)

Table of contents

Foreword.....	ii
Terminology.....	iii
Abbreviations	iii
1 Introduction.....	1
2. Responsibilities of the public body	2
2.1 Selection of projects	2
2.2 Setting of rate of pay.....	2
2.3 Appointment of consulting engineers and contractors	3
3 Contract Documentation for Consulting Engineers and Contractors for Labour intensive construction projects.....	4
3.1 General.....	4
3.2 Contract Documentation for Consulting Engineering Services	4
3.3 Contract Documentation for the Works.....	5
3.3.1 <i>Conditions of tender</i>	5
3.3.2 <i>Conditions of contract</i>	5
3.3.3 <i>Scope of work</i>	10
3.3.4 <i>Schedules of quantities</i>	14
4 Design checklist	15
APPENDIX A: SOURCES OF ADDITIONAL INFORMATION.....	17
APPENDIX B: TYPES OF INFRASTRUCTURE WHICH ARE SUITABLE FOR CONSTRUCTION USING LABOUR INTENSIVE METHODS.....	19
B.1 <i>Roads</i>	19
B.2 <i>Stormwater</i>	19
B.3 <i>Sewers</i>	19
B.4 <i>Water</i>	20
B.4 <i>Haul of Material</i>	20
B.5 <i>Electricity</i>	20
B.6 <i>Houses, schools and clinics</i>	20
APPENDIX C: STANDARD FORMS OF CONTRACT USED IN SOUTH AFRICA	21
APPENDIX D: REQUIRED SKILLS PROGRAMMMES.....	22
D.1 <i>Client/ Employer</i>	22
D.2 <i>Consultants</i>	22
D.3 <i>Contractors</i>	22

Foreword

The Expanded Public Works Programme (EPWP) is one of government's short-to-medium term programmes aimed at alleviating and reducing unemployment. The EPWP will achieve this aim through the provision of work opportunities coupled with training. It is a national programme covering all spheres of government and state-owned enterprises (SOE's). President Mbeki formally announced the programme in his State of the Nation Address in February 2003.

Government's medium-to-long term programmes to address unemployment include increasing economic growth, improving skills levels through education and training, and improving the enabling environment for industry to flourish. The EPWP will continue to exist until these medium-to-long term programmes are successful in reducing unemployment.

The programme involves reorientating line function budgets so that government expenditure results in more work opportunities, particularly for unskilled labour. EPWP projects will therefore be funded through the normal budgetary process, through the budgets of line-function departments, provinces and municipalities.

Opportunities for implementing the EPWP have been identified in the infrastructure, environmental, social and economic sectors. In the infrastructure sector the emphasis is on creating additional work opportunities through the introduction of labour-intensive construction methods. Labour-intensive construction methods involve the use of an appropriate mix of labour and machines, with a preference for labour where technically and economically feasible, without compromising the quality of the product.

All public bodies involved in infrastructure provision are expected to attempt to contribute to the programme. As part of this initiative, the national government has through the 2004 Division of Revenue Act placed some additional conditionalities on the Provincial Infrastructure Grant (PIG) and the Municipal Infrastructure Grant (MIG). These additional conditionalities will require provinces and municipalities to use the "Guidelines for the implementation of labour intensive infrastructure projects under the EPWP" agreed upon between SALGA, National Treasury and the Department of Public Works for identification, design and construction or projects financed through the MIG or PIG. This document contains those guidelines.

International and local experience has shown that, with well-trained supervisory staff and an appropriate employment framework, labour-intensive methods can be used successfully for infrastructure projects involving low-volume roads and sidewalks, stormwater drains, and trenches. On the basis of this experience, and in the context of high levels of unemployment, the national government has decided to require that these infrastructure projects must be carried out labour-intensively.

These guidelines aim to provide provinces and municipalities with the necessary tools to successfully tender these projects as labour-intensive projects. These guidelines have been designed with the aim of minimising the additional work required from provincial and municipal officials. The National Department of Public Works is working with the Construction Education and Training Authority (CETA) to develop the capacity of the construction industry to design and manage labour-intensive infrastructure projects successfully.

The guidelines contain sections which should be copied into the relevant parts of the contract documentation for consulting engineers and contractors. These sections introduce a requirement that certain construction activities must be carried out by hand, under certain conditions. These requirements were formulated on the basis of a thorough review of international and local experience of labour-intensive construction, in order to identify the activities for which it is economically and technically feasible to use labour-intensive methods. The guidelines therefore conform to the Public Finance Management Act requirement for assessing the cost-effectiveness of capital projects. The normal tender evaluation processes are followed under these guidelines, and it is not necessary to apply any special additional preferences for employment creation.

The guidelines include the contents of the Code of Good Practice for Special Public Works Programmes, which has been gazetted by the Department of Labour, and which provides for special conditions of employment for these EPWP projects. In terms of the Code of Good Practice, the workers on these projects are entitled to formal training, which will be provided by training providers appointed (and funded) by the Department of Labour. For projects of up to six months in duration, this training will cover life-skills and information about other education, training, and employment opportunities.

In order to develop the capacity of the construction industry to manage labour-intensive projects, these guidelines also include an eligibility requirement for the appointment of contractors and consulting engineers, i.e. that their key staff involved in the project must undergo special NQF-accredited training programmes in labour-intensive construction.

As an additional means of addressing the capacity in the labour-intensive construction sector, DPW together with the CETA has established a labour intensive contractor learnership programme. The aim of this learnership programme is to produce small contractors qualified to execute work in accordance with these guidelines. The CETA is paying for the classroom training of these contractors.

As part of this learnership programme, learner contractors need to execute projects to gain practical experience. Partnering provinces and municipalities may allocate projects identified and designed using these guidelines to the learner contractors on a negotiated price basis.

An electronic version of these guidelines and electronic copies of the following documents can be obtained on the enclosed CD ROM or downloaded from www.publicworks.gov.za.

- Code of Good Practice for Employment and Conditions of Work for Special Public Works Programmes
- Ministerial Determination, Special Public Works Programmes, issued in terms of the Basic Conditions of Employment Act of 1997 by the Minister of Labour in Government Notice N° R63 of 25 January 2002
- Government Gazette (DORA 2004 with MIG and PIG Conditions)
- Documents relating on the Labour Intensive Contractor Learnership Programme

Terminology

By hand: refers to the use of tools which are manually operated and powered

Form of contract: refers to a document (conditions of contract) published by industry which establishes the risks, liabilities and obligations of the contracting parties and the procedures for the administration of the contract.

Labour-intensive: refers to methods of construction involving a mix of machines and labour, where labour, utilising hand tools and light plant and equipment, is preferred to the use of heavy machines, where technically and economically feasible.

(Note: The normal emphasis on the cost-effectiveness and quality of the asset must be retained.)

