



Washington State Construction Crane Certifier Program CANDIDATE HANDBOOK

ACCREDITATION PROCESS

In the State of Washington, candidates may seek accreditation as a Crane Certifier in one or more of the following crane categories:

- Mobile Cranes
- Tower Cranes
- Articulating Cranes
- Overhead Cranes

There are three steps to follow to become accredited to certify cranes in the construction industry:

- **STEP 1**—Make sure that you meet the experience requirements and other accreditation criteria.
- **STEP 2**—Submit an application to the Department of Labor and Industries.
- **STEP 3**—Take and pass the required certification examinations.

These steps are described in detail below.

Step 1—Make Sure That You Meet All of the Accreditation Criteria

- All applicants must possess knowledge of WAC Chapter 296-155, *Safety Standards for Construction Work*, as well as American Society of Mechanical Engineers (ASME) standards relating to the design, testing, inspection, and operation of cranes specifically applicable to the type(s) of cranes for which certifier accreditation will be issued.
- All applicants must demonstrate at least five years' crane-related experience, of which two years must be actual crane inspection activities. The other three years may include experience in duties such as a crane operator, crane mechanic, crane shop foreman, crane operations supervision, or rigging specialist. Related education may be substituted for related experience at a ratio of two years of education for one year of experience up to three years. Related education may include courses in engineering, physics, applied mathematics, applied science courses in nondestructive testing, construction technology, technical courses in heavy equipment mechanic, welding technology, and similar applicable topics.

Step 2—Submit an Application to the Department of Labor and Industries

Candidates must submit an application for accreditation to the Department. Complete this application online at: <https://lni.wa.gov/forms-publications/F416-063-000.doc>. All information and attachments must be provided accurately under penalty of perjury. The application must include, but is not limited to, the following:

- A statement of the crane types per the ASME B30 series that the applicant desires to certify pursuant to accreditation
- A statement of qualifications and experience including their capacities, satisfying at a minimum the criteria set forth in WAC 296-155-53102 as well as any and all other qualifications the applicant wishes the Department to consider
- Any other relevant information the applicant desires to be considered by the Department

Step 3—Take and Pass the Required Certification Examinations

Washington General Crane Certifier Examination

All candidates must take the Washington General Crane Certifier Examination. This examination consists of 50 multiple-choice questions. Candidates are allowed 60 minutes to complete the examination. An outline of the examination's content can be found on page 3.

Candidates must also take one or more of the Additional Inspection Criteria and Proof Load Testing Exams described below.

Mobile Crane Additional Inspection Criteria and Proof Load Testing Exam

This examination consists of 40 multiple-choice questions, 30 of which will be scored for this examination and 10 will be non-scored questions. Candidates are allowed 90 minutes to complete the examination. An outline of the examination's content can be found on page 4.

Tower Crane Additional Inspection Criteria and Proof Load Testing Exam

This examination consists of 40 multiple-choice questions, 30 of which will be scored for this examination and 10

will be non-scored questions. Candidates are allowed 60 minutes to complete the examination. An outline of the examination's content can be found on pages 4–5.

Articulating Crane Additional Inspection Criteria and Proof Load Testing Exam

This examination consists of 40 multiple-choice questions, 30 of which will be scored for this examination and 10 will be non-scored questions. Candidates are allowed 60 minutes to complete the examination. The content outline of the examination is found on page 5.

Overhead Crane Additional Inspection Criteria and Proof Load Testing Exam

This examination consists of 40 multiple-choice questions, 30 of which will be scored for this examination and 10 will be non-scored questions. Candidates are allowed 60 minutes to complete the examination. The content outline of the examination is found on page 5.

Crane Operator Examinations

Candidates must also pass crane operator certification written examination(s) that have been developed and are administered by a nationally recognized and accredited testing agency.

Candidates who have previously passed written crane operator examination(s) in the category(s) that they seek to become a crane certifier in are not required to retake the crane operator examination(s).

APPLYING TO TAKE THE EXAMINATIONS

Candidates do not have to wait for approval from Washington State Department of Labor and Industries to take the written exams. Candidates may find it more convenient to take the required exams prior to or concurrently with the submittal of their application and resume to the Washington State Department of Labor and Industries.

The Crane Certifier accreditation process may be expedited if the candidate can demonstrate that they have passed the appropriate exam(s).

Candidates wishing to take the Washington State Construction Crane Certifier examination(s) may request an application form or obtain further information from the Washington State Department of Labor and Industries or the National Commission for the Certification of Crane Operators (NCCCO).

