NATIONAL COMMISSION FOR THE
CERTIFICATION OF CRANE OPERATORS (CCO)

PRACTICAL EXAMINATION
TEST SITE COORDINATOR HANDBOOK

TSCH-P REV 05/07

BOARD OF DIRECTORS

CCO does not discriminate against any individual because of race, gender, age, creed, disability or national origin.

Dear Practical Test Site Coordinator:

Welcome to the Practical Examination segment of the CCO national crane operator certification program.

The CCO Practical Examination has been developed by the National Commission for the Certification of Crane Operators as a fair, valid and reliable assessment of the essential skills a crane operator needs to demonstrate in order to be certified by CCO to operate cranes. The Practical Examination was developed by a CCO Task Force staffed by experts from all aspects of the crane industry—crane operators, training directors, managers, supervisors, manufacturers—representing many thousands of hours of crane experience. These volunteers gave freely of their time and expertise with the single goal of improving the safety of all whose work brings them into contact with cranes and lifting equipment.

CCO teamed their knowledge and experience with the exam development expertise of International Assessment Institute (IAI). Based in Clearwater, Florida, IAI guided the CCO Task Force in establishing key elements of the program, including: identifying essential skills, selecting tasks, standardizing test conditions, developing the scoring process, establishing reliability between tests, and creating flexible application and scheduling procedures. In concert with the CCO Task Force, IAI also designed the Practical Examiner Accreditation Program whereby CCO trains and accredits CCO-certified crane operators to administer CCO practical examinations.

This Handbook has been developed to provide you, the Practical Test Site Coordinator, with all the information you need to successfully prepare for a CCO Practical Examination. As the Practical Test Site Coordinator, you play a critical role in the smooth administration of the CCO exams on test day. It is vitally important you study this entire Handbook very carefully before making any preparations for a practical test administration. The overview of the Practical Examination Process and the summary of your responsibilities are particularly important.

The CCO Certification Program is accredited by the National Commission for Certifying Agencies.

As you read carefully though its several sections, you will note the Handbook provides a large amount of detail on such aspects as crane selection and configuration, layout of the test site, and construction of the test weight and other site equipment. The validity and reliability of the test you are planning to administer depends on your following each requirement to the letter. Failure to do so could result in your practical test being declared invalid and the need to start over.

CCO recognizes the commitment you have made, and the resources you will allocate, to hosting the CCO practical examination. We want your experience to be a positive and successful one, and we stand ready to assist you in reaching that goal. If, after reading this Handbook, there is anything you do not fully understand or need clarifying, please call CCO at 703/560-2391, or e-mail us at info@nccco.org. CCO staff will be happy to guide you through any and all aspects of the Practical Examination administration process.

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Table of Contents

Practical Examination Process

STEP 1

Test Site Coordinator identifies the cranes he/she wishes to use for the test, the Practical Examiner who will conduct the test, the approximate date of testing, and the number of candidates to be tested.

STEP 2

Four weeks prior to the test date, Test Site Coordinator completes the Practical Examination Test Site Application & Data Sheet and sends this, along with the necessary supporting documentation, to CCO.

STEP 3

Test Site Coordinator coordinates scheduling of the test with the Practical Examiner. Two weeks prior to the test date, the Practical Examiner contacts International Assessment Institute for the required number of Score Sheets.

STEP 4

Test Site Coordinator prepares the test site and test crane in accordance with CCO requirements.

STEP 5

Test Site Coordinator reviews the Practical Test Application of each candidate.

STEP 6

The Practical Examiner administers the Practical test.

STEP 7

Once testing is completed, Test Site Coordinator sends to International Assessment Institute via overnight or second day courier:

- candidate applications with passport photos
- candidate Written Exam verification (if applicable)
- candidate fees

STEP 8

Practical examiner sends candidate Score Sheets and Site Report to International Assessment Institute via overnight or second day courier.

STEP 9

International Assessment Institute processes candidate Score Sheets and sends:

- score reports to candidates and, if applicable, certification cards
- a Pass/Fail Score Report or Detailed Score Report to Test Site Coordinator if requested

Hosting and Administering a CCO Practical Examination

Facilities wishing to volunteer as Practical Exam Sites must meet all CCO criteria for hosting a Practical Exam. If the facility meets the stated criteria, CCO will provide all necessary information to allow tests to be scheduled.

