CCO

CANDIDATE HANDBOOK

- **DEDICATED PILE DRIVER OPERATOR**

Table of Contents

Certification Policies **1**
- Eligibility 1
- Examination Fees 1
- CCO Certification Time Frames 1
- Recertification Requirements 1

Written Examination Outline **2**

Practical Examination **3**

Reference List **6**

CCO Policies **7**

Copyright 2016–2025 CCO. All rights reserved. DPD CH REV 01/25

Certification Policies
DEDICATED PILE DRIVER OPERATOR

ELIGIBILITY

To be eligible for certification, candidates must:

- Be at least 18 years of age
- Comply with CCO's Substance Abuse Policy
- Comply with CCO's Code of Ethics
- Pass written examination
- Pass practical examination

EXAMINATION FEES

For all exam and related fees, visit www.nccco.org/fees.

CCO CERTIFICATION TIME FRAMES

Candidates have 12 months after they pass their first exam (written or practical) to pass the corresponding written or practical Exam. For example, a candidate passing the written exam in December 2024 has until the end of December 2025 to pass the practical exam.

RECERTIFICATION REQUIREMENTS

CCO Dedicated Pile Driver Operator certification is valid for five years. ***Recertification candidates must complete all recertification requirements during the 12 months prior to their certification's expiration date.*** Regardless of the date of the exams within that one-year period, the new five-year certification period begins from the date of expiration of the candidate's initial certification.

Recertificants must:

- Pass the Dedicated Pile Driver Operator written examination
- Comply with CCO's Substance Abuse Policy
- Comply with CCO's Code of Ethics

Candidates who can attest to at least 500 hours of pile driver–related experience during their period of certification do not need to take the practical exam to recertify. *Pile driver–related experience* is defined as: operating, servicing, repairing, and setting up pile drivers. It also includes training personnel in operating pile drivers and administering CCO Dedicated Pile Driving Rig practical exams.

Recertification candidates who need to take the practical exam for any reason, however, must do so before their certification expires. ***There is no grace period after their certification expires.*** Candidates whose certification has lapsed must take both the regular written and practical examinations again to be certified again.

NOTE: Candidates who recertify more than 12 months prior to their expiration date will have their new certification period begin immediately, not from the end of their current certification period.

Copyright 2016–2025 CCO. All rights reserved. DPD CH REV 01/25

Written Examination Outline

DEDICATED PILE DRIVER OPERATOR

70 QUESTIONS/90 MINUTES (CALCULATOR NOT PERMITTED)

The CCO Dedicated Pile Driver written examination tests the following knowledge areas relating to the operation of dedicated pile drivers:

Domain 1: Site Examination/Machine Arrival

- Approximately 14% of test

Domain 2: Setup/Inspection/Pre-Operation

- Approximately 29% of test

Domain 3: Operation/Pile Engagement

- Approximately 45% of test

Domain 4: Maintenance

- Approximately 8% of test

Domain 5: Disassembly

- Approximately 5% of test

DOMAIN 1: SITE EXAMINATION/MACHINE ARRIVAL

1. Know how to identify obstacles and hazards
   a. Below surface (e.g., voids, tanks, loose fill)
   b. On surface (e.g., retaining walls, excavations, depressions)
2. Know proper use of supporting materials (e.g., natural materials, man-made materials)
3. Know how to determine and ensure proper clearance to energized power lines
4. Know the travel limitations for the machine

DOMAIN 2: SETUP/INSPECTION/PRE-OPERATION

1. Know how to set up the equipment
2. Know inspection requirements
   a. Shift inspection
   b. Monthly inspection
3. Know what inspection documentation is required
4. Know when and who to notify regarding inspection deficiencies
5. Know how to confirm operations aids and safety devices are functioning properly
6. Know what information can be found in the operator's manual
7. Know the proper regulations for signals
   a. Hand signals
   b. Dedicated spotter
8. Know how to verify that the hammer or other attachments have been properly installed
9. Know the removal criteria for wire rope
10. Know how to stage piles

