

A. Scope of Works

B. Technical Specification

1. Preamble to Schedule of Rates

- 1.1 It is a general principle throughout this Specification that the payment for each work item is inclusive of all operations, resources and inputs necessary to complete the work Item. The cost of operations or works not included in the Specifications or the Bill of Quantities, but are all necessary for the completion of the Works, shall be deemed to included within other items
- 1.2 In the Schedule of Rates the Item numbers, headings and item descriptions identify the work covered by the respective items. The exact nature and extent of the work is to be ascertained by reference to the Works description, Specifications and Conditions of Contract. The rates and prices entered in the Schedule of Rates shall be deemed to be the full inclusive value of the work including the following, unless expressly stated otherwise:
 - (a) The provision, storage, transport, handling, use, distribution, and maintenance of all materials, plant, equipment, machinery and tools including all costs, charges, dues, demurrage or other outlays involved in carriage and importation, including waste and delivery to Site and the Network,
 - (a) The provision, storage, transport, use, handling, distribution and maintenance of all consumable stores, fuel, water and electricity,
 - (b) Temporary Works,
 - (c) Establishment charges including temporary accommodation at individual sites, overheads and profit,
 - (d) All risks, liabilities, contingencies, insurance and obligations imposed or implied by the Contract,
 - (e) Attendance and transport for sampling and testing carried out by the Engineer's Representative, supplying results of tests carried out by the Contractor and providing test certificates,
 - (f) Awaiting approvals and or consents,
 - (g) Traveling to, between and from different locations within the Network,
 - (h) The provision and care of all staff and labor and their payment, accommodation, transport, fares and other requirements including First Aid, welfare and safety requirements,
 - (i) Setting out, including the location and preservation of survey markers, measurement and supervision,
 - (j) The opening operation and reinstatement upon completion of all quarries and borrow pits,
 - (k) The construction and maintenance of the temporary diversion routes as required, the control of traffic, and the provision of temporary road signs as described or otherwise necessary for the safe performance of the Works,
 - (l) Injury caused to the works under construction, plant, materials and consumable stores by weather,
 - (m) Co-ordination with other Contractors or Authorities carrying out work either in connection with or adjacent to the works,
 - (n) The protection of mains, ducts and services,
- 1.3 Each individual item shall have a rate or price entered against it.

- 1.4 Unless expressly stated otherwise the Contractor shall allow in his rates and prices for carrying out the works at any location within the Network, for setting up at each Site and for movement between Sites.
- 1.5 The Contractor shall allow for the items in the Schedule of Rates being used only once, a number of times or not at all and in any quantity during the currency of the Contract
- 1.6 Where the Schedule of Rates includes separate pay items depending on work quantity, this shall be on the basis of the quantity of each work Item instructed by a single Works Order.
- 1.7 The final measurement of quantity against each item on a Works Order shall be computed net to two decimal places from the dimensions stated in the Contract unless stated otherwise in the Specifications or stated on the Works Order.
- 1.8 The measured quantity for each item of work executed by the Contractor in accordance with the Contract shall be measured net and no allowance will be made for waste, bulking, shrinkage, increase or decrease of volume due to compacting or to the provision of working space.
- 1.9 Where in the Contract a choice of alternatives is permitted, the scheduled description and the rates and prices inserted shall be deemed to cover any of the permitted alternative materials or designs the Contractor may elect to use.
- 1.10 The Schedule of Rates does not include or infer any pre-estimate of the required work quantities. The Contractor should make his own predictions regarding the amounts, frequencies and distribution of the Works based on the information contained in the Contract, his own experience of patterns of road deterioration, and his pre-tender inspection of the Network. The Contractor is entirely responsible for any inaccuracies in his predictions.
- 1.11 Except in circumstances as provided for in the Contract, the Contractor will not be entitled to any monthly interim payment or any other payment on account until all the work required by a Works Order is complete. Payment will then normally be claimed in the next monthly statement following certified completion by the Engineer. However, payment for continuous Length-Person activities may be claimed on a regular monthly basis in arrears.

