

Superseded

Specification (Measurement)

**Transport and Main Roads Specification
MRS140 Horizontal Directional Drilling (HDD)**

January 2017

Superseded

Copyright



<http://creativecommons.org/licenses/by/3.0/au/>

© State of Queensland (Department of Transport and Main Roads) 2017

Feedback: Please send your feedback regarding this document to: tmr.techdocs@tmr.qld.gov.au

Contents

1	Introduction	1
2	Measurement of work	1
2.1	Standard Work Items	1
2.2	Work Operations	1
2.2.1	<i>HDD construction</i>	<i>1</i>
2.3	Measurement	3
2.3.1	<i>Measurement of provision of traffic</i>	<i>3</i>
2.3.2	<i>Measurement of General Earthworks</i>	<i>3</i>
2.4	Calculation of quantities	3
3	Measurement and payment	3
3.1	Traffic management	3
3.2	General earthworks	3
3.3	All lump sums amounts	3
3.3.1	<i>Times for payments for lump sums</i>	<i>4</i>

1 Introduction

This Specification applies to the installation of underground services and utilities using Horizontal Directional Drilling (HDD).

This Specification shall be read in conjunction with MRS01 *Introduction to Specifications* and other Specifications as appropriate.

This Specification forms part of the Transport and Main Roads Specification Manual.

2 Measurement of work

2.1 Standard Work Items

In accordance with the provisions of Clause 2 of MRS01 *Introduction to Specifications*, the Standard Work Items covered by this Specification are listed in Table 2.1.

Table 2.1 – Standard Work Items

Standard Item No.	Description	Unit of Measurement
Horizontal Directional Drilling (HDD)		
3901	Design of HDD boring installation system	lump sum
3902	Supply and installation of sleeving and carrier pipe	m
3903	HDD, all materials	m
3904P	HDD in hard ground, rate additional to rates for Work Item 3903 (Provisional Quantity)	m
3905	Removal of spoil material from HDD drive	m ³
3906P	Addition of lime to spoil material in Acid Sulphate Soil area, (Provisional Quantity as directed)	m ³
3907	Grouting outer annuls and space between the casing and carrier pipe	m ³
3908	Sand fill the space between the casing and carrier pipe	m ³
3909	Operation of HDD machine	lump sum
3910	Designer's inspection and certification	lump sum

2.2 Work Operations

Any other Standard Work Items other than given in Table 2.1 shall be in accordance with the relevant MRS, e.g., Provision for Traffic in accordance with MRS02 and provision for General Earthworks is in accordance with MRS04.

2.2.1 HDD construction

Item 3901 Design of HDD installation system

Work Operations incorporated in the above item include:

- Work Operations listed in Clause 2.1.5 of MRS01 *Introduction to Specifications*
- design of HDD system in accordance with this Specification, and
- submission of design for approval to use in accordance with the Conditions of Contract.

Item 3902 Supply and installation of sleeving and carrier pipe

Work Operations incorporated in the above item include:

- a) Work Operations listed in Clause 2.1.5 of MRS01 *Introduction to Specifications*, and
- b) supply and installation of sleeving and carrier pipe

Item 3903 HDD, all materials

Work Operations incorporated in the above item include:

- a) Work Operations listed in Clause 2.1.5 of MRS01 *Introduction to Specifications*, and
- b) boring through all materials.

Item 3904P HDD, hard ground, rate additional to rates for Work Item 3903 (Provisional Quantity)

Work Operations incorporated in the above item include:

- a) Work Operations listed in Clause 2.1.5 of MRS01 *Introduction to Specifications*, and
- b) boring associated with hard ground in addition to that required for, in all materials.

Item 3905 Removal of spoil material from HDD drive

Work Operations incorporated in the above item include:

- a) Work Operations listed in Clause 2.1.5 of MRS01 *Introduction to Specifications*
- b) removing all spoils from pits
- c) stockpiling of material considered suitable for re-use, and
- d) hauling and disposing of unsuitable material.

Item 3906P Addition of lime to spoil material in Acid Sulphate Soil area, (Provisional Quantity as directed)

Work Operations incorporated in the above item include:

- a) Work Operations listed in Clause 2.1.5 of MRS01 *Introduction to Specifications*, and
- b) mixing of lime into spoil material at the rate required to neutralise potential acid production (excluding supply of lime)

Item 3907 Grouting outer annulus and space between the casing and carrier pipe

Work Operations incorporated in the above item include:

- a) Work Operations listed in Clause 2.1.5 of MRS01 *Introduction to Specifications*, and
- b) supply cementitious grouting and other associated materials and grouting the annulus and any void between casing and carrier pipe.

Item 3908 Sand fill the space between the casing and carrier pipe

Work Operations incorporated in the above item include:

- a) Work Operations listed in Clause 2.1.5 of MRS01 *Introduction to Specifications*, and
- b) supply sand and filling the space between casing and carrier pipe.

Item 3909 Operation of HDD machine

Work Operations incorporated in the above item include:

- a) Work Operations listed in Clause 2.1.5 of MRS01 *Introduction to Specifications*
- b) mobilizing and demobilizing HDD machine
- c) provide access road / working platform as necessary
- d) provide surveyors for checking the alignment
- e) supply, install and monitoring of instrumentations throughout the operations, and
- f) install of all sundry items and other components necessary to complete the work.

Item 3910 Designer's inspection and certification

Work Operations incorporated in the above item include:

- a) Work Operations listed in Clause 2.1.5 of MRS01 *Introduction to Specifications*
- b) provision of design certification in accordance with the Conditions of Contract, and
- c) addressing review comments and revising design.

2.3 Measurement

2.3.1 Measurement of provision of traffic

The provision of traffic shall be measured in accordance with MRS02 *Provision for Traffic*.

2.3.2 Measurement of General Earthworks

The measurement of excavation and backfilling shall be measured in accordance with MRS04 *General Earthworks*.

2.4 Calculation of quantities

Quantities shall be calculated in accordance with the provisions of Clause 2.1.1 of MRS01 *Introduction to Specifications*.

3 Measurement and payment

3.1 Traffic management

The measurement and payment shall be in accordance with MRS02 *Provision for Traffic*.

3.2 General earthworks

The measurement and payment shall be in accordance with MRS04 *General Earthworks*.

3.3 All lump sums amounts

The lump sum amounts tendered by the Contractor and accepted by the Administrator under Standard Work Items shall be deemed to be full.

3.3.1 Times for payments for lump sums

Notwithstanding the requirements of the Conditions of Contract:

- a) the Contractor may claim payment under Standard Work Item 3901 only after permission to use the Contractor's Design has been approved by the Administrator under the Conditions of Contract or after such permission is deemed to have been given under the Conditions of Contract
- b) the Contractor may claim payment under Standard Work Items 3902, 3903, 3904P, 3905, 3906P, 3907, 3908 and 3909 in accordance
- c) with the requirements of the Conditions of Contract
- d) the Contractor may claim payment under Standard Work Item 3910 only after delivery to the Administrator of the documents listed in the Conditions of Contract.

Superseded

Superseded