DOMAIN 3: OPERATION/PILE ENGAGEMENT

1. Know alternative measures if operational aids fail
2. Understand conditions that affect capacity
3. Knowledge of the proper selection and application of rigging equipment
4. Know how to verify the pile head is properly positioned, secured, and/or captured
5. Know how to ensure the pile installation and orientation is correct
6. Know how to position the rig and pile for safe operations
7. Know how to ensure non-essential personnel are prevented access to restricted areas
8. Know how to begin pile driving operations
9. Know which situations or conditions may cause unexpected pile movement
10. Know how to determine when the pile has reached the required depth
11. Know how to read and utilize the equipment load charts
12. Know pile driving terms and nomenclature
13. Know the manufacturer's limitations for the hammer
14. Know general rules, regulations, and safety standards for operation

DOMAIN 4: MAINTENANCE

1. Know how to perform maintenance on the equipment, including:
   a. Lubrication
   b. Fluid levels
2. Know how to document maintenance activities
3. Know how to inspect the hammer and lead system for wear or damage
4. Know how to inspect the hydraulic hoses and connections

DOMAIN 5: DISASSEMBLY AND TRANSPORTATION

1. Know how to stow or store the hammer
2. Know how to retract the equipment components
3. Know the manufacturer instructions for disassembly and transportation

Copyright 2016–2025 CCO. All rights reserved. DPD CH REV 01/25

Practical Examination
DEDICATED PILE DRIVER OPERATOR

SKILLS TESTED

The practical examination comprises seven main tasks designed to assess the specific operating skills necessary for dedicated pile driving operations. Skills tested include: inspecting the equipment, maneuvering loads with the hoist, maneuvering and placement of a pile, preparation for engaging the hammer, and securing/shutdown of the equipment. Equipment operation with load and without load is required.

The following is an outline of the practical testing procedure, as provided to candidates at the time of testing.

CANDIDATE INFORMATION AND INSTRUCTIONS

The following sections describe the specific tasks you will be performing when taking the practical examination. It is important that you understand these instructions. If there is anything you do not understand, please request clarification from the Proctor.

TASKS

The practical exam tasks are:

- ***Task 1: Pre-Operational (Shift) Inspection***
- ***Task 2: Test Weight in Barrels***
- ***Task 3: Stand up, Cap, and Secure the Pile***
- ***Task 4: Position the Pile***
- ***Task 5: Initiate Pile Driving on Test Pile***
- ***Task 6: Set Pile Down***
- ***Task 7: Safe Shutdown and Securing Procedures***

There is also a Pre-Test Briefing, an Equipment Walk Around, and a Familiarization Period. You will be required to complete all phases of the test in sequence.

During the practical examination, you are under the direction of the Proctor and must follow the Proctor's directions at all times.

Once you have completed all of the tests you are taking, you must leave the testing area. Only personnel involved in the administration of the test are allowed in the test area.

OPTIMUM TIMES

For some tasks ***optimum time limits*** have been set. If the task is completed within this time period, you receive no time penalty. Other tasks are untimed, as noted below.

Once you exceed this time limit, however, you will lose points on a gradual basis. The optimum time for each task is stated as part of the task descriptions. At one-and-a-half times the optimum time the Proctor may end the task and move on to the next task.

If Task 3 cannot be completed within twice the optimum time, the Proctor is required to end the test.

PRE-TEST BRIEFING

While candidates are waiting to take their tests, they will have sufficient time to read the description of the tasks to be performed and review the operator's manual and load chart for the pile drive they will operate. In addition, they will be informed of the make and model of the dedicated pile driving rig, the boom length, and the weight of the test load. Note that:

- The dedicated pile driving rig has been set up and leveled. A spirit level is available to verify that the rig is level.
- None of the target points have been placed at a radius that exceeds the dedicated pile driving rig's rated capacity.
- All signals used throughout the test are in accordance with the Standard Method hand signals.

UNSAFE ACT

If, at any time during the Pre-Test Familiarization Period or during the test, you commit an unsafe act, you will be disqualified from continuing with the test. An "unsafe act" is defined as an action by a candidate that is uncontrolled or reckless, and is sufficient to cause safety concern for persons or property damage.

The Proctor has the authority to stop the test at any time for reasons of safety. Please ask the Proctor if you have any questions. If you are disqualified due to an unsafe act, you will not be permitted to take any additional practical exams that day.

WEATHER CONDITIONS AND EQUIPMENT PROBLEMS

The Proctor will use an anemometer to check the wind speed and then will record the weather conditions on the score sheet.