Public body: refers to a department, trading entity, constitutional institution, municipality, public entity or municipal entity

Scope of work: refers to a specification and description of the services or construction works which are to be provided and any other requirements and constraints relating to the manner in which the contract is to be performed

Abbreviations

CETA:	Construction Education and Training Authority
CIDB:	Construction Industry Development Board
ECSA:	Engineering Council of South Africa
EPWP:	Expanded Public Works Programme
FIDIC:	French acronym for the International Federation of Consulting Engineers
NEC:	New Engineering Contract.
NQF:	National Qualifications Framework
SANS:	South African National Standard
SPWP:	Special Public Works Programme

1 Introduction

Labour-intensive infrastructure projects under the EPWP include:

- using labour intensive construction methods to provide employment opportunities to local unemployed people;
- providing training or skills development to those locally employed workers;
- building cost-effective and quality assets.

This document is a guiding framework for the implementation of labour-intensive projects under the Expanded Public Works Programme. It provides the means by which labour intensive works can be implemented under the most commonly encountered delivery model, namely design by employer (i.e. the model in which the contractor undertakes construction on the basis of full designs issued by the employer.) It also assumes that the public body will appoint a consultant to design the works and to administer the contract. Adjustments to the text of this document will be necessary to accommodate other delivery models. Where no consultants are appointed, the staff of the public body needs to perform the activities assigned to consultants in this document.

The document in addition provides guidance on the:

- identification of suitable projects;
- appropriate design for labour-intensive construction;
- the specification of labour-intensive works; and
- the compilation of contract documentation for labour-intensive projects.

Specific direction is given regarding contract clauses which must be included to amend or augment standard documentation, in order to implement labour-intensive projects.

These guidelines do not have to be applied to projects for which planning had already commenced before the beginning of the 2004-2005 financial year, as it might require too many changes to existing designs or tender documentation. However these guidelines must be applied to all relevant projects for which the design process commences after the beginning of the 2004-2005 financial year.

Appendix A provides sources of additional information.

The employment of locally employed temporary workers on all EPWP labour-intensive infrastructure projects must be in accordance with the Code of Good Practice for Employment and Conditions of Work for Special Public Works Programmes issued in terms of the Basic Conditions of Employment Act, 1997 (Act N° 75 of 1997) and promulgated in Government Gazettes Notice N° P64 of 25 January 2002. The requirements of this Code have been included in this Guidelines document. However, reference should be made to the full text of the Code of Good Practice and the related Ministerial Determination.

2. Responsibilities of the public body

2.1 Selection of projects

The public body must implement the following types of civil infrastructure projects labour-intensively, in accordance with these guidelines:

- low-volume roads (typically less than 500 vehicles per day) and sidewalks;
- stormwater drainage; and
- trenching;

where such projects contain a significant amount of the construction activities for which the use of labour is specified in the Generic Labour Intensive Specification in section 3.3.3 below, i.e. excavation, loading, short-distance hauling, offloading, spreading, grassing, and stone-pitching.

There is also potential for additional employment creation in other types of infrastructure and building (see Annexure B). Public bodies are also encouraged to create additional work opportunities in these projects. These guidelines may be used for other labour-intensive projects other than those types of civil infrastructure projects specified above, as long as such projects involve a significant substitution of labour for machines.

The public body must be satisfied that sufficient local labour (willing to work) is available for the project, before proceeding with the project as a labour-intensive project.

The public body is encouraged to send its relevant managers on the applicable skills programmes in labour-intensive construction (See Appendix D).

As mentioned in section 1 of these guidelines above, these guidelines do not have to be applied to projects for which planning had already commenced before the beginning of the 2004-2005 financial year, to avoid reworking existing designs or tender documentation.

2.2 Setting of rate of pay

In accordance with the Code of Good Practice for Employment and Conditions of Work for Special Public Works Programmes (clause 10.4), the public body must set a rate of pay (task-rate) for workers to be employed on the labour-intensive projects.

Clause 10.4 requires that the following should be considered when setting rates of pay for workers:

10.4.1 The rate set should take into account wages paid for comparable unskilled work in the local area per sector, if necessary.

10.4.2 The rate should be an appropriate wage to offer an incentive for work, to reward effort provided and to ensure a reasonable quality of work. It should not be more than the average local rate to ensure people are not recruited away from other employment and jobs with longer-term prospects.

10.4.3 Men, women, disabled persons and the aged must receive the same pay for work of equal value.

2.3 Appointment of consulting engineers and contractors

The public body must ensure that:

- i) the design of the labour intensive works by consultants is overseen by persons in their employ who have completed the necessary skills training (see Appendix D);
- ii) works contracts are administered by persons in the employ of consultants who have completed the necessary skills training (see Appendix D); and
- ii) works contracts are awarded to contractors who have in their employ managers who have completed the necessary skills training (see Appendix D).

As a concession up to 30 June 2005, persons identified in Appendix D who have not completed the requisite skills training need only to be registered on the relevant skills programmes.

3 Contract documentation for consulting engineers and contractors for labour intensive construction projects

3.1 General

All standard forms of contract applicable in South Africa (see Appendix C) may be used for labour-intensive projects. It is not necessary to create special new forms of contract or to amend existing forms to implement labour based works.

Requirements for labour-intensive works need, however, to be established in the scope of work / specifications / schedules / works information / scope of services / scope associated with a contract for both consultants and contractors.

Each standard form of contract uses different terms to describe the parties to the contract and to establish requirements for the works (see Appendix C). These guidelines use the terms employer and contractor for the parties engaged in construction works, client and consultant for the parties engaged in professional service contracts and scope of work for requirements in both professional service and construction contracts. The terms used in the text in boxes may have to be adjusted to reflect the terms used in the particular standard form of contract.

3.2 Contract Documentation for Consulting Engineering Services

The scope of work must establish the manner in which the consultant is to provide the consulting engineering services associated with labour intensive works.

The following must be included in the scope of work in the contract of employment with a Consulting Engineer:

General

The services shall be provided in accordance with the provisions of the Guideline Scope of Service and Tariff of Fees for Persons Registered in terms of the Engineering Professions Act published by the Engineering Council of South Africa in terms of Board Notice No 18 of 2003 in Government Gazette No 24938, 28 February 2003)

Labour-intensive works

1. The Consultant shall not perform any significant portion of a project involving labour-intensive works under the direction of a staff member who has not completed, or, for the period 1 April 2004 to 30 July 2005, is not registered for training towards, the NQF level 7 unit standard "Develop and Promote Labour Intensive Construction Strategies" (Details of this skills programmes may be obtained from the CETA ETQA manager (e-mail:gerard@ceta.co.za , tel: 011-265 5900).
2. The staff member of the consultant who is responsible for the administration of any works contract involving labour intensive works must have completed or, for the period 1 April 2004 to 30 July 2005, be registered for training towards, the NQF level 5 unit standard "Manage Labour Intensive Construction Projects" (Details of this skills programmes may be obtained from the CETA ETQA manager (e-mail:gerard@ceta.co.za , tel: 011-265 5900).
3. The Consultant must provide the Client with satisfactory evidence that staff members satisfy the requirements of 1 and 2.
4. The Consultant must design and implement the construction works in accordance with the Guidelines for the Implementation of the Labour Intensive Projects under the Expanded Public Works Programme (the Guidelines) published by the national Department of Public Works.