Candidate exam applications along with the respective fees must be submitted to NCCCO. Applications are due at least two weeks prior to the scheduled examination date. An exam application form is included on pages 7–8.

Information about the specific locations of the test sites will be available no less than four weeks prior to the examination. Candidates eligible to sit for the examination will receive an admission letter approximately one week before the scheduled test administration date.

FEES

The fees for the Washington State Written Examinations are as follows:

- Washington General Crane Certifier Examination \$250
- Mobile Crane Additional Inspection Criteria and Proof Load Testing Exam \$250
- Tower Crane Additional Inspection Criteria and Proof Load Testing Exam \$250
- Articulating Crane Additional Inspection Criteria and Proof Load Testing Exam \$250
- Overhead Crane Additional Inspection Criteria and Proof Load Testing Exam \$250

The fees for the NCCCO Written Examinations are as follows:

- NCCCO Mobile Crane Operator Core Exam..... \$160
- NCCCO Tower Crane Operator Exam \$180
- NCCCO Articulating Crane Operator Exam \$180
- NCCCO Overhead Crane Operator Exam..... \$180

The fees for the NCCCO Written Recertification Examinations are as follows:

- NCCCO Mobile Crane Operator Core Recertification Exam \$160
- NCCCO Tower Crane Operator Recertification Exam \$180
- NCCCO Articulating Crane Operator Recertification Exam \$180
- NCCCO Overhead Crane Operator Recertification Exam \$180

For more information about the content of NCCCO exams, see the appropriate NCCCO Candidate Handbooks.

SCORE REPORTING

The Written Examinations are electronically scored by NCCCO. All candidates receive score reports of their performance. Examination results are mailed to candidates approximately 12 business days after the examination administration.

In reporting the examination results to candidates, statistical procedures are used to convert raw scores (i.e., the number of test questions answered correctly) to scaled scores, which are equivalent for all administrations of the examination(s). Candidate results will be reported as a scaled score, on a scale ranging from 0 to 100 points, with a score of **70** representing the minimum passing score. This scaled score is not a number-answered-correctly score.

Candidate's scores cannot be given over the telephone.

RETEST POLICY

If a candidate fails a Written Exam or a Recertification Exam, he/she may retake it at a regularly scheduled test administration. Retest fees are the same as the original fees as listed under Fees.

CERTIFICATION CARDS

Candidates who complete the requirements for accreditation or renewal receive a card designating them as a "WA State Crane Certifier" and listing the specific category(s) in which they have successfully met all requirements.

ADDING CRANE CATEGORIES

WA State Crane Certifiers may add a new category to their accreditation at any time by applying to the department for approval for the additional category(s) and passing the respective examination(s).

DURATION AND RENEWAL (WAC 296-155-53108)

Accreditation for Washington State Crane Certifiers is valid for three years. Renewal may be obtained by meeting the following criteria:

- Crane certifiers must complete 40 hours of crane-related training every three years in courses recognized by the department, providing they have been actively inspecting cranes during their prior accreditation period.
- Crane certifiers are considered *active* if they have certified/inspected at least 21 cranes during their accreditation period.

Crane certifiers who have not certified/inspected at least 21 cranes during their accreditation period must take the written exams to become accredited again.

At minimum, all applicants for renewal must successfully complete the written examinations every six years.

REFERENCE SOURCES

The primary reference sources for the examinations are as follows:

Applicable Exams	Reference Source
<ul style="list-style-type: none"> • All Exams 	<ul style="list-style-type: none"> • WAC Chapter 296-155, Part L
<ul style="list-style-type: none"> • WA State General Crane Certifier • Mobile Crane Specific Inspection Criteria and Proof Load Testing Exam 	<ul style="list-style-type: none"> • ASME B30.5 (2011), Mobile & Locomotive Cranes
<ul style="list-style-type: none"> • Tower Crane Specific Inspection Criteria and Proof Load Testing Exam 	<ul style="list-style-type: none"> • ASME B30.3 (2012), Tower Cranes • ASME B30.29 (2012), Self-Erecting Tower Cranes
<ul style="list-style-type: none"> • Articulating Crane Additional Inspection Criteria and Proof Load Testing Exam 	<ul style="list-style-type: none"> • ASME B30.22 (2010), Articulating Boom Cranes
<ul style="list-style-type: none"> • Overhead Crane Additional Inspection Criteria and Proof Load Testing Exam 	<ul style="list-style-type: none"> • ASME B30.2 (2011), Overhead & Gantry Cranes (Top Running Bridge, Single or Multiple Girder, Top Running Trolley Hoist) • ASME B30.11 (2010), Monorails and Underhung Cranes • ASME B30.17 (2006), Overhead & Gantry Cranes (Top Running Bridge, Single Girder, Underhung Hoist)

WRITTEN EXAM CONTENT OUTLINES

Washington General Crane Certifier Examination Content Outline

Domain 1: Washington State Crane Regulations—36%

1. Know scope of WAC 296-155-529 through 296-155-53214, *Construction Crane Certification*.
2. Know basic crane terminology and definitions including those in WAC 296-155-52902.
3. Know requirements for a Washington State-accredited Crane Certifier.
4. Understand the duties and record-keeping responsibilities required by this rule.
5. Understand requirements regarding temporary and annual certificates of operation.
6. Know conditions under which identification stickers need to be attached.