The Proctor has the responsibility to determine if weather conditions or equipment problems are such that a test needs to be suspended. If the test is interrupted due to

Copyright 2016–2025 CCO. All rights reserved. DPD CH REV 01/25

weather conditions or equipment problems, the procedure for restarting is as follows:

- You will resume the test at the beginning of the task you were performing at the time of the interruption.
- You will be entitled to a Pre-Test or Pre-Task Familiarization period before resuming the test.
- If testing resumes on a different machine, you must start the test over from the beginning. The first score sheet will be marked as "VOID" with an explanation and returned to CCO.
- If the testing is delayed to a different day, the test must be restarted from the beginning.

DEDICATED PILE DRIVING RIG WALK AROUND

- Before you begin operations, you are allowed a couple of minutes to walk around the dedicated pile driving rig to ensure proper setup.

TASK 1: PRE-OPERATIONAL (SHIFT) INSPECTION

- You will be asked to identify five checklist items of the dedicated pile driver that are part of the pre-operational inspection.
- One at a time, you will describe how you would inspect it and what deficiencies you would look for.
- You have approximately one minute per item.
- Points will be deducted for each incorrectly identified inspection item.

PRE-TEST FAMILIARIZATION PERIOD

- You will be allowed 15 minutes to familiarize yourself with the equipment and to examine anything on the it that you feel is necessary to operate it comfortably.
- You will be allowed to get the feel of the controls and run the pile driving rig through its functions. The brakes and other devices have been set according to the manufacturer's recommendation.
- You may not interfere with the test course, lift the test weight, or shadow the Corridor or the barrels.
- You must finish the Pre-test Familiarization Period with the load hook under control and over the test weight start point in preparation for attachment within the 15-minute period.
- The Proctor will notify you when there are ten, five, and one minute(s) remaining.
- If you are ready in less than 15 minutes, you may indicate this to the Proctor.
- If, at the end of the Pre-Test Familiarization Period, you feel that you are not ready to take the examination, you should notify the Proctor. You will be required to sign to that effect.

TASK 2: TEST WEIGHT IN BARRELS

Optimum time: 3:00

- At the Proctor's indication to start, at which point timing will begin, raise the test weight at or above eye level to clear all obstacles and personnel.
- Bring it from the start point over to Designated Area 1 and lower it inside the barrel.
- Once the line on the test weight has been lowered below the rim of the barrel, the Proctor will indicate this to you and signal you to proceed to the next barrel.
- You will again lowered the test weight inside of the barrel at Designated Area 2 and wait for the Proctor to give you the signal to proceed to Designated Area 3.
- You will lower the test weight inside of the barrel at Designated Area 3 so that the line on the test weight has been lowered below the rim of the barrel and hold it in until instructed by the Proctor to remove it.
- Timing stops when the test weight is completely clear of Barrel #3 and the Proctor has given you a final stop signal.
- If your time exceeds one-and-a-half times the optimum time, the Proctor may stop you and move on to the next task.
- Points will be deducted for the following:
  a. Weight touching ground outside of designated area
  b. Leader contacting tracks
  c. Knocking over barrel
  d. Moving barrel (2 in. or more)
  e. Exceeding optimum time

TASK 3: STAND UP, CAP, AND SECURE THE PILE

Maximum time: 9:00*

- At the Proctor's indication to start, lift the pile into an upright position, then cap the pile and secure it with the pile guides.
- Timing stops when the pile is capped and the pile arms have closed around the pile.
- Points will be deducted for the following:
  a. Dragging or contacting pile tip out of box
  b. Pile tip kicking out during capping
  c. Knocking ball off pole
  d. Moving pole base off line
  e. Knocking pole over
  f. Exceeding optimum time

*Candidates who cannot complete Task 3 within 9 minutes will not be allowed to continue on with the remaining parts of the exam.

Copyright 2016–2025 CCO. All rights reserved. DPD CH REV 01/25

TASK 4: POSITION PILE

Optimum time: 3:30

- At the Proctor's indication to start, at which point timing will begin, lift the pile and set it on the ground inside Designated Area 1. The Proctor will give you a stop, a hoist and a swing signal to indicate that you may lift the Test Pile and bring it to Designated Area 2.
- Once the pile has been landed inside Designated Area 2, the Proctor will give you another set of stop, hoist and swing signals to indicate you may proceed to Designated Area 3.
- Timing stops when the pile has been set down fully inside of Designated Area 3 and the Proctor has given you a stop signal.
- If your time exceeds one-and-a-half times the optimum time, the Proctor may stop you and move on to the next task.
- Points will be deducted for the following:
  a. Pile touching ground outside of designated area
  b. Touching the tracks with the pile or leader
  c. Exceeding optimum time