5. The Consultant shall for monitoring purposes, transmit to the Client data obtained from the contractor on the number of people employed, broken down into the amounts spent on women, youth, and persons with disability on the project, the number of person days of employment created and the number of days of formal training provided.
6. All services relating to the implementation of the works which are to be provided in terms of the Guidelines are normal services in terms of ECSA's Board Notice No 18 of 2003. Any changes in the design of the works to incorporate labour intensive works shall not constitute a change in scope or an additional service.
7. The Consultant shall certify that the works have been completed in accordance with the requirements of the Guidelines and the Contract:
 - a) whenever a payment certificate is presented to the Client for payment; and
 - b) immediately after the issuing of a practical completion certificate that signifies that the whole of the works have reached a state of readiness for occupation or use for the purposes intended although some minor work may be outstanding.

3.3 Contract Documentation for the Works

3.3.1 Conditions of tender

Public bodies must only award contracts to contractors who have suitably qualified senior and middle supervisory staff to supervise the labour-intensive works. Tenderers must be made aware of this requirement in tender documents. Those responsible for evaluating tenders must confirm that the contractor has such staff available for the contract during the tender evaluation process.

The following must be included in the tender data / conditions of tender in the contract with the Employer:

Eligibility requirements

A contract will only be entered into with a tenderer who has in his employ management and supervisory staff satisfying the requirements of the scope of work for labour intensive competencies for supervisory and management staff .

Information to be submitted with the tender

The tenderer shall, when requested by the Employer to do so, submit the names of all management and supervisory staff that will be employed to supervise the labour-intensive portion of the works together with satisfactory evidence that such staff members satisfy the eligibility requirements.

3.3.2 Conditions of contract

As mentioned in 3.1, any standard form of contract for construction works may be used for labour-intensive projects (see Appendix C). These forms of contract must not, however, be amended or varied to alter the obligations, liabilities or rights of the employer, representative of the employer (engineer / principal agent / agent / project manager) or contractor where a project manager, materials manager, trainer, mentor or any other person is appointed to support the Contractor.

The following must be included in the contract data / special conditions of contract in the contract with the Employer:

Payment for the labour-intensive component of the works

Payment for works identified in the Scope of Work as being labour-intensive shall only be made in accordance with the provisions of the Contract if the works are constructed strictly in accordance with the provisions of the scope of work. Any non-payment for such works shall not relieve the Contractor in any way from his obligations either in contract or in delict.

Applicable labour laws

The Ministerial Determination, Special Public Works Programmes, issued in terms of the Basic Conditions of Employment Act of 1997 by the Minister of Labour in Government Notice N° R63 of 25 January 2002, as reproduced below, shall apply to works described in the scope of work as being labour intensive and which are undertaken by unskilled or semi-skilled workers.

1 Introduction

1.1 This document contains the standard terms and conditions for workers employed in elementary occupations on a Special Public Works Programme (SPWP). These terms and conditions do NOT apply to persons employed in the supervision and management of a SPWP.

1.2 In this document –

- (a) “department” means any department of the State, implementing agent or contractor;
- (b) “employer” means any department, implementing agency or contractor that hires workers to work in elementary occupations on a SPWP;
- (c) “worker” means any person working in an elementary occupation on a SPWP;
- (d) “elementary occupation” means any occupation involving unskilled or semi-skilled work;
- (e) “management” means any person employed by a department or implementing agency to administer or execute an SPWP;
- (f) “task” means a fixed quantity of work;
- (g) “task-based work” means work in which a worker is paid a fixed rate for performing a task;
- (h) “task-rated worker” means a worker paid on the basis of the number of tasks completed;
- (i) “time-rated worker” means a worker paid on the basis of the length of time worked.

2 Terms of Work

2.1 Workers on a SPWP are employed on a temporary basis.

2.2 A worker may NOT be employed for longer than 24 months in any five-year cycle on a SPWP.

2.3 Employment on a SPWP does not qualify as employment as a contributor for the purposes of the Unemployment Insurance Act 30 of 1966.

3 Normal Hours of Work

3.1 An employer may not set tasks or hours of work that require a worker to work–

- (a) more than forty hours in any week
- (b) on more than five days in any week; and
- (c) for more than eight hours on any day.

3.2 An employer and worker may agree that a worker will work four days per week. The worker may then work up to ten hours per day.

3.3 A task-rated worker may not work more than a total of 55 hours in any week to complete the tasks allocated (based on a 40-hour week) to that worker.

4 Meal Breaks

4.1 A worker may not work for more than five hours without taking a meal break of at least thirty minutes duration.

4.2 An employer and worker may agree on longer meal breaks.

4.3 A worker may not work during a meal break. However, an employer may require a worker to perform duties during a meal break if those duties cannot be left unattended and cannot be performed by another worker. An employer must take reasonable steps to ensure that a worker is relieved of his or her duties during the meal break.

4.4 A worker is not entitled to payment for the period of a meal break. However, a worker who is paid on

the basis of time worked must be paid if the worker is required to work or to be available for work during the meal break.

5 Special Conditions for Security Guards

5.1 A security guard may work up to 55 hours per week and up to eleven hours per day.

5.2 A security guard who works more than ten hours per day must have a meal break of at least one hour or two breaks of at least 30 minutes each.

6 Daily Rest Period

Every worker is entitled to a daily rest period of at least eight consecutive hours. The daily rest period is measured from the time the worker ends work on one day until the time the worker starts work on the next day.

7 Weekly Rest Period

Every worker must have two days off every week. A worker may only work on their day off to perform work which must be done without delay and cannot be performed by workers during their ordinary hours of work ("emergency work").

8 Work on Sundays and Public Holidays

8.1 A worker may only work on a Sunday or public holiday to perform emergency or security work.

8.2 Work on Sundays is paid at the ordinary rate of pay.

8.3 A task-rated worker who works on a public holiday must be paid –

(a) the worker's daily task rate, if the worker works for less than four hours;

(b) double the worker's daily task rate, if the worker works for more than four hours.

8.4 A time-rated worker who works on a public holiday must be paid –

(a) the worker's daily rate of pay, if the worker works for less than four hours on the public holiday;

(b) double the worker's daily rate of pay, if the worker works for more than four hours on the public holiday.

9 Sick Leave

9.1 Only workers who work four or more days per week have the right to claim sick-pay in terms of this clause.

9.2 A worker who is unable to work on account of illness or injury is entitled to claim one day's paid sick leave for every full month that the worker has worked in terms of a contract.

9.3 A worker may accumulate a maximum of twelve days' sick leave in a year.

9.4 Accumulated sick-leave may not be transferred from one contract to another contract.

9.5 An employer must pay a task-rated worker the worker's daily task rate for a day's sick leave.

9.6 An employer must pay a time-rated worker the worker's daily rate of pay for a day's sick leave.

9.7 An employer must pay a worker sick pay on the worker's usual payday.

9.8 Before paying sick-pay, an employer may require a worker to produce a certificate stating that the worker was unable to work on account of sickness or injury if the worker is –

(a) absent from work for more than two consecutive days; or

(b) absent from work on more than two occasions in any eight-week period.

9.9 A medical certificate must be issued and signed by a medical practitioner, a qualified nurse or a clinic staff member authorised to issue medical certificates indicating the duration and reason for incapacity.

