
**VOLUME 5 CONTRACT DOCUMENTS
FOR SPECIALIST
ACTIVITIES**

**SECTION 9 MODEL CONTRACT
DOCUMENTS FOR CCTV
SURVEY OF HIGHWAY
DRAINAGE SYSTEMS**

PARTS 1 TO 5

Part 1	SD 15/03	Implementation Standard for CCTV Survey of Highway Drainage Systems
Part 2		Series 9000 - Specification
Part 3		Series NG 9000 - Notes for Guidance
Part 4		Series 9000 - Method of Measurement
Part 5		Highway Drain Condition Classification

SUMMARY

These documents are new. They introduce to Volume 5 of the Manual the Implementation Standard for CCTV Survey of Highway Drainage Systems together with the Specification, Notes for Guidance, Method of Measurement and Highway Drain Condition Classification (Part 1 to Part 5).

INSTRUCTIONS FOR USE

This is a new document to be incorporated into the Manual.

1. Insert Parts 1 to 5 into Volume 5, Section 9.
2. Archive this sheet as appropriate.

Note: A quarterly index with a full set of Volume Contents Pages is available separately from The Stationery Office Ltd.

MANUAL OF CONTRACT DOCUMENTS FOR HIGHWAY WORKS

A BRIEF DESCRIPTION OF NOVEMBER 2003 AMENDMENTS

VOLUME 5

DOCUMENT	DESCRIPTION
Volume 5	Model Contract Documents for Major Works and Implementation Requirements
General	<p>The user's attention is drawn to a new Standard HD 34/03 (DMRB 5.3.1) which introduces the Standards Improvement System (SIS). This standard supersedes HD 34/93 - Implementation and Use of the Quality Control Reporting System and is published in November 2003.</p> <p>SIS is a computerised database of reports generated from failures of specifications and design standards and other observations on these documents. The database records potential improvements using lists of components, symptoms, diagnoses and detailed descriptions. SIS is operated and maintained by the Highways Agency. Its prime objective is to improve the performance of the engineering standards and specifications published by the Highways Agency, both independently and jointly with other Overseeing Organisations.</p>
Section 9 Part 1	<p>SD15/03 - Implementation Standard for CCTV Survey of Highway Drainage Systems</p> <p>This Standard introduces the documentation for the specialist activity of the Closed Circuit Television (CCTV) survey of highway drainage systems. These documents shall be used in the preparation of contracts for the construction, improvement or maintenance of trunk roads including motorways in England, Scotland, Wales and Northern Ireland (In Northern Ireland the documents will be applicable to those roads designated by the Overseeing Organisation).</p> <p>The specification covers all types of pipes with diameters up to and including 900 mm including sub-surface drainage and other non-piped systems that are being introduced. Pipes and conduits in excess of 900 mm are classified as structures that require technical approval; however, this technique is equally applicable to the remote inspection of these structures up to 1800 mm diameter.</p> <p>This Standard and accompanying Parts 2, 3, 4 and 5 should be used forthwith for all schemes currently being prepared, provided that, in the opinion of the Overseeing Organisation, this would not result in significant additional expense or delay.</p>
Section 9 Part 2	<p>Series 9000 - Specification</p> <p>This Part is the Specification for the Closed Circuit Television (CCTV) survey of highway drainage systems. It states the various requirements when such activity is undertaken.</p>

MANUAL OF CONTRACT DOCUMENTS FOR HIGHWAY WORKS

A BRIEF DESCRIPTION OF NOVEMBER 2003 AMENDMENTS

VOLUME 5 (continued)

