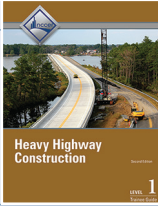




# Heavy Highway Construction

## L1 HEAVY HIGHWAY CONSTRUCTION



LEVEL 1

REVISED!

### Curriculum Notes

- 150 Hours (Includes 80 hours of *Core Curriculum* which is a prerequisite for completion and must be purchased separately. See p. 11 for ordering information.)
- To Be Revised: 2017, Second Edition
- New printed Instructor's Package includes lesson plans and instructor's copy of Trainee Guide with an access code to download TestGen software, module exams, PowerPoints®, and performance profile sheets from [www.nccerirc.com](http://www.nccerirc.com).

PAPERBACK	ISBN
Trainee Guide: \$67	978-0-13-448247-7
Instructor's Package: \$67	978-0-13-454304-8

### MODULES

All of the modules listed below are included in the Trainee Guide and the Instructor's Guide. The following ISBN and pricing information is for ordering individual modules only.

#### Orientation to the Trade (7.5 Hours)

Trainee \$20 ISBN 978-0-13-448575-1  
 Instructor \$20 ISBN 978-0-13-448574-4  
 (Module ID 36101-17) Provides an overview of the work performed by craft-workers involved in the construction of highways and bridges, focusing on the three distinct branches of the trade: grading, paving, and structures and their processes. Covers opportunities in the trades, and includes a description of NCCER training programs and apprenticeships.

#### Safety (5 Hours)

Trainee \$20 ISBN 978-0-13-448577-5  
 Instructor \$20 ISBN 978-0-13-448576-8  
 (Module ID 36110-17) Expands on the safety coverage in the *Core Curriculum*, focusing on issues specific to highway and bridge work such as traffic safety, fall protection, working above or around water, confined spaces, and environmental hazards.

#### Identification of Equipment Used in Heavy Highway Construction (10 Hours)

Trainee \$20 ISBN 978-0-13-448579-9  
 Instructor \$20 ISBN 978-0-13-448578-2  
 (Module ID 36111-17) Identifies the various types of heavy equipment used on highway and bridge job sites, including excavators, bulldozers, cranes, and backhoes. Also covers utility equipment such as generators, air compressors, and compacting equipment.

#### Excavation Math (17.5 Hours)

(Module ID 22207-13; from *Heavy Equipment Operations Level 2*)  
 Trainee \$20 ISBN 978-0-13-340323-7  
 Instructor \$20 ISBN 978-0-13-340334-3

#### Reinforcing Concrete (15 Hours)

(Module ID 27304-14; from *Carpentry Level 3*)  
 Trainee \$20 ISBN 978-0-13-378679-8  
 Instructor \$20 ISBN 978-0-13-378690-3

#### Working with Concrete (15 Hours)

Trainee \$20 ISBN 978-0-13-448582-9  
 Instructor \$20 ISBN 978-0-13-448581-2  
 (Module ID 36112-17) Covers properties and characteristics of concrete and the materials used in making concrete, along with testing methods. Also includes information and instructions for safely handling, placing, and finishing concrete.

Ordering information for *Highway/Heavy Construction, First Edition:*

PAPERBACK	ISBN
Trainee Guide: \$67	978-0-13-061611-1
Instructor's Guide: \$140	978-0-13-061612-8

## L2 HEAVY HIGHWAY CONSTRUCTION

LEVEL 2

### Curriculum Notes

NEW!

- 145 Hours
- To Be Published: 2017
- New printed Instructor's Package includes lesson plans and instructor's copy of Trainee Guide with an access code to download TestGen software, module exams, PowerPoints®, and performance profile sheets from [www.nccerirc.com](http://www.nccerirc.com).
- For more information, visit [www.nccer.org/book-updates](http://www.nccer.org/book-updates).

PAPERBACK	ISBN
Trainee Guide: \$97	978-0-13-448246-0
Instructor's Package: \$97	978-0-13-454303-1

### MODULES

All of the modules listed below are included in the Trainee Guide and the Instructor's Guide. The following ISBN and pricing information is for ordering individual modules only.