9.10 A worker is not entitled to paid sick-leave for a work-related injury or occupational disease for which the worker can claim compensation under the Compensation for Occupational Injuries and Diseases Act.

10 Maternity Leave

10.1 A worker may take up to four consecutive months' unpaid maternity leave.

10.2 A worker is not entitled to any payment or employment-related benefits during maternity leave.

10.3 A worker must give her employer reasonable notice of when she will start maternity leave and when she will return to work.

10.4 A worker is not required to take the full period of maternity leave. However, a worker may not work for four weeks before the expected date of birth of her child or for six weeks after the birth of her child, unless a medical practitioner, midwife or qualified nurse certifies that she is fit to do so.

10.5 A worker may begin maternity leave –

(a) four weeks before the expected date of birth; or

- (b) on an earlier date –
 - (i) if a medical practitioner, midwife or certified nurse certifies that it is necessary for the health of the worker or that of her unborn child; or
 - (ii) if agreed to between employer and worker; or
- (c) on a later date, if a medical practitioner, midwife or certified nurse has certified that the worker is able to continue to work without endangering her health.

10.6 A worker who has a miscarriage during the third trimester of pregnancy or bears a stillborn child may take maternity leave for up to six weeks after the miscarriage or stillbirth.

10.7 A worker who returns to work after maternity leave, has the right to start a new cycle of twenty-four months employment, unless the SPWP on which she was employed has ended.

11 Family responsibility leave

11.1 Workers, who work for at least four days per week, are entitled to three days paid family responsibility leave each year in the following circumstances -

- (a) when the employee's child is born;
- (b) when the employee's child is sick;
- (c) in the event of a death of –
 - (i) the employee's spouse or life partner;
 - (ii) the employee's parent, adoptive parent, grandparent, child, adopted child, grandchild or sibling.

12 Statement of Conditions

12.1 An employer must give a worker a statement containing the following details at the start of employment –

- (a) the employer's name and address and the name of the SPWP;
- (b) the tasks or job that the worker is to perform; and
- (c) the period for which the worker is hired or, if this is not certain, the expected duration of the contract;
- (d) the worker's rate of pay and how this is to be calculated;
- (e) the training that the worker will receive during the SPWP.

12.2 An employer must ensure that these terms are explained in a suitable language to any employee who is unable to read the statement.

12.3 An employer must supply each worker with a copy of these conditions of employment.

13 Keeping Records

13.1 Every employer must keep a written record of at least the following –

- (a) the worker's name and position;
- (b) in the case of a task-rated worker, the number of tasks completed by the worker;
- (c) in the case of a time-rated worker, the time worked by the worker;
- (d) payments made to each worker.

13.2 The employer must keep this record for a period of at least three years after the completion of the SPWP.

14 Payment

14.1 An employer must pay all wages at least monthly in cash or by cheque or into a bank account.

14.2 A task-rated worker will only be paid for tasks that have been completed.

14.3 An employer must pay a task-rated worker within five weeks of the work being completed and the work having been approved by the manager or the contractor having submitted an invoice to the employer.

14.4 A time-rated worker will be paid at the end of each month.

14.5 Payment must be made in cash, by cheque or by direct deposit into a bank account designated by the worker.

14.6 Payment in cash or by cheque must take place –

- (a) at the workplace or at a place agreed to by the worker;
- (b) during the worker's working hours or within fifteen minutes of the start or finish of work;
- (c) in a sealed envelope which becomes the property of the worker.

14.7 An employer must give a worker the following information in writing –

- (a) the period for which payment is made;
- (b) the numbers of tasks completed or hours worked;
- (c) the worker's earnings;
- (d) any money deducted from the payment;

(e) the actual amount paid to the worker.

14.8 If the worker is paid in cash or by cheque, this information must be recorded on the envelope and the worker must acknowledge receipt of payment by signing for it

14.9 If a worker's employment is terminated, the employer must pay all monies owing to that worker within one month of the termination of employment.

15 Deductions

15.1 An employer may not deduct money from a worker's payment unless the deduction is required in terms of a law.

15.2 An employer must deduct and pay to the SA Revenue Services any income tax that the worker is required to pay.

15.3 An employer who deducts money from a worker's pay for payment to another person must pay the money to that person within the time period and other requirements specified in the agreement law, court order or arbitration award concerned.

15.4 An employer may not require or allow a worker to –

- (a) repay any payment except an overpayment previously made by the employer by mistake;
- (b) state that the worker received a greater amount of money than the employer actually paid to the worker; or
- (f) pay the employer or any other person for having been employed.

16 Health and Safety

16.1 Employers must take all reasonable steps to ensure that the working environment is healthy and safe.

16.2 A worker must –

- (a) work in a way that does not endanger his/her health and safety or that of any other person;
- (b) obey any health and safety instruction;
- (c) obey all health and safety rules of the SPWP;
- (d) use any personal protective equipment or clothing issued by the employer;
- (e) report any accident, near-miss incident or dangerous behaviour by another person to their employer or manager.

17 Compensation for Injuries and Diseases

17.1 It is the responsibility of the employers (other than a contractor) to arrange for all persons employed on a SPWP to be covered in terms of the Compensation for Occupational Injuries and Diseases Act, 130 of 1993.

17.2 A worker must report any work-related injury or occupational disease to their employer or manager.

17.3 The employer must report the accident or disease to the Compensation Commissioner.

17.4 An employer must pay a worker who is unable to work because of an injury caused by an accident at work 75% of their earnings for up to three months. The employer will be refunded this amount by the Compensation Commissioner. This does NOT apply to injuries caused by accidents outside the workplace such as road accidents or accidents at home.

18 Termination

18.1 The employer may terminate the employment of a worker for good cause after following a fair procedure.

18.2 A worker will not receive severance pay on termination.

18.3 A worker is not required to give notice to terminate employment. However, a worker who wishes to resign should advise the employer in advance to allow the employer to find a replacement.

18.4 A worker who is absent for more than three consecutive days without informing the employer of an intention to return to work will have terminated the contract. However, the worker may be re-engaged if a position becomes available for the balance of the 24-month period.

18.5 A worker who does not attend required training events, without good reason, will have terminated the contract. However, the worker may be re-engaged if a position becomes available for the balance of the 24-month period.

19 Certificate of Service

19.1 On termination of employment, a worker is entitled to a certificate stating –

- (a) the worker's full name;
- (b) the name and address of the employer;
- (c) the SPWP on which the worker worked;

- (d) the work performed by the worker;
- (e) any training received by the worker as part of the SPWP;
- (f) the period for which the worker worked on the SPWP;
- (g) any other information agreed on by the employer and worker.

3.3.3 Scope of work

Standard specifications (those normally used by the public bodies) are to be utilised. It is necessary, however, to include certain requirements in the scope of work to implement labour-intensive works in accordance with the provisions of these Guidelines.

The following wording, as appropriate, must be included in the scope of work in the contract with the contractor

DESCRIPTION OF THE WORKS

Employer's objectives

The employer's objectives are to deliver public infrastructure using labour intensive methods

Labour-intensive works

Labour-intensive works comprise the activities described in the Labour-Intensive Specification. Such works shall be constructed using local workers who are temporarily employed in terms of this scope of work.