DOCUMENT	DESCRIPTION
Volume 5	Model Contract Documents for Major Works and Implementation Requirements
Section 9 Part 3	Series NG 9000 - Notes for Guidance <p>This Part provides the Notes for Guidance on the Specification. It gives the background information on the Highways Agency's research that has shown there to be an unacceptable number of defects within the highway drainage system and also identified the need for more complete and accurate recording of the drain positions, sizes and condition. The use of CCTV survey will greatly assist in the collation of the record data and the programming of highway drainage maintenance. Identifying sections of drain in poor structural condition and the consequent remedial works can have a significant effect on the longevity of the pavement construction.</p>
Section 9 Part 4	Series 9000 - Method of Measurement <p>This Part provides the Method of Measurement for the use of CCTV survey for the inspection of highway drainage systems. The Part covers CCTV survey of the drainage systems and also the recording and storage format of the data.</p>
Section 9 Part 5	Highway Drain Condition Classification <p>This Part provides the general principles that should be followed when completing the header section of the standard coding form.</p>



THE HIGHWAYS AGENCY



THE SCOTTISH OFFICE DEVELOPMENT DEPARTMENT



**THE WELSH OFFICE
Y SWYDDFA GYMREIG**



**THE DEPARTMENT OF THE ENVIRONMENT FOR
NORTHERN IRELAND**

Notes for Guidance on the Specification for Geodetic Surveying Services

Summary: This part of Section 1 of Volume 5 of the MCHW provides Notes for Guidance on the Specification for Geodetic Surveying Services.

REGISTRATION OF AMENDMENTS

Amend No	Page No	Signature & Date of incorporation of amendments	Amend No	Page No	Signature & Date of incorporation of amendments

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**VOLUME 5 CONTRACT
DOCUMENTS FOR
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**SECTION 1 GEODETIC
SURVEYS**

PART 3

**NOTES FOR GUIDANCE ON THE
SPECIFICATION FOR GEODETIC
SURVEYING SERVICES**

Contents

1. Introduction
2. Notes for Guidance on the specification

1. INTRODUCTION

1.1 This part of Section 1 of Volume 5 of the MCHW provides Notes for Guidance on the Specification for Geodetic Surveying Services.

2. NOTES FOR GUIDANCE ON THE SPECIFICATION

NG 2. PURPOSE AND SCOPE

This Section shall give a brief description of the Survey. General requirements are covered in Clause 3 and detailed project requirements are covered in Clauses 4-14.

NG 2.1 Location

This shall include the road number, geographical locations of scheme limits sufficient to identify on a 1:250,000 or other suitable scale plan, nearest town and the county in which the scheme is located.

NG 2.2 Aim of the Project for which the Survey is Required

This shall be a statement of the overall objective of the project: eg, to upgrade the existing road to dual 2 lane carriageway by means of an on line improvement, to provide a new road to bypass an urban area, etc.

NG 2.3 Aim of the Survey

This may be to provide topographical information for use in feasibility studies, outline design, detailed design, Contract Documents, etc.

NG 2.4 Brief Description of Survey Area

Give approximate length and average breadth of the survey area. State whether area is predominantly rural or urban, briefly describe the terrain, vegetation cover, use of buildings. Highlight any areas of special significance eg nature reserves, sites of special scientific interest and the like, MOD land etc and other areas with restricted access, major traffic management requirements, sensitivity of the scheme.

NG 2.5 Use of the Survey Information

This should state the purposes for which the survey information will be used, particularly any unusual or special purposes. These may include the following.

- a. The identification of preliminary horizontal and vertical alignments for alternative routes on 1:10,000 scale mapping to provide outline information on earthworks required, construction costs, and the broad effects of the route on property, landscape and the environment.
- b. The preparation of outline engineering layout and landscaping plans at 1:2500 scale.
- c. The preparation and publication of order plans under the Highways Act, Roads (Scotland) Act, compulsory purchase order plans, land reference plans.
- d. Base plans for the display of material at public exhibitions.
- e. Base plans for use with the design of the engineering detail of the scheme including Contract Documents.
- f. To provide information for noise calculations.
- g. To provide a digital ground model for the calculation of earthworks quantities.
- h. To provide detailed geometric information on existing structures.
- i. To provide information for ground investigation purposes.

NG 3. GENERAL REQUIREMENTS

This section remains standard for all contracts.

Survey Advisor should inform tenderers of abnormal safety considerations of the works.

