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Highway Construction Inspection Certification

Level II Content Outline

Associate Engineering Technician

The candidate for NICET certification at Level II in Highway Construction Inspection should have the knowledge and experience to: Inspect construction of basic earthwork, pavement, structural components, and incidentals; gather samples for material testing; recognize unsafe construction procedures and site conditions; inspect erosion control measures. Understand basic project administration. They have at least 2 years of experience in the inspection of highway construction projects and related work.

2.1 Earthwork

(Questions related to these tasks make up 15-25% of the exam.)

- 2.1.1 Describe basic soil and aggregate types and their properties. 1, 6, 7
- 2.1.2 Identify and differentiate between limits of disturbance, rights-of-way, and easements. 1
- 2.1.3 Inspect temporary erosion and sediment controls and storm water management components. 1
- 2.1.4 Monitor field procedures for soils and subbase compaction, perform testing, and determine the acceptability of the results. 1, 2, 7
- 2.1.5 Inspect placement and grading of embankments, subgrades, and aggregate subbase and base courses, including compaction. 1, 2
- 2.1.6 Calculate excavation and embankment quantities. 1

2.2 Asphalt Pavement Construction

(Questions related to these tasks make up 10-20% of the exam.)

- 2.2.1 Inspect existing surface preparation as required. 5
- 2.2.2 Inspect the application of tack coats. 1, 5
- 2.2.3 Conduct pre-placement inspection, including grade control, equipment pre-checks, and paving plan review. 1, 8
- 2.2.4 Inspect delivery, placement, compaction, and finishing of asphalt. 1, 8
- 2.2.5 Calculate and interpret yield. 1

2.3 Concrete Structure Construction

(Questions related to these tasks make up 15-25% of the exam.)

- 2.3.1 Inspect delivered precast box culverts, box beams, and other precast items. 2
- 2.3.2 Inspect installation of basic driven pile. 1
- 2.3.3 Inspect forms and reinforcing steel for structures, and calculate pay weight. 1, 2, 3
- 2.3.4 Inspect delivery and method of placement of concrete for structures. 1, 3
- 2.3.5 Inspect cast-in-place structural components. 1, 3
- 2.3.6 Verify that concrete for structures meets testing and certification requirements. 1, 2, 3
- 2.3.7 Calculate volumes of concrete structures.

2.4 Drainage

(Questions related to these tasks make up 9-19% of the exam.)

- 2.4.1 Identify drainage system components. 1, 2
- 2.4.2 Calculate excavation and backfill quantities for drainage.
- 2.4.3 Inspect installation of drainage components. 1, 2

2.5 Utilities and Incidental Construction

(Questions related to these tasks make up 6-16% of the exam.)

2.5.1 Identify utilities affected by construction. 1,9

2.5.2 Inspect the installation of guardrails, safety systems, and fencing. 1, 6

2.5.3 Inspect construction of sidewalks, curbs and gutters, curb ramps, medians/median barriers, and driveways for compliance with contract documents. 1

2.5.4 Inspect permanent environmental restoration (seeding and mulching). 1

2.6 Site Layout and Controls

(Questions related to these tasks make up 5-15% of the exam.)

2.6.1 Use basic survey methods to verify elevations and horizontal controls. 1

2.6.2 Describe different methods to check surface tolerances. 1

2.6.3 Identify environmental control techniques. 1

2.7 Responsibilities

(Questions related to these tasks make up 5-15% of the exam.)

2.7.1 Identify project roles, and responsibilities, including the authority of the inspector. 1,5

2.7.2 Verify implementation of work zone traffic controls, including lane shifts, closures, detours, and construction access points and routes. 4, 7

March 9, 2026

footnote number is linked to a reference on the Selected General References listing