LABOUR INTENSIVE COMPETENCIES OF SUPERVISORY AND MANAGEMENT STAFF

Established contractors shall only engage supervisory and management staff in labour intensive works who have either completed, or for the period 1 April 2004 to 30 June 2005, are registered for training towards, the skills programme outlined in Table 1.

Emerging contractors shall have personally completed, or for the period 1 April 2004 to 30 June 2005 be registered on a skills programme for the NQF level 2 unit standard. All other site supervisory staff in the employ of emerging contractors must have completed, or for the period 1 April 2004 to 30 June 2005 be registered on a skills programme for, the NQF level 2 unit standards or NQF level 4 unit standards.

Table 1: Skills programme for supervisory and management staff

Personnel	NQF level	Unit standard titles	Skills programme description
Team leader / supervisor	2	Apply Labour Intensive Construction Systems and Techniques to Work Activities	This unit standard must be completed, and any one of these 3 unit standards
		Use Labour Intensive Construction Methods to Construct and Maintain Roads and Stormwater Drainage	
		Use Labour Intensive Construction Methods to Construct and Maintain Water and Sanitation Services	
		Use Labour Intensive Construction Methods to Construct, Repair and Maintain Structures	
Foreman/ supervisor	4	Implement labour Intensive Construction Systems and Techniques	This unit standard must be completed, and any one of these 3 unit standards
		Use Labour Intensive Construction Methods to Construct and Maintain Roads and Stormwater Drainage	
		Use Labour Intensive Construction Methods to Construct and Maintain Water and Sanitation Services	
		Use Labour Intensive Construction Methods to Construct, Repair and Maintain Structures	
Site Agent / Manager (i.e the contractor's most senior representative that is resident on the site)	5	Manage Labour Intensive Construction Processes	Skills Programme against this single unit standard

Details of these skills programmes may be obtained from the CETA ETQA manager (e-mail: gerard@ceta.co.za , tel: 011-265 5900)

EMPLOYMENT OF UNSKILLED AND SEMI-SKILLED WORKERS IN LABOUR-INTENSIVE WORKS

1.1 Requirements for the sourcing and engagement of labour.

1.1.1 Unskilled and semi-skilled labour required for the execution of all labour intensive works shall be engaged strictly in accordance with prevailing legislation and SANS 1914-5, Participation of Targeted Labour.

1.1.2 The rate of pay set for the SPWP is R per task or per day.
(Insert value determined by public body in terms of clause 2.2 of these Guidelines)

1.1.3 Tasks established by the contractor must be such that:

- a) the average worker completes 5 tasks per week in 40 hours or less; and
- b) the weakest worker completes 5 tasks per week in 55 hours or less.

1.1.4 The contractor must revise the time taken to complete a task whenever it is established that the time taken to complete a weekly task is not within the requirements of 1.1.3.

1.1.5 The Contractor shall, through all available community structures, inform the local community of the labour intensive works and the employment opportunities presented thereby. Preference must be given to people with previous practical experience in construction and / or who come from households:

- a) where the head of the household has less than a primary school education;
- b) that have less than one full time person earning an income;
- c) where subsistence agriculture is the source of income.
- d) those who are not in receipt of any social security pension income

1.1.6 The Contractor shall endeavour to ensure that the expenditure on the employment of temporary workers is in the following proportions:

- a) 60 % women;
- b) 20% youth who are between the ages of 18 and 25; and
- c) 2% on persons with disabilities.

1.2 Specific provisions pertaining to SANS 1914-5

1.2.1 Definitions

Targeted labour: Unemployed persons who are employed as local labour on the project.

1.2.3 Contract participation goals

1.2.3.1 There is no specified contract participation goal for the contract. The contract participation goal shall be measured in the performance of the contract to enable the employment provided to targeted labour to be quantified.

1.2.3.2 The wages and allowances used to calculate the contract participation goal shall, with respect to both time-rated and task rated workers, comprise all wages paid and any training allowance paid in respect of agreed training programmes.

1.2.4 Terms and conditions for the engagement of targeted labour

Further to the provisions of clause 3.3.2 of SANS 1914-5, written contracts shall be entered into with targeted labour.

1.2.5 Variations to SANS 1914-5

1.2.5.1 The definition for net amount shall be amended as follows:
Financial value of the contract upon completion, exclusive of any value added tax or sales tax which the

law requires the employer to pay the contractor.

1.2.5.2 The schedule referred to in 5.2 shall in addition reflect the status of targeted labour as women, youth and persons with disabilities and the number of days of formal training provided to targeted labour.

1.3 Training of targeted labour

1.3.1 The contractor shall provide all the necessary on-the-job training to targeted labour to enable such labour to master the basic work techniques required to undertake the work in accordance with the requirements of the contract in a manner that does not compromise worker health and safety.

1.3.2 The cost of the formal training of targeted labour, will be funded by the local office of the Department of Labour. This training will take place as close to the project site as practically possible. The contractor must access this training by informing the relevant regional office of the Department of Labour in writing, within 14 days of being awarded the contract, of the likely number of persons that will undergo training and when such training is required. The Employer and the Department of Public Works (Fax: 012 3258625/ EPWP Unit, Private Bag X65, Pretoria 0001) must be furnished with a copy of this request.

1.3.3 The contractor shall do nothing to dissuade targeted labour from participating in training programmes and shall take all reasonable steps to ensure that each beneficiary is provided with two days of formal training for every 22 days worked.

1.3.4 An allowance equal to 100% of the task rate or daily rate shall be paid by the contractor to workers who attend formal training, in terms of 1.3.3 above.

1.3.5 Proof of compliance with the requirements of 1.3.2 to 1.3.4 must be provided by the Contractor to the Employer prior to submission of the final payment certificate.

GENERIC LABOUR INTENSIVE SPECIFICATION

(This specification must be incorporated in the Scope of Works without amendment or modification. When SANS 1921-5, *Construction and management requirements for works contracts Part 5: Earthworks activities which are to be performed by hand*, is published, the earthworks portions of this generic specification must be replaced with a reference to SANS 1921-5 and its associated specification data)

Scope

This specification establishes general requirements for activities which are to be executed by hand involving the following:

- a) trenches having a depth of less than 1.5 metres
- b) stormwater drainage
- c) low-volume roads and sidewalks

Precedence

Where this specification is in conflict with any other standard or specification referred to in the Scope of Works to this Contract, the requirements of this specification shall prevail.

Hand excavateable material

Hand excavateable material is material:

a) granular materials:

- i) whose consistency when profiled may in terms of table 1 be classified as very loose, loose, medium dense, or dense; or
- ii) where the material is a gravel having a maximum particle size of 10mm and contains no cobbles or isolated boulders, no more than 15 blows of a dynamic cone penetrometer is required to penetrate 100mm;

b) cohesive materials:

- i) whose consistency when profiled may in terms of table 1 be classified as very soft, soft, firm, stiff and stiff / very stiff; or
- ii) where the material is a gravel having a maximum particle size of 10mm and contains no cobbles or

isolated boulders, no more than 8 blows of a dynamic cone penetrometer is required to penetrate 100mm;

- Note: 1) A boulder, a cobble and gravel is material with a particle size greater than 200mm, between 60 and 200mm.
2) A dynamic cone penetrometer is an instrument used to measure the insitu shear resistance of a soil comprising a drop weight of approximately 10 kg which falls through a height of 400mm and drives a cone having a maximum diameter of 20mm (cone angle of 60° with respect to the horizontal) into the material being used.

Table 1: Consistency of materials when profiled

GRANULAR MATERIALS		COHESIVE MATERIALS	
CONSISTENCY	DESCRIPTION	CONSISTENCY	DESCRIPTION
Very loose	Crumbles very easily when scraped with a geological pick.	Very soft	Geological pick head can easily be pushed in as far as the shaft of the handle.
Loose	Small resistance to penetration by sharp end of a geological pick.	Soft	Easily dented by thumb; sharp end of a geological pick can be pushed in 30-40 mm; can be moulded by fingers with some pressure.
Medium dense	Considerable resistance to penetration by sharp end of a geological pick.	Firm	Indented by thumb with effort; sharp end of geological pick can be pushed in upto 10 mm; very difficult to mould with fingers; can just be penetrated with an ordinary hand spade.
Dense	Very high resistance to penetration by the sharp end of geological pick; requires many blows for excavation.	Stiff	Can be indented by thumb-nail; slight indentation produced by pushing geological pick point into soil; cannot be moulded by fingers.
Very dense	High resistance to repeated blows of a geological pick.	Very stiff	Indented by thumb-nail with difficulty; slight indentation produced by blow of a geological pick point.

Trench excavation

All hand excavateable material in trenches having a depth of less than 1,5 metres shall be excavated by hand.

Compaction of backfilling to trenches (areas not subject to traffic)

Backfilling to trenches shall be placed in layers of thickness (before compaction) not exceeding 100mm. Each layer shall be compacted using hand stampers

- a) to 90% Proctor density;
- b) such that in excess of 5 blows of a dynamic come penetrometer (DCP) is required to penetrate 100 mm of the backfill, provided that backfill does not comprise more than 10% gravel of size less than 10mm and contains no isolated boulders, or
- c) such that the density of the compacted trench backfill is not less than that of the surrounding undisturbed soil when tested comparatively with a DCP.

Excavation

All hand excavateable material including topsoil classified as hand excavateable shall be excavated by hand. Harder material may be loosened by mechanical means prior to excavation by hand.

The excavation of any material which presents the possibility of danger or injury to workers shall not be excavated by hand.

Clearing and grubbing

Grass and small bushes shall be cleared by hand.

Shaping

All shaping shall be undertaken by hand.

Loading

All loading shall be done by hand, regardless of the method of haulage.

Haul

Excavation material shall be hauled to its point of placement by means of wheelbarrows where the haul distance is not greater than 150 m.

Offloading

All material, however transported, is to be off-loaded by hand, unless tipper-trucks are utilised for haulage

Spreading

All material shall be spread by hand.

Compaction

Small areas may be compacted by hand provided that the specified compaction is achieved.

Grassing

All grassing shall be undertaken by sprigging, sodding, or seeding by hand.

Stone pitching and rubble concrete masonry

All stone required for stone pitching and rubble concrete masonry, whether grouted or dry, must be collected, loaded, off loaded and placed by hand.

Sand and stone shall be hauled to its point of placement by means of wheelbarrows where the haul distance is not greater than 150m.

Grout shall be mixed and placed by hand.

Manufactured Elements

Elements manufactured or designed by the Contractor, such as manhole rings and cover slabs, precast concrete planks and pipes, masonry units and edge beams shall not individually, have a mass of more than 320kg. In addition the items shall be large enough so that four workers can conveniently and simultaneously acquire a proper hand hold on them.

3.3.4 Schedules of quantities

Labour-intensive works must be highlighted in the schedules / bills of quantities for the payment items relating to labour intensive works.

The following wording, as appropriate, may be included in the preamble or pricing instructions to the schedules / bills of quantities in the contract with the contractor:

1 Those parts of the contract to be constructed using labour-intensive methods have been marked in the bill of quantities with the letters LI in a separate column filled in against every item so designated. The works, or parts of the works so designated are to be constructed using labour-intensive methods only. The use of plant to provide such works, other than plant specifically provided for in the scope of work, is a variation to the contract. The items marked with the letters LI are not necessarily an exhaustive list of all the activities which must be done by hand, and this clause does not over-ride any of the requirements in the generic labour intensive specification in the Scope of Works.

2 Payment for items which are designated to be constructed labour-intensively (either in this schedule or in the Scope of Works) will not be made unless they are constructed using labour-intensive methods. Any unauthorised use of plant to carry out work which was to be done labour-intensively will not be condoned and any works so constructed will not be certified for payment.

The following payment items should be included in the bill of quantities:

Item	Description	Unit	Quantity	Rate	Amount
	Training allowance paid to targeted labour iro formal training	Person days	(insert quantity)	(insert specified day rate)	
	Extra over for the administration of payment of training allowances to targeted labour	Person days	(as above)		
	Transport and accommodation of workers for training where it is not possible to undertake the training in close proximity to the site. (Provisional sum)	Sum	(insert provisional sum)		

4 Design checklist

Cognisance of the following should be taken in the design of labour intensive works:

1. Earthworks must be designed taking consideration of the method of construction, namely labour intensive.
2. Vertical and horizontal alignment of the works (roads, trenches, pipelines and stormwater channels) should be such to optimise cut and fill, minimise deep or hard excavation or areas requiring specialist engineering input for example dewatering or specialist ground stabilisation.
3. During the design of gravel roads, suitable construction material should be sourced in close proximity to the site of the Works.
4. Drawings must be produced and presented in a clear easily understandable way. Where setting out information is provided in the form of coordinates it should be backed up with methods, not relying on sophisticated surveying instruments, such as offsets measurable will the use of a standard tape. Where possible and appropriate drawings should be produced using a background of ortho photos to provide for easily identification of surrounding features.
5. Except in special circumstances, drawings should be produced in a form that is easily readable in A3 format.
6. Where the haul distance is greater than 150m, and less than 5000m the use of small volume local transport, particularly using animal drawn vehicles should be considered.
7. Excavation in material which may constitute a safety hazard for workers must be excluded.
8. All pre-manufactured materials which are incorporated into the Works must be sized such that the mass of individual elements does not exceed 320kg.
9. Hazardous material such as lime or harmful chemical stabilizing agents must not be included in the Works.
10. Stone masonry and grouted stone pitching should be included wherever suitable material is available to the exclusion of pre-cast or cast in situ concrete stormwater structures.
11. Where compaction of road layer works is required, it must be carried out using conventional compaction equipment (mechanised pedestrian rollers where possible). Compaction of small areas and in trenches may be carried out using hand stampers.

12. Consideration must be given to alternative design of trenches for gravity pipelines to reduce depth of excavation.
13. Where there is an indication of local skills, e.g. bricklaying, structures should be designed to make use of such skills.
14. There are appropriate designs for labour-intensive construction of low-cost surfacing for low-volume roads, such as the Cape Seal and interlocking concrete blocks. Refer to Appendix A for further details.

APPENDIX A: SOURCES OF ADDITIONAL INFORMATION

The following sources provide comprehensive information in respect of the following topics:

Topic	Reference	Obtainable from
Besa building system	Agrément South Africa's Guideline 1, <i>The Manufacture of BESA Blocks</i> Agrément Open Certificate OC-1/2003. Agrément Open Certificate OC-2/2003. CIDB. Best Practice Guidelines for Labour-based Methods and Technologies for Employment Intensive Construction Works. Part 3: Section 2- The BESA Building System	Agrément South Africa www.agrement@csir.co.za Construction Industry Development Board www.cidb.org.za under the section "job creation"
Brick and block making	CIDB. Best Practice Guidelines for Labour-based Methods and Technologies for Employment Intensive Construction Works. Part 3: Section 1- Precast Concrete Products, Brick and Block Making	Construction Industry Development Board www.cidb.org.za under the section "job creation"
Conditions of Employment	Code of Code of Good Practice for Employment and Conditions of Work for Special Public Works Programmes Ministerial Determination: Special Public Works Programmes	EPWP Unit of the Department of Public Works
Earthworks	CIDB. Best Practice Guidelines for Labour-based Methods and Technologies for Employment Intensive Construction Works. (Download from www.cidb.org.za) <ul style="list-style-type: none"> ▪ Part 2: Labour-based construction methods for earthworks ▪ Appendix 1: Quantitative Employment Data on Selected Construction Activities 	Construction Industry Development Board www.cidb.org.za under the section "job creation"
Labour intensive projects and programmes	McCutcheon, RT (ed) (1993). Interim Guidelines for employment-intensive construction projects. Construction and Development Series Number 2, Midrand: Development Bank of Southern Africa, February 1993 McCutcheon, RT and Marshall J (1996). Labour-intensive Construction and Maintenance of Rural Roads : Guidelines for the Training of Road Builders, Construction and Development Series, Number 14 (Midrand: DBSA, November 1996) McCutcheon, RT and Filip, LM (ed). Employment and high - standard infrastructure. Work Research Centre for Employment Creation in Construction (2003)	Development Bank of Southern Africa School of Civil Engineering, University of the Witwatersrand.
Labour productivities	CIDB. Best Practice Guidelines for Labour-based Methods and Technologies for Employment Intensive Construction Works. <ul style="list-style-type: none"> ▪ Appendix 1: Quantitative Employment Data on Selected Construction Activities 	Construction Industry Development Board www.cidb.org.za under the section "job creation"
Minimum wages	Wage determination for the Civil Engineering Sector	www.safcec.org.za under the section "human resources"
Monitoring the employment of workers / compliance with the provisions of SANS 1914-5	SANS 10396, Implementing Preferential Procurement Policies Using Targeted Procurement Procedures <ul style="list-style-type: none"> ▪ Annex G: Implementing employment intensive infrastructure projects which target the increase of employment opportunities generated per unit of expenditure ▪ Annex J: Third party management support 	Standards South Africa (division of the South African Bureau of Standards)
Pre-cast concrete works	CIDB Best Practice Guidelines for Labour-based Methods and Technologies for Employment Intensive Construction Works. <ul style="list-style-type: none"> ▪ Part 3: Section 1- Pre-cast Concrete Products, Brick and Block Making 	Construction Industry Development Board www.cidb.org.za under the section "job creation"
Preparing procurement documents	CIDB Best Practice Guidelines for Procurement C1: Preparing Procurement Documents	Construction Industry Development Board www.cidb.org.za under the section "job creation"
	SANS 10403, Formatting and Compilation of Construction Procurement Documents	Standards South Africa (division of the South African Bureau of Standards)
Roads	CIDB Best Practice Guidelines for Labour-based Methods and Technologies for Employment Intensive Construction Works. <ul style="list-style-type: none"> ▪ Part 2: Labour-based construction methods for earthworks ▪ Part 4: Section 4 - Foam bitumen gravel ▪ Part 4: Section 5 - Cast in-situ block pavements 	

	<p>(hysen cells)</p> <ul style="list-style-type: none"> ▪ Part 4: Section 6 - Emulsion treated gravel ▪ Part 4: Section 7 - Waterbound macadam ▪ Part 4: Section 8 - Slurry bound and composite macadams ▪ Part 4: Section 9 - Labour-based methods for unsealed roads ▪ Appendix 1: Quantitative Employment Data on Selected Construction Activities 	
Rubble concrete masonry	<p>CIDB Best Practice Guidelines for Labour-based Methods and Technologies for Employment Intensive Construction Works.</p> <ul style="list-style-type: none"> ▪ Part 4: Section 2 – Rubble masonry dam construction technology ▪ Part 4: Section 3 – Rubble masonry concrete arch bridge construction technology 	<p>Construction Industry Development Board www.cidb.org.za under the section "job creation"</p>
Storm water drainage	<p>CIDB Best Practice Guidelines for Labour-based Methods and Technologies for Employment Intensive Construction Works.</p> <ul style="list-style-type: none"> ▪ Part 4: Section 1 – Labour-based Open Channel Flow Technology 	<p>Construction Industry Development Board www.cidb.org.za under the section "job creation"</p>
Trenches	<p>CIDB Best Practice Guidelines for Labour-based Methods and Technologies for Employment Intensive Construction Works. (Download from www.cidb.org.za)</p> <ul style="list-style-type: none"> ▪ Part 2: Labour-based construction methods for earthworks ▪ Appendix 1: Quantitative Employment Data on Selected Construction Activities 	<p>Construction Industry Development Board www.cidb.org.za under the section "job creation"</p>
Concrete Block Paved Roads	<p>Macleod, Concrete Block Paved Roads: The Development Potential. Construction and Development. Series, Number 8. Development Bank of Southern Africa. September, 1993</p>	<p>Development Bank of Southern Africa.</p>
Bituminous Surfacing	<p>Methods and Procedures Labour Enhanced. Construction for Bituminous surfacings Manual 12, March 1993. SABITA.</p>	<p>Southern African Bitumen and Tar Association.</p>
Bituminous Surfacing	<p>Methods and Procedures Labour Enhanced. Construction for Bituminous surfacings Manual 11, March 1993. SABITA.</p>	<p>Southern African Bitumen and Tar Association.</p>

APPENDIX B: TYPES OF INFRASTRUCTURE WHICH ARE SUITABLE FOR CONSTRUCTION USING LABOUR INTENSIVE METHODS**B.1 Roads**

The following operations may be carried out using labour intensive methods:

1. Site clearance
2. Layer work construction including loading, hauling and spreading material.

Note: All compaction should be done using conventional compaction equipment and where necessary the use of heavy machinery may be employed to loosen material for excavation by hand. Where significant use of blasting is indicated, then the Works are probably not suitable for labour intensive methods.
3. Where high categories of roads are to be constructed then the following operations may be included:
 - Macadam base course either dry, water bound or emulsion bound; foamed bitumen gravel; emulsion treated gravel; or slurry bound or composite macadams .
 - Application of bitumen bound surface treatment (cold) including spreading and dragging of chips.
 - Slurry treatments to existing or new road surfaces.
 - In situ concrete roads.
 - Segmented block paved roads.
 - Cast in-situ block pavements (hysen-cells);
 - Road markings.
4. Fencing.
5. Erection of road signs.
6. Grass maintenance.
7. Road reserve maintenance.
8. Rubble masonry bridges, culverts and retaining walls

B.2 Stormwater

The following operations may be constructed using labour intensive construction methods:

1. Gabions and reno mattresses.
2. Small diameter pre-cast concrete elements (pipes and arches).
3. Grassed or lined water channels

B.3 Sewers

The following operations may be constructed using labour intensive construction methods:

1. Sewer manholes either in brickwork or using specially manufactured pre-cast manhole rings (individual mass less than 320kg).
2. Sewer manhole covers and lids using specially designed pre-cast units.

3. Maturation or flocculation ponds with least dimension not exceeding 100m.

B.4 Water

The following operations may be constructed using labour intensive construction methods:

1. Laying of water pipelines, fittings and house connections in all materials (including steel) where the mass of individual pipe lengths does not exceed 320kg.
2. Construction of ferro-cement reservoirs.
3. Excavation for membrane lined and floating roof reservoirs.
4. Construction of small masonry reservoirs.
5. Spring and well protection measures

B.4 Haul of Material

Where the haul of any material exceeds 200m, consideration should be given to the use of local resources for transporting material. This includes the use of animal drawn vehicles and small trailer combinations utilising locally sourced tractors. All loading and off loading can be done by hand.

B.5 Electricity

The following operations may be constructed using labour intensive methods:

1. Excavation of trenches for reticulation of all voltages.
2. Excavation for and erection of poles for overhead lines.
3. Installation of all electricity cables (joints and terminations by qualified persons).

B.6 Houses, schools and clinics

Housing is seen as labour-intensive, but the number of local people that could be employed may be enhanced by one or more of the following:

1. Manufacture of masonry elements on site.
2. Excavation of all foundation trenches by hand.
3. Manufacture of roof trusses on site.
4. Adoption of the BESA System

Note: 1) In the BESA system walls are constructed using bitumen emulsion stabilised adobe blocks and mortar. External and internal wall surfaces can be finished in a variety of ways using a mortar mix or a cement/sand plaster.

- 2) The BESA Building System is the subject of an open certificate issued by Agrément South Africa. The concept of an open certificate is that the technology is not the intellectual property of any company or individual and the information is available to anyone who wishes to use it. Any competent person, company or institution who wishes to use this system and is capable of carrying out this work in accordance with the terms and conditions of certification and undertakes to do so, may apply to Agrément South Africa to be registered as a holder of this open certificate.

APPENDIX C: STANDARD FORMS OF CONTRACT USED IN SOUTH AFRICA

The following standard forms of contract which are in use in South Africa use the following terminology:

Standard form of contract	Location for items covered by the scope of work	Names of the Parties to a Contract
GCC 1990, COLTO 1997, FIDIC Short Form of Contract	Specifications	Employer Contractor
FIDIC Conditions of Contract for Construction ("Red Book")	Specification and schedule	Employer Contractor
NEC Engineering and Construction Contract and Engineering and Construction Short Contract	Works Information	Employer Contractor
JBCC 2000 Principal Building Agreement, Minor Works Agreement	Schedule	Employer Contractor
NEC - The Professional Services Contract	Scope	Employer Consultant
CIDB Standard Services Contract	Scope of Work	Employer Service Provider
SAACE Form of Agreement for Consulting Services	Scope of Services	Client Consultant
GCC 2004	Scope of Work	Employer Contractor

Note:

The Engineering Council of South Africa have issued in government gazette No 24938, dated 28 February 2003, a document entitled: Guideline Scope of Services and Tariff of Fees for Persons Registered in terms of the Engineering Profession Act, 2000, (Act No. 46 of 2000). This document which provides a "guideline scope of service" and a "guideline tariff of fees" repeals Government Notice R 1113 of June 1982.

This document can be referenced in the scope of work and the pricing instructions. It uses the terms "client" and "consulting engineer".

APPENDIX D: REQUIRED SKILLS PROGRAMMMES**D.1 Client/ Employer**

It is recommended that personnel within public bodies complete skills programmes for NQF registered unit standards, as set out in Table D.1.

Table D.1: Skills programme for client / employer staff

Personnel	NQF	Unit Standard Title	Skills Programme Description
Senior management and professionals	7	Develop and Promote Labour Intensive Construction Strategies	Skills Programme against this single unit standard
Middle management (technical)	5	Manage Labour Intensive Construction Projects	Skills Programme against this single unit standard
Middle management (admin)	5	Manage Labour Intensive Construction Projects	Skills Programme against this single unit standard

D.2 Consultants

The person responsible for the design and documentation of the labour intensive works, must have completed, or be registered on a skills programme for, the NQF level 7 unit standard "Develop and Promote Labour Intensive Construction Strategies". (see Table D.2)

The person who is responsible to the employer for the administration of the contract, must have completed, or be registered on a skills programme for, the NQF level 5 unit standard "Manage Labour Intensive Construction Projects". (see Table D.2)

Table D.2: Skills programme for consultants

Personnel	NQF	Unit standard Title	Skills Programme Description
Administrator / Site Supervisor	5	Manage Labour Intensive Construction Projects	Skills Programme against this single unit standard
Designer	7	Develop and Promote Labour Intensive Construction Strategies	Skills Programme against this single unit standard

D.3 Contractors

The unit standards for contractors are outlined in Table D.3.

For established contractors, the site agent / manager (i.e the contractors' most senior representative that is resident on the site) must have completed, or be registered on a skills programme for the NQF level 5 unit standard "Manage Labour Intensive Construction Projects". For emerging contractors, the emerging contractor himself or herself must have completed, or be registered on a skills programme for the NQF level 2 unit standard.

For both established and emerging contractors, all other site supervisory staff (i.e. team leaders or foremen) must have completed, or be registered on a skills programme for, the NQF level 2 unit standards or NQF level 4 unit standards.

Personnel	NQF	Unit standard Titles	Skills Programme Description
Team Leader / Supervisor	2	Apply Labour Intensive Construction Systems and Techniques to Work Activities	This unit standard must be completed, and
		Use Labour Intensive Construction Methods to Construct and Maintain Roads and Stormwater Drainage	} any one of the 3 listed unit standards must be completed
		Use Labour Intensive Construction Methods to Construct and Maintain Water and Sanitation Services	
		Use Labour Intensive Construction Methods to Construct, Repair and Maintain Structures	
Foreman / Supervisor		Implement labour Intensive Construction Systems and Techniques	This unit standard must be completed, and
		Use Labour Intensive Construction Methods to Construct and Maintain Roads and Stormwater Drainage	} any one of the 3 listed unit standards must be completed
		Use Labour Intensive Construction Methods to Construct and Maintain Water and Sanitation Services	
		Use Labour Intensive Construction Methods to Construct, Repair and Maintain Structures	
Site Agent / Manager	5	Manage Labour Intensive Construction Processes	Skills Programme against this single unit standard