7. Understand grounds on which crane certifier accreditation can be revoked.
8. Know requirements for crane decertification and reinstatement.

Domain 2: Crane Inspection, Documentation, and Maintenance Requirements—50%

1. Know how to review crane maintenance records of critical components to ensure maintenance of these components has been performed in accordance with the manufacturer’s recommendations.
2. Know how to review crane periodic and frequent inspection documentation.
3. Know how to proceed if manufacturer’s equipment criteria is unavailable.
4. Know how to identify the crane or wire rope manufacturer’s specifications for size, type, and inspection requirements.
5. Know the requirements for the removal criteria of wire rope in the absence of the manufacturer’s specifications:
 - a. Know how to perform a complete and thorough inspection covering the surface of their working range plus three additional wraps of the wire rope on the drum.
 - b. Know what to do if a wire rope deficiency is identified.
 - c. Know wire rope removal criteria based upon reductions from nominal diameter.
 - d. Know replacement rope criteria.
6. Know what steps need to be taken prior to performing a proof load test:
 - a. Know the requirements for performing a proof load test.
 - b. Understand when a registered professional engineer familiar with the type of equipment involved must develop written specifications for load testing.
7. Know how to conduct a visual inspection of crane components.

Domain 3: Safety Standards & Regulations—14%

1. Know relevant WAC crane safety standards found in WAC Chapter 296-155, Part L.
2. Know relevant requirements in WAC Chapter 296-155, *Safety Standards for Construction Work*.
3. Know applicable ASME/ANSI requirements.

Mobile Crane Additional Inspection Criteria and Proof Load Testing Exam Content Outline

Domain 1: Visual Inspection—30% (*according to WAC 296-155-53202*)

1. Know which crane components must be visually inspected.
2. Know the requirements to conduct a proper visual inspection.
3. Know how to handle situations in which additional information is required to confirm visual acceptance.

Domain 2: Operational Testing (15%)

1. Know which operational tests must be made without a load applied to the hook.
2. Know what you are to check for when conducting operational tests.

Domain 3: Annual Proof Load Testing (25%)

1. Know how to conduct an annual proof load test.
2. Know how to conduct a free-rated load test (on rubber).

Domain 4: Load Charts (30%)

1. Know how to determine net load capacity or gross capacity for the configuration of the crane.
2. Know how to differentiate between structural and stability capacities.
3. Know how to determine the appropriate radius for testing.

Tower Crane Additional Inspection Criteria and Proof Load Testing Exam Content Outline

Domain 1: Inspection Requirements Prior to Erecting a Tower Crane—25%

1. Know the conditions or situations that require tower cranes and/or tower crane assembly parts to be inspected.
2. Understand requirements that must be met prior to erecting a tower crane.
3. Know which documents and records must be inspected prior to erecting a tower crane.

Domain 2: Visual Inspection—25% (*according to WAC 296-155-53206*)

1. Know which crane components must be visually inspected.

2. Know the requirements to conduct a proper visual inspection.
3. Know how to handle situations in which additional information is required to confirm visual acceptance.

Domain 3: Requirements Prior to Performing a Proof Load Test (Operational Testing)—20%

1. Know which tests must be conducted.
2. Know what functional motion tests must include and how they must be conducted.
3. Know the sequence in which functional motion tests must be conducted.

Domain 4: Proof Load Testing of Tower Cranes—20%

1. Know how to conduct and document an annual proof load test.
2. Know how to verify that hoist load limit switches are operating properly.
3. Know how to test the structural support or foundation system of fixed free-standing tower cranes.
4. Know how to test the structural support or foundation system of rail-traveling tower cranes.

Domain 5: Self-Erecting Cranes—10%

1. Know additional inspection requirements that apply to self-erecting cranes:
 - a. Reeving
 - b. Ladder
 - c. Outriggers
2. Know how to test the structural support or foundation system of self-erecting cranes.