#### Introduction to Earthmoving (12.5 Hours)

(Module ID 22201-12; from *Heavy Equipment Operations Level 2*)  
 Trainee \$20 ISBN 978-0-13-292310-1  
 Instructor \$20 ISBN 978-0-13-292317-0

#### Site Work (20 Hours)

(Module ID 22210-13; from *Heavy Equipment Operations Level 2*)  
 Trainee \$20 ISBN 978-0-13-340326-8  
 Instructor \$20 ISBN 978-0-13-340336-7

#### Interpreting Civil Drawings (20 Hours)

(Module ID 22209-13; from *Heavy Equipment Operations Level 2*)  
 Trainee \$20 ISBN 978-0-13-340325-1  
 Instructor \$20 ISBN 978-0-13-340335-0

#### Work-Zone Safety (5 hours)

(Module ID 75104-13; from *Field Safety*)  
 Trainee \$20 ISBN 978-0-13-340361-9  
 Instructor \$20 ISBN 978-0-13-340370-1

#### Plant Operations (7.5 Hours)

Trainee \$20 ISBN 978-0-13-448584-3  
 Instructor \$20 ISBN 978-0-13-448583-6  
 (Module ID 36107-17) Describes the materials used in making concrete and asphalt, as well as the methods by which these materials are obtained. Covers the methods and facilities used to produce concrete and asphalt.

#### Paving (7.5 Hours)

Trainee \$20 ISBN 978-0-13-448586-7  
 Instructor \$20 ISBN 978-0-13-448585-0  
 (Module ID 36108-17) Explains the equipment and methods used in performing hot-mix asphalt and concrete paving. Discusses concrete paving equipment, such as slipform pavers and texture and curing machines.

#### Crane Safety (15 Hours)

(Module ID 21104-04; from *Mobile Crane Operations Level 1*)  
 Trainee \$20 ISBN 978-0-13-160068-3  
 Instructor \$20 ISBN 978-0-13-160074-4

#### Rigging Equipment (10 Hours)

(Module ID 38101-11; from *Basic Rigger*)  
 Trainee \$20 ISBN 978-0-13-266176-8  
 Instructor \$20 ISBN 978-0-13-266178-2

#### Rigging Practices (15 Hours)

(Module ID 38102-11; from *Basic Rigger*)  
 Trainee \$20 ISBN 978-0-13-266177-5  
 Instructor \$20 ISBN 978-0-13-266179-9

#### Bridge Construction (20 Hours)

Trainee \$20 ISBN 978-0-13-448588-1  
 Instructor \$20 ISBN 978-0-13-448587-4  
 (Module ID 36201-17) Describes the various types and the major components of bridges. Includes basic surveying equipment and principles, and describes the structure and content of bridge plans.

#### Deep Foundations (10 Hours)

Trainee \$20 ISBN 978-0-13-448591-1  
 Instructor \$20 ISBN 978-0-13-448590-4  
 (Module ID 36202-17) Describes the various types of foundations used in bridge construction and how they are installed. Covers, piles and pile installation, footings, cofferdams, pile driving equipment, and the environmental issues associated with pile driving.

#### Bridge Formwork (22.5 Hours)

Trainee \$20 ISBN 978-0-13-448593-5  
 Instructor \$20 ISBN 978-0-13-448592-8  
 (Module ID 36203-17) Identifies the basic types of concrete forms used in bridge building and describes how those forms are used. Explains how to assemble, set, maintain, and store forms.

## Hydroblasting



20 Hours  
 Revised: 2012, Second Edition  
 Module ID 43101-12

PAPERBACK	ISBN
Trainee Guide: \$22	978-0-13-294870-8
Instructor's Guide: \$22	978-0-13-294915-6

- Instructor's Guide includes access code to download TestGen software, module exams, PowerPoints®, and performance profile sheets from [www.nccerirc.com](http://www.nccerirc.com).

Includes the newest waterjet safety technologies, methods, and equipment. Also provides expanded information on shrouds, shielding, chocking, and grounding.