2. General Requirements

The Contractor shall engage only those people who have been adequately trained and instructed in their duties. All operators of equipment and vehicles shall be competent and hold all necessary licenses in accordance with current legislation. The Contractor shall employ sufficient numbers of helpers and watchmen who shall guide operators and provide warning of potential conflict with people and other vehicles, as applicable.

The Contractor shall pay due regard to the safety of his workers.

Where appropriate, the Contractor shall pay particular attention to the safety of operators and all persons in the vicinity of fuel transfer / storage operations. A prohibition on smoking must be actively enforced when close to flammable liquids.

All equipment and vehicles shall be in a good and safe working condition. The Contractor must have contingency arrangements in place to attend to personal injuries that may result from accidents occurring within the work site.

3. Protection of the Environment / Works

The Contractor shall take all reasonable precautions to preserve the condition of the environment. In particular:

- (a) No pollutants shall be allowed to enter any watercourse;
- (b) No unauthorized or indiscriminate felling of trees shall be permitted;
- (c) No open or uncontrolled fires shall be permitted;

- (d) The Contractor shall not cause areas of stagnant water to form, on the surface or in open containers;
- (e) All spoil or waste materials remaining after the works must be neatly disposed of in approved dump sites;
- (f) The Contractor shall ensure that the Works, including the action of individual workers, do not result in any littering. Where such littering does occur the Contractor shall be responsible for the collection and proper disposal of the litter;
- (g) The use of herbicides and pesticides shall not be permitted.
- (h) Excavations, finished works are to be protected from adverse weather and any work damaged by adverse weather is to be repaired by the Contractor.

4. Equivalency of Standards and Codes

Wherever reference is made in the Contract to specific standards and codes to be met by the goods and materials to be furnished, and work performed or tested, the provisions of the latest current edition or revision of the relevant standards and codes in effect shall apply, unless otherwise expressly stated in the Contract. Where such standards and codes are national, or relate to a particular country or region, other authoritative standards that ensure a substantially equal or higher quality than the standards and codes specified will be accepted subject to the Employer's prior review and written consent. Differences between the standards specified and the proposed alternative standards shall be fully described in writing by the Contractor and submitted to the Engineer at least 28 days prior to the date when the Contractor desires the Engineer's consent. In the event the Engineer determines that such proposed deviations do not ensure substantially equal or higher quality, the Contractor shall comply with the standards specified in the documents.

5. Project Sign Boards

The Contractor shall provide, erect and maintain, Project Sign Boards at all the principle boundaries to construction location. The cost of providing and maintaining the sign boards should be included in the rates tendered for other work items and will not be separately reimbursed.

6. Work Item Specifications

The pages that follow provide the work Specifications for each of the term work activity Items. A standard layout sheet is used for the Specifications of each Item. As well as stating the title, reference number and units for measurement, these provide information under the following headings:

- (a) **Description** – provides an overview of the repair / work technique and the circumstances when it is normally used.
- (b) **Typical Equipment** – where included, provides advice on key items of equipment needed to perform the work. This is for guidance only and the Contractor may select his own resources.
- (c) **Materials** – describes and defines the type and quality of main materials which are to be incorporated into the work.
- (d) **Work Specifications** – describes the general methodology for performing the work, states any mandatory requirements (e.g. when mechanical compaction must be used), required standards of workmanship quality and any required testing.
- (e) **Measurement and Payment** – describes in what units and how the accomplished work is to be measured for the application of unit payment rates. The units of measurement used are those of the International System of Units (SI). No other units may be used for measurements, pricing, detail drawings etc. (Any units not mentioned in the technical documentation must also be expressed in terms of the SI.) Abbreviations used in the specification are to be interpreted as follows:

mm	means millimeter	h	means hour
-----------	------------------	----------	------------

m	means meter	L.s.	means Lump sum
mm²	means square millimeter	km	means kilometer
m²	means square meter	l	means liter
m³	means cubic meter	%	means per cent
kg	means kilogram	N.d	means nominal diameter
to	means tone (1000 kg)	m/m	means man-month
pcs	means pieces	m/d	means man-day