Articulating Crane Additional Inspection Criteria and Proof Load Testing Exam Content Outline

Domain 1: Visual Inspection—40% (*according to WAC 296-155-53204*)

1. Know which crane components must be visually inspected.
2. Know the requirements to conduct a proper visual inspection.

Domain 2: Operational Testing—40%

1. Know which operational tests must be made.
2. Know what you are checking for when conducting operational tests.

Domain 3: Annual Proof Load Testing—20%

1. Know which components are subject to annual proof load testing.
2. Know how to conduct an annual proof load test.

Overhead Crane Additional Inspection Criteria and Proof Load Testing Exam Content Outline

Domain 1: Visual Inspection—50% (*according to WAC 296-155-53210*)

1. Know which crane components must be visually inspected.
2. Know the requirements to conduct a proper visual inspection.

Domain 2: Operational Testing—23%

1. Know which operational tests must be made.
2. Know which components must be checked when conducting operational tests.

Domain 3: Annual Proof Load Testing—27%

1. Know which components are subject to annual proof load testing.
2. Know how to conduct an annual proof load test.

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Washington State Construction Crane Certifier Written Examination CANDIDATE APPLICATION

Please type or print neatly. All fields marked with an asterisk () must be completed or application will be considered incomplete.*

FULL LEGAL NAME <small>(as shown on driver's license)</small>		FIRST*	Middle	LAST*	Suffix (Jr., Sr., III)	
NCCCO CERTIFICATION NUMBER (if previously certified)		DATE OF BIRTH*		CANDIDATE ID: <small>(if previously tested)</small>		
PERSONAL MAILING ADDRESS*			CITY*	STATE*	ZIP*	COUNTRY
HOME PHONE	CELL PHONE*		CANDIDATE EMAIL* (PERSONAL EMAIL UNIQUE TO CANDIDATE)			
COMPANY/ORGANIZATION				PHONE		
COMPANY MAILING ADDRESS			CITY	STATE	ZIP	COUNTRY
<input type="checkbox"/> I AM REQUESTING TESTING ACCOMMODATIONS IN COMPLIANCE WITH THE AMERICAN WITH DISABILITIES ACT (ADA). <i>(For details on NCCCO's Testing Accommodations policy, please see www.nccco.org/accommodations.)</i>						

WRITTEN EXAMINATION(S) FOR WHICH YOU ARE APPLYING

FILL IN the circle next to the crane type(s) for which you are applying. Total the amount due at bottom. If you are reaccrediting, please use separate Reaccreditation Examination Application form.

EXAM DESCRIPTIONS AND FEES/RETEST FEES

- | | | |
|--|--------------|-------|
| <input type="radio"/> Washington State General Crane Certifier Exam | 911101 | \$250 |
| <input type="radio"/> Mobile Crane Additional Inspection Criteria & Proof Load Test Exam..... | 911102 | \$250 |
| <input type="radio"/> Tower Crane Additional Inspection Criteria & Proof Load Test Exam | 911103 | \$250 |
| <input type="radio"/> Overhead Crane Additional Inspection Criteria & Proof Load Test Exam..... | 911104 | \$250 |
| <input type="radio"/> Articulating Crane Additional Inspection Criteria & Proof Load Test Exam | 911105 | \$250 |
| <hr/> | | |
| <input type="radio"/> NCCCO Mobile Crane Operator Core Exam | 652603 | \$160 |
| <input type="radio"/> NCCCO Tower Crane Operator Exam | 654601 | \$180 |
| <input type="radio"/> NCCCO Overhead Crane Operator Exam | 653601 | \$180 |
| <input type="radio"/> NCCCO Articulating Crane Operator Exam (choose one exam below)..... | | \$180 |
| <input type="checkbox"/> Articulating Boom Cranes (ABC)..... | 652902 | |
| <input type="checkbox"/> Articulating Boom Cranes with Winch (ABW)..... | 652903 | |
| <input type="checkbox"/> Articulating Boom Loaders (ABL)..... | 652901 | |

If you have previously passed the NCCCO certification exam(s) in the category(s) for which you are seeking accreditation, you do not need to retake the exam(s).