CRITERIA FOR TEST SITES

Each practical test site facility must arrange to have on site:

- A designated Test Site Coordinator.
- A CCO Accredited Practical Examiner.
- A designated Proctor(s) to assist the Practical Examiner during the test.
- Cranes that meet CCO requirements for the Practical Exam (see Crane Selection and Set-Up).
- An outside/inside area suitable for testing on the cranes selected and ancillary equipment necessary for conducting the exam (see Test Site Set-Up).
- An indoor facility suitable for the Pre-Test Briefing of exam candidates and a waiting area.

In addition, Practical Test Sites must pay an annual $50 registration at the time of application and on or before the first practical test of each calendar year thereafter. Employers or organizations with more than one test site must pay a fee for **each site**. Candidate Score Sheets from exams conducted at Practical Test Sites who have not paid the $50 annual fee will not be processed.

TEST SITE COORDINATOR

The person designated by their company or organization to liaise with CCO and its testing company International Assessment Institute (IAI) on test administration matters is known as the Test Site Coordinator. The Test Site Coordinator is responsible for:

- submitting all required information to CCO in a timely fashion on the Practical Examination Test Site Application Form & Data Sheet.
- preparing a test area in accordance with the directions in the Test Site Set-Up and Test Site Layout Instructions provided by CCO.
- preparing test equipment in accordance with the directions in Crane Selection and Set-Up.
- scheduling candidates to take the Practical Exam, and informing them of their test date, location, and time.
- liaison with the Practical Examiner and CCO in all aspects of test preparation and administration.
- The Test Site Coordinator or their designated representative is required to remain on Site throughout each Test Administration.

Test Site Coordinators are required to have an email address which must be provided to CCO with the first paperwork submission.

Practicing the Test Course

Practicing the Practical Exam on or before the day of the test is permitted with the approval of the Test Site Coordinator for that site.

PRACTICAL EXAMINER

Practical Examinations are conducted by a CCO Accredited Practical Examiner. An Examiner may test only one candidate on one crane at one time.

Thus, testing a candidate, or several candidates in turn, on one crane, would require one Practical Examiner.

Testing two candidates simultaneously on separate cranes would require two Practical Examiners, and so on. If you need assistance on selecting a Practical Examiner, contact CCO.

Only Practical Examiners are permitted to request Score Sheets from International Assessment Institute. These must be requested at least two weeks prior to the intended test date.

Practical Examiners must have an email address as a condition of accreditation.

PROCTORS

Proctors are volunteers who assist the Practical Examiner in the administration of the exam. The Test Site Coordinator is responsible for assigning one proctor per Practical Examiner to assist during the test. Proctors are under the direction of the Practical Examiner during the test administration. Proctors may not be candidates waiting to take the Practical Exam.

APPLYING TO HOST A PRACTICAL EXAMINATION

When the Test Site Coordinator is ready to schedule a test, (s)he must submit to CCO a completed Test Site Application and Data Sheet for each crane to be tested on. The Data Sheet may be copied as often as necessary to accommodate all test cranes.

This must be sent, along with all requested additional materials, to CCO **no later than four (4) weeks prior to the desired test date**. Note that **all** the information requested must be included; incomplete applications **cannot be** processed.

Using the application form, the Test Site Coordinator will need to provide the following information:

- Make, model, serial no. of the crane(s).
- A detailed description of the configuration for testing, i.e. counterweight(s), boom type, rope size and type, and ancillary equipment which will be in place.
- Dimensions (diameter and height) of the test weight(s) (Mobile Only) to be used.
- Rating/capacity charts (Mobile and Tower only) and associated notes for the proposed configuration(s).

Once the application has been approved, CCO will develop details of the layout of the test site and crane set-up including a CAD Test Site Plan. CCO will email the CAD directly to the Test Site Coordinator.

SITE LAYOUT

Using the information CCO provides, and the instructions contained in this Handbook, the Test Site Coordinator should prepare the cranes and lay out the test site.