NG 6. REVISION OR UPGRADING OF EXISTING MAPPING

Authorities, including restricted working hours etc. shall be stated in the special requirements.

NG 6.7 Additional Details

The list of features to be surveyed should include those features required which do not normally appear on the original base map, such as high tension power lines with double poles.

NG APPENDIX D - ACCESS REQUIREMENTS

Information relating to access routes, times of access, identification of personnel etc. shall be given.

NG 9. SURVEYS FOR NOISE EVALUATION

The Survey Advisor or Design Organisation should try to arrange block groupings of similar buildings on similar ground levels wherever possible to simplify the Survey.

NG APPENDIX E - RESTRICTIONS TO THE SURVEY PROGRAMME

Information on events such as county shows, pageants, events on other major works, land which cannot be accessed etc. shall be given.

In the case of non residential buildings, such as garages, churches, offices etc. the eaves level can be omitted provided that the eaves levels of residential buildings in the block are represented.

NG APPENDIX F - SCHEDULE OF CONTACTS

This Appendix shall include contacts in private and public utility service companies and other statutory authorities serving the locality including:-

NG APPENDIX A - SCHEDULE OF LANDOWNERS AND OCCUPIERS

This Appendix should make it clear whether landowners and occupiers have already been notified of the period in which access is likely to be required and their permission for entry obtained by the Design Organisation or Survey Advisor. If the Survey Contractor is required to obtain such permissions, this should be clearly stated.

British Rail, Police and Highway Authorities, Electricity, Gas, Telephone, Water, Oil pipelines, River Drainage Boards etc.

The "Status" shall state whether it is the "owner, occupier, Survey Advisor, Design Organisation etc"

NG APPENDIX G - SCHEDULE OF EXISTING INFORMATION ON UNDERGROUND SERVICES

This Appendix should contain a schedule of all information available on the location of public and private services and supplies. This should include the service, the name, address, telephone and fax number of the contact, and the title, reference number, scale and date of the source data.

NG APPENDIX B - TABLE OF FEATURE SYMBOLS

This Appendix should contain details of the feature symbols to be used on all mapping.

NG APPENDIX H - SCHEDULE OF CONTRACT DRAWINGS

Shall give details of all drawings included in the Contract Documents.

NG APPENDIX C - REQUIREMENTS FOR TRAFFIC SAFETY AND MANAGEMENT

This Appendix should contain details of all traffic safety and management requirements, with which the Survey Contractor is required to comply. Details of relevant general statutory regulations should also be included.

NG APPENDIX J - CONSTRUCTION OF PERMANENT GROUND MARKERS

This Appendix should give details of the construction requirements for permanent ground markers, including illustrations where appropriate.

Any requirements made known in pre-survey discussions between the Design Organisation or Survey Advisor and the Highway and Police

NG APPENDIX K - LOCATION OF PERMANENT GROUND MARKERS

This Appendix should contain a pro-forma location diagram for use by the Survey Contractor to record the

location of all permanent ground markers used on the Contract.

**NG APPENDIX L - CONSTRUCTION OF
PERMANENT BENCH MARKS**

This Appendix should give details of the construction requirements for permanent bench marks, including illustrations where appropriate.

**NG APPENDIX M - LOCATION OF
PERMANENT BENCH MARKS**

This Appendix should contain a pro-forma location diagram for use by the Survey Contractor to record the location of all permanent bench marks used on the Contract.

**NG APPENDIX N - FLIGHT PLAN FOR
AERIAL PHOTOGRAPHY**

Where the Design Organisation or Survey Advisor is responsible for compiling the flight plan, details should be given in this Appendix.

**NG APPENDIX P - REPRESENTATION OF
UNDERGROUND SERVICES**

This Appendix shall contain details of the conventions, abbreviations, line types and other representational features to be used by the Survey Contractor on drawings of underground services.

**NG APPENDIX R - SCHEDULE OF FINAL
DRAWINGS**

This Appendix should contain a schedule of the scales and sheet sizes to be used for the final drawings.