TOTAL AMOUNT DUE \$

WASHINGTON STATE CONSTRUCTION CRANE CERTIFIER WRITTEN EXAMS CANDIDATE APPLICATION (CONT'D)

TEST SITE AT WHICH YOU INTEND TO TAKE THE WRITTEN EXAMINATION

TEST SITE NAME	TEST SITE COORDINATOR		
TEST SITE ADDRESS			
CITY	STATE	ZIP	
TEST ADMINISTRATION NUMBER	DATE YOU INTEND TO TAKE THE CCO EXAMINATION		

I declare that the foregoing statements and those in any required accompanying documentation are true. I understand and agree that my failure to provide accurate and complete information or abide by NCCCO's policies and procedures, including the Code of Ethics, shall constitute grounds for the rejection of my application, or denial or revocation of my certification. I understand that NCCCO reserves the right to verify any information in this application or in connection with my certification. I expressly consent to NCCCO's release of any information consistent with NCCCO's Information Release policy. I have read the NCCCO Candidate Handbook and agree to be bound by all NCCCO policies and procedures—including NCCCO's substance abuse policy—as they may be amended from time to time, including without limitation those posted at nccco.org. I understand that if at any point during my certification period I fail to meet any of the requirements outlined above, or if matters arise that can affect my capability to continue to fulfill certification requirements, I must report it to NCCCO immediately and agree to cooperate with any subsequent investigation regarding such matters.

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CANDIDATE SIGNATURE*	DATE*
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METHOD OF PAYMENT

CCO will invoice by email for the payment of the applicable candidate fees. Invoice will be sent from noreply@nccco.org. Your request will not be processed until payment has been received. Please pay promptly to avoid delays in processing.

Email invoice to: _____

Please email this form to CCO at writtenapps@nccco.org.

CANDIDATE APPLICATION CHECKLIST

- I have completed and submitted the application for accreditation on the Dept. of Labor and Industries' website (see page 1).
- I have completed and signed this *Candidate Application* for the appropriate written tests.
- I have provided credit card information or a check or money order for the correct amount due.



Washington State Construction Crane Certifier Recreditation Examination CANDIDATE APPLICATION

Please type or print neatly. All fields marked with an asterisk () must be completed or application will be considered incomplete.*

FULL LEGAL NAME <small>(as shown on driver's license)</small>		FIRST*	Middle	LAST*	Suffix (Jr., Sr., III)	
NCCCO CERTIFICATION NUMBER (if previously certified)		DATE OF BIRTH*		CANDIDATE ID: <small>(if previously tested)</small>		
PERSONAL MAILING ADDRESS*			CITY*	STATE*	ZIP*	COUNTRY
HOME PHONE	CELL PHONE*		CANDIDATE EMAIL* (PERSONAL EMAIL UNIQUE TO CANDIDATE)			
COMPANY/ORGANIZATION				PHONE		
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<input type="checkbox"/> I AM REQUESTING TESTING ACCOMMODATIONS IN COMPLIANCE WITH THE AMERICAN WITH DISABILITIES ACT (ADA). <i>(For details on NCCCO's Testing Accommodations policy, please see www.nccco.org/accommodations.)</i>						

WRITTEN EXAMINATION(S) FOR WHICH YOU ARE APPLYING

This application is for recreditation only. You may only reccredit in the designation(s) in which you are currently accredited. FILL IN the circle next to the crane type(s) for which you wish to reccredit. Total the amount due at bottom.

EXAM DESCRIPTIONS AND FEES/RETEST FEES

- Washington State General Crane Certifier Exam911101\$250
 - Mobile Crane Additional Inspection Criteria & Proof Load Test Exam.....911102\$250
 - Tower Crane Additional Inspection Criteria & Proof Load Test Exam911103\$250
 - Overhead Crane Additional Inspection Criteria & Proof Load Test Exam.....911104\$250
 - Articulating Crane Additional Inspection Criteria & Proof Load Test Exam911105\$250
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- NCCCO Mobile Crane Operator Core Recertification Exam652605\$160
 - NCCCO Tower Crane Operator Recertification Exam654602\$180
 - NCCCO Overhead Crane Operator Recertification Exam653602\$180
 - NCCCO Articulating Crane Operator Recertification Exam (choose one exam below).....\$180
 - Articulating Boom Cranes (ABC).....652905
 - Articulating Boom Cranes with Winch (ABW).....652906
 - Articulating Boom Loaders (ABL).....652904

If you have previously passed the NCCCO certification exam(s) in the category(s) for which you are seeking accreditation, you do not need to retake the exam(s).

TOTAL AMOUNT DUE \$

WASHINGTON STATE CONSTRUCTION CRANE CERTIFIER WRITTEN EXAMS CANDIDATE APPLICATION (CONT'D)

TEST SITE AT WHICH YOU INTEND TO TAKE THE WRITTEN EXAMINATION

TEST SITE NAME	TEST SITE COORDINATOR		
TEST SITE ADDRESS			
CITY	STATE	ZIP	
TEST ADMINISTRATION NUMBER	DATE YOU INTEND TO TAKE THE CCO EXAMINATION		

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