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Transport Infrastructure Ireland

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Independent Vehicle Restraint Systems Chartered Engineer Requirements

CC-REQ-04009

June 2020

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1. Introduction

1.1 General

The objective of this document is to set out the current requirements for an Independent Vehicle Restraint Systems (VRS) Chartered Engineer to be appointed to carry out VRS foundation and ground condition certifications on National Road projects in accordance with CC-SPW-00400 Specification for Road Restraint Systems (Vehicle and Pedestrian).

2. TII Register of Approved Independent VRS Chartered Engineers

2.1 Qualifications and Experience

The following are the current qualification requirements for an Independent VRS Chartered Engineer to be appointed to carry out VRS foundation and ground condition certifications on National Road projects in accordance with CC-SPW-00400.

The Independent VRS Chartered Engineer will be a Chartered Engineer and shall have:

- At least five years' demonstrable experience of VRS related design and installation experience;
- Attended and successfully completed the TII two-day certified VRS designers course run in conjunction with Engineers Ireland; and
- Be included on the TII Register of Approved Independent VRS Chartered Engineers.

2.2 Procurement

The services of the Independent VRS Chartered Engineer shall be procured by the Contractor. The Chartered Engineer shall be independent of the Design Team and shall not be part of the Contractors organisation.

2.3 Applications to the Register

Applications to be included on the TII Register of Approved Independent VRS Chartered Engineers shall be submitted to barriers@tii.ie for review. Such applications shall demonstrate that applicants meet the qualifications and experience requirements contained within Section 2.1. Table 1 below lists the evidence required to be submitted to support applications to be included on the TII Register of Approved Independent VRS Chartered Engineers.

Table 2.1 Evidence to be Submitted

Requirement	Evidence to be Submitted
Be a Chartered Engineer.	Engineers Ireland Membership Number.
Have at least five years' demonstrable experience of VRS related design and installation.	Curriculum vitae and cover letter clearly demonstrating the applicant meets the requirements plus a minimum of one reference for verification purposes.
Have attended and successfully completed the two-day certified VRS designers training course.	Copy of certificate of completion including Engineers Ireland reference number.

The register of Independent VRS Chartered Engineers is available at:

www.tiipublications.ie/downloads

2.4 Continuing Professional Development

The following additional periodic training is required to remain on the TII Register of Approved Independent VRS Chartered Engineers following initial acceptance to the register:

- Attendance at VRS training provided periodically by TII. Independent VRS Chartered Engineers included on the register will be notified by TII when such training is scheduled.

2.5 Insurance

In order for any independent certification procedure to be of value it is essential that all proposed Independent VRS Chartered Engineers are:

- listed as specialists in the contract schedule; and
- required to provide at least €1M Professional Indemnity Insurance cover.

3. Independent VRS Chartered Engineers Report

3.1 Report Format

An Independent VRS Chartered Engineer must supply a report following VRS foundation and ground condition certifications on National Road projects in accordance with CC-SPW-00400. The Independent VRS Chartered Engineer's report shall be submitted to the Employer's Representative and the Contractor at least one week prior to installation of the relevant lengths of restraint system.

This report must follow the template as presented in Appendix A. A sample template for test results is included within Appendix B.

Appendix A:

Independent VRS Chartered Engineer Report Template

A1 Introduction

[Note to compiler: State here:]

- i. Name of Scheme
- ii. Scheme Type
- iii. Scheme Stakeholders – ASR, DSR, Contractor, Client
- iv. VRS Details – Locations, References
- v. Independent VRS Chartered Engineer Details – Name, Membership Number, Contact Details
- vi. Dates Independent VRS Chartered Engineer Attended Site

A2 Documents Inspected

[Note to compiler: Details should be given here of all documents, drawings, reports, specifications, installation manuals etc. provided]

A3 Site Testing

[Note to compiler: State here:]

- i. List of potential testing options within installation manual

A3.1 Soil Classification

[Note to compiler: State here:]

- i. Details should be given here of locations and type of ground conditions/ soil types present at the test location
- ii. Reference to any geotechnical reports if received
- iii. Images of excavation material, core logs, bore holes if available

A3.2 Push Testing

[Note to compiler: Details should be given here of the type of testing being undertaken along with test rig setup images.]

A3.2.1 Test Regime Undertaken

[Notes to compiler; State here:]

- i. Date of Testing
- ii. Weather Conditions
- iii. Ground Conditions
- iv. Post Type Used – Section, Length, Material, Manufacturer etc.

A4 Discussion and Analysis

A4.1 General

[Note to compiler: State here:]

- i. Discussion analysing the results obtained through testing including any observations or abnormalities potentially effecting the results obtained.
- ii. Summary of results in tabular form clearly presenting;
 - a) VRS Location Reference
 - b) Test Type
 - c) Test Summary
 - d) Deflection Results
 - e) Pass/ Fail/ Recommendation

[Note to compiler: It is recommended to use the table template in Appendix B of this document for Section A4.1 (ii) of the report]

A5 Conclusions and Recommendations

[Note to compiler: Details should be given here of the final decision of the Independent VRS Chartered Engineer in relation to the applicable location]

Appendix A - Manufacturers Testing Procedure and Installation Manual

[Note to compiler: The manufactures testing procedure and installation manual provided as per Section A2 should be included as Appendix A of the Ground Condition Test Report.]

Appendix B – Detailed Test Results

[Note to compiler: Any test results obtained at the time of testing should be included as Appendix B of the Ground Condition Test Report.]

Appendix C – Locations and Specifications


[Note to compiler: Any drawings related to the VRS or location under testing provided should be included as Appendix C of the Ground Condition Test Report.]

Appendix B:

Test Result Table Template

Agent Authority/ Consulting Engineer		Site.....			Date.....	
Test no.	Details of post/ foundation and location (central reserve or other)	Loading height (m)	Incremental loading value (N)	Deflection (mm)	Bending moment (Nm)	Remarks (e.g. pass/fail)
Tested by (name).....		Signed.....		Date.....		




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