Before the Examiner can begin testing, he/she will need to verify the test site has been laid out correctly. A copy of the Practical Examination Site Report used by the Examiner is provided in this Handbook. CCO encourages Test Site Coordinators to use this report to check that all items are in order before the Examiner arrives. This will expedite the Examiner's verification of the test site.

For permanent practical test sites, the requirement for a Site Inspection prior to each test may be waived. This option is available only to test sites where there had been no change in test crane, test site/location and Test Site Coordinator in the last six months. If it has been more than six months since the last full Site Report was submitted, another full Site Report must be conducted. If the Test Site Coordinator requests a Test Site Report Waiver, the Examiner must have the Test Site Coordinator sign a statement on the last page of the Site Report attesting that all the requirements for such a waiver have been met.

VERIFYING CANDIDATE ELIGIBILITY

Candidates must pass a Written Exam and a Practical Exam in the category they wish to be certified in. Candidates have 12 months after they pass the first exam (Written or Practical) in which to take the corresponding Written or Practical Exam in the same category. Candidates may take their Written and Practical Exams in any order. For example, a candidate passing the Written Exams (Core + Specialty) in the Large Telescopic crane (Swing Cab) category would have 12 months to pass the Large Telescopic crane Practical Exam.

CANDIDATE PHOTOGRAPHS

All candidate applications must be accompanied by a color, passport-type, head-and-shoulders photograph of the candidate without hat or sunglasses. Digital photos are acceptable. Test sites equipped with digital photographic equipment are encouraged to submit candidate photographs to International Assessment Institute in digital format.

EXAMINATION FEES

Examination fees for the Practical Examination are as follows:

One Mobile Crane Type	$60
Two Mobile Crane Types	$70
Three Mobile Crane Types	$80
Overhead Crane	$60
Overhead Crane Candidates who have previously registered or are registering for the Mobile and/or Tower Crane Examinations.	$50
Tower Crane	$60
Tower Crane Candidates who who have previously registered or are registering for the for Mobile and/or Overhead Crane Examinations .	$50

SUBMITTING APPLICATIONS

Once testing is completed, the Test Site Coordinator must send to International Assessment Institute via overnight or second day courier:

- candidate applications with passport photos
- candidate fees

SCORE REPORTING

All candidates are mailed a report of their performance from International Assessment Institute approximately twelve (12) business days after receipt of the Score Sheets from the Practical Examiner.

For candidates testing at their site, Test Site Coordinators may request a summary of candidates Pass/Fail Score Reports or Detailed Score Reports. Forms for this purpose are provided in this Handbook. Note that all requests for Detailed Score Reports must include the release signature of each candidate.

MENTORING PROGRAM

Practical test sites testing for the first time are encouraged to request a Mentor from CCO. Mentors are CCO Accredited Practical Examiners who have experience in laying out test sites and who have been approved as Mentors by CCO's Practical Exam Management Committee.

Mentors are volunteers who receive no compensation from CCO for their services. However, test sites may negotiate fees with Mentors for test site set-up and/or Practical Exam guidance services. Practical test sites interested in having a Mentor attend their site should contact CCO.

AUDITING PROGRAM

The National Commission for the Certification of Crane Operators conducts audits of Practical Examination sites/Practical Examiners in accordance with the accreditation requirements of the National Commission for Certifying Agencies (NCCA).

Practical Exam sites/Practical Examiners are selected for audits on the basis of a variety of criteria, including: random selection; in response to issues reported by candidates; or unusually high or low pass rates.

Once a site has been selected for an announced audit, the Test Site Coordinator or company representative from the site will be notified by letter from NCCCO prior to the scheduled audit day. In addition, the auditor will contact the Test Site Coordinator or company representative to verify the testing date and the site address. Audits may be scheduled without prior notification.

It is a condition of Practical Examiner accreditation and Test Site status that all test site personnel, including the Test Site Coordinator, Practical Examiner and Proctor, cooperate fully with the NCCCO Auditor during the audit process.

CCO Practical Examination Forms - All Programs

Please photocopy all sides of the following forms for your use in applying for the CCO Written and Practical Examinations.

Candidate Application - Practical Examination

Detailed Score Report Request for the Practical Exam

Pass/Fail Report Request for the Practical Exam

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CANDIDATE APPLICATION
PRACTICAL EXAMINATION

Please type or print neatly.

NAME *First* *Middle* *Last*

CCO CERTIFICATION NUMBER (If previously certified) | DATE OF BIRTH | SOCIAL SECURITY #

MAILING ADDRESS | CITY | STATE | ZIP

PHONE | CELL | FAX | E-MAIL

COMPANY / ORGANIZATION | PHONE

COMPANY MAILING ADDRESS | CITY | STATE | ZIP

ARE YOU A RECERTIFIATION CANDIDATE? NO ☐ YES ☐ PRACTICAL EXAM TEST DATE ___/___/___

Indicate with a check mark the crane type(s) you wish to be tested on and the date you passed the corresponding Written Examination if applicable. If you have passed the Written Exams you must also provide a copy of either a score report, or certification card.

PRACTICAL EXAM	WRITTEN EXAM	Date on which you passed the Written Exam?
☐ Lattice Boom	Lattice Boom Crawler and/or	___/___/___
	Lattice Boom Truck	___/___/___
☐ Large Telescopic (Swing Cab)	Large Telescopic (TLL)	___/___/___
☐ Small Telescopic (Fixed Cab)	Small Telescopic (TSS)	___/___/___
☐ Tower	Tower Crane	___/___/___
☐ Overhead	Overhead Crane	___/___/___

TEST SITE AT WHICH YOU INTEND TO TAKE THE PRACTICAL EXAMINATION

TEST SITE COORDINATOR NAME

PHONE | FAX | E-MAIL

TEST SITE STREET ADDRESS

CITY | STATE | ZIP

Under penalties of perjury, 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 consent to NCCCO's release of any information regarding this application and my examination administration to third parties. I have received a copy of the CCO Candidate Handbook and have read, and do understand and agree to be bound by all prevailing NCCCO policies and procedures. I attest that I have passed a substance abuse test conducted by a recognized laboratory service and agree to comply with NCCCO's substance abuse policy. I have passed a physical exam that complies with the ASME B30 standard for my certification category and I will continue to comply with those requirements.

CANDIDATE SIGNATURE | DATE

CANDIDATE APPLICATION (CONT'D)
PRACTICAL EXAMINATION

CCO CERTIFICATION CARDS

Candidates who meet all the requirements for certification in any one category are issued a certification card at no charge. Replacement and updated cards are available for an additional fee; see panel below.

Attach Color Passport Photo Here

1 ⅜" W x 1 ¾" H

Please attach a passport color photo, without hat or sunglasses, and enclose any required payment based upon the information listed below with your application form.

PRACTICAL EXAMINATION FEES

Checks and money orders must be made payable to **International Assessment Institute**. Credit cards (Visa or Master Card) may be used by filling out the Credit Card Box below.

Check the box next to the Practical Exam category for which you are registering.

Examination Fees:

- ☐ **One Mobile Crane Type — $60** ☐ **Two Mobile Crane Types — $70** ☐ **Three Mobile Crane Types — $80**
- ☐ **Tower Crane Category Only — $60**
- ☐ **Tower Crane** *(Added to existing Mobile Crane Certification, no new card)* — **$50**
- ☐ **Overhead Crane Category Only — $60**
- ☐ **Overhead Crane** *(Added to existing Mobile and/or Tower Crane Certification, no new card)* — **$50**
- ☐ **Charge an additional $25 for a replacement card.**

METHOD OF PAYMENT FOR CANDIDATE EXAMINATION FEES

Do not send cash.

☐ VISA ☐ MasterCard ☐ American Express ☐ Personal Check ☐ Employer Check ☐ Money Order ***Do not staple your check.***

If paying by credit card — complete the following information:

SECURITY CODE

CREDIT CARD NUMBER

EXPIRATION DATE

NAME *(Print as it appears on card)*

SIGNATURE *(on card)*

Checks and money orders should be be made payable to: International Assessment Institute — Attention: CCO Testing
Do not send this application to IAI or CCO. Give this application, along with payment and all necessary documentation, to your Test Site Coordinator on test day.

DETAILED SCORE REPORT REQUEST FORM
FOR THE