TASK 5: INITIATE PILE DRIVING ON TEST PILE

Optimum time: 2:30

- At the Proctor's indication to start, at which point timing will begin, pick up the Test Pile and set the pile head fully on the Pile Driving Plate in preparation for driving the pile.
- Prepare to initiate the driving sequence at the manual driving setting at lowest energy.
- ***DO NOT*** initiate driving until instructed to by the Proctor.
- When you are ready to initiate the driving sequence and the pile guides are open, say "done," at which point timing will end.
- Your setting will be evaluated by the Proctor prior to proceeding.
- The Proctor will then institute you to proceed with the driving sequence.
- If your time exceeds one-and-a-half times the optimum time, the Proctor may stop you and move on to the next task.
- Points will be deducted for the following:
  a. Driving energy not set at lowest power
  b. Hammer not placed fully on pile
  c. Leader is not plumb (± 0.5 degrees in either direction)
  d. Ropes are not visibly slack
  e. Touching the tracks with the pile or leader
  f. Not setting machine in manual mode
  g. Exceeding optimum time

TASK 6: SET PILE DOWN

Optimum time: 4:30

- At the Proctor's indication to start, at which point timing will begin, pick up the Test Pile and set the pile head down fully within the square designated area.
- With the pile head in the square designated area, lower the pile back down so that it rests inside the Pole Corridor.
- The Proctor will give you a stop signal when the Test Pile has been completely lowered to the ground inside the Pole Corridor.
- If your time exceeds one-and-a-half times the optimum time, the Proctor may stop you and move on to the next task.
- Points will be deducted for the following:
  a. Dragging pile tip out of box
  b. Touching the tracks with the pile or leader
  c. Knocking ball off pole
  d. Moving pole base off line
  e. Knocking pole over
  f. Exceeding optimum time

TASK 7: SAFE SHUTDOWN AND SECURING PROCEDURES

- Before leaving the operator station, you will be required to apply safe shutdown procedures to the dedicated pile driver in preparation for the next candidate.
- Once the dedicated pile driver is shut down, you will leave the operator station and describe to the Proctor the procedures you would follow to secure the machine at the end of the work day.

Copyright 2016–2025 CCO. All rights reserved. DPD CH REV 01/25

Reference List

DEDICATED PILE DRIVER OPERATOR

The latest versions of the following reference materials are used by CCO's Dedicated Pile Driver Exam Management Committee to verify the accuracy of CCO test questions.

ANSI/ASSE A10.19 (2023) SAFETY REQUIREMENTS FOR PILE INSTALLATION & EXTRACTION OPERATIONS

webstore.ansi.org

PDCA SPECIFICATION 103-07 (2007) INSTALLATION SPECIFICATIONS FOR DRIVEN PILES

nccco.org/docs/default-source/reference-materials-2014/pdca-specification-103-07_installation_specification_for_driven_piles.pdf

PDCA Recommended Industry Practices for Safe Working Platforms for Construction Equipment (2021)

https://www.piledrivers.org/shop/working-platforms-recommended-industry-practices--id1227/

ASME B30.30 ROPES (2024)

www.asme.org

OSHA PART 1926 SUBPART CC—CRANES AND DERRICKS IN CONSTRUCTION

OSHA PART 1926.251 RIGGING EQUIPMENT FOR MATERIAL HANDLING

www.osha.gov/laws-regs/regulations/standardnumber/1926

Copyright 2016–2025 CCO. All rights reserved. DPD CH REV 01/25

CCO Policies

DEDICATED PILE DRIVER OPERATOR

Code of Ethics

www.nccco.org/coe

Disciplinary Policy

www.nccco.org/discipline

Substance Abuse Policy

www.nccco.org/abuse

Testing Accommodations

www.nccco.org/accommodations

Test Security

www.nccco.org/security

Information Release Policy

www.nccco.org/inforelease

Copyright 2016–2025 CCO. All rights reserved. DPD CH REV 01/25

CCO

5250 Commerce Dr, 100, Murray,
Utah 84107, US

Phone: 703-560-2391
info@ncccco.org
www.ncccco.org