



Implementing Employment Intensive Road Works

A **cidb** guide to best practice

Supporting job creation and the development and skills of SME contractors



Constructing shared growth

This set of practice manuals for **Implementing Employment Intensive Road Works** draws on the experience of the South African Construction Industry in the development of road building contractors, supervisors and designers. The set provides detailed guidance on implementing road works to support job creation. The manuals build on the labour-based best practice guidelines that have been published by the Construction Industry Development Board (cidb).

In assembling this publication, the cidb has collaborated with the Council for Scientific and Industrial Research (CSIR) and the International Labour Organisation (ILO) in fulfilment of the cidb's mandate to promote "national social and economic objectives, including labour absorption in the construction industry", (CIDB Act 38 of 2000). The cidb is committed to further partnerships with industry and stakeholders to promote the use of these manuals and the training of SME contractors within the framework of a national contractor development programme and the Construction Charter.

Implementing Employment Intensive Road Works aims to provide practical technical guidance to small and medium sized (SME) contractors, supervisors and designers involved in the construction and upgrading of roads using labour and light plant.

These manuals are supported by the Expanded Public Works Programme (EPWP), which directs a significant and increasing proportion of South Africa's public investment towards a labour intensive programme of construction, drawing the unemployed into productive work and providing access to skills development.

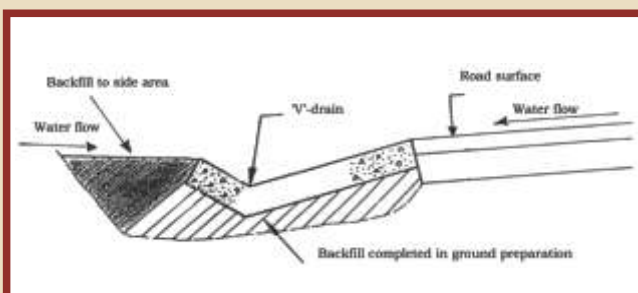
"...with the right construction technology, South Africa can successfully address infrastructural backlogs in a cost-efficient way and to acceptable engineering standards. We are saying we can do this while maximising job opportunities..."

Ms Thoko Didiza, Minister of Public Works.
Nkangala, Mpumalanga,
June 2006.



The aggregate is loaded into the "Chippy" by wheelbarrows and the "Chippy" guided along the length of the road in accordance with the manufactures instructions.

Source: Manual 4, page 28



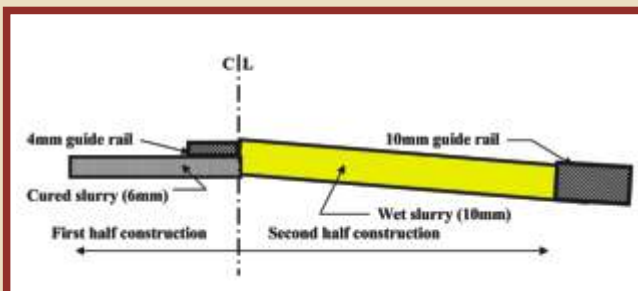
Example of backfilling 'V' drain

Source: Manual 5, page 41



Spotting of aggregate

Source: Manual 4, page 60



Detail to accommodate wet and dry slurry thicknesses

Source: Manual 4, page 53

Implementing Employment Intensive Road Works

Manual 1

The fundamentals of road construction

- Module 1: Basic mathematical concepts and calculations
- Module 2: Survey concepts
- Module 3: Material concepts
- Module 4: Material related concepts
- Module 5: Typical road terms and components

Manual 2

Planning and contract management

- Module 1: Documentation on which the contract is based
- Module 2: The role and authority of parties involved in the contract
- Module 3: The establishment and management of the construction camp
- Module 4: Health and safety issues
- Module 5: The preparation of a programme for the execution of the contract
- Module 6: Quality control of the work
- Module 7: Broad environmental issues

Manual 3

Gravel pavement layers

- Module 1: Safety during construction
- Module 2: Setting out
- Module 3: Construction of unstabilised gravel pavement layers
- Module 4: Construction of a gravel wearing course
- Module 5: Construction of a stabilised base course
- Module 6: Indicative task rates

Manual 4

Bituminous seals

- Module 1: Safety during construction
- Module 2: Operation and utilisation of the motorised hand sprayer
- Module 3: Construction of a single seal
- Module 4: Construction of a slurry seal
- Module 5: Construction of a "Cape" seal
- Module 6: Construction of an "Otta" seal
- Module 7: Indicative task rates

Manual 5

Concrete and masonry drainage works and structures

- Module 1: Safety during construction
- Module 2: Concrete and mortar
- Module 3: Construction of lined channels and chutes
- Module 4: Construction of culverts/small bridges
- Module 5: Construction of drifts and causeways
- Module 6: Construction of erosion control structures
- Module 7: Construction process for pipe laying
- Module 8: Indicative task output rates

Drawings

Workshop drawings of selected items of specialised equipment

The Guidelines can be downloaded from the cidb website www.cidb.org.za free of charge and will soon be available on CD and in hard copy. For more information contact the cidb on (012) 482 7218.

The following products are also available from the cidb in support of contractor development:

- Labour based methods and technologies for employment intensive construction works
- Construction Contracts: the 3Rs Basic Guide for SMEs “know your rights, responsibilities and risks”
- And soon to be available:
 - GCC and JBCC training guides for contractors - understanding the most common forms of contract
 - Construction tendering and contract management guide - how to manage your contracts efficiently and profitably

“We have made the firm commitment to confront the challenges of poverty and joblessness. We have made the solemn pledge that we will do everything possible to achieve the goal of a better life for all our people.”

President Thabo Mbeki



Construction Industry Development Board

Private Bag X14, Brooklyn Square, 0075

Tel: +27 12-482 7200, Fax: +27 12-343 7153, E-mail: cidb@cidb.org.za, Website www.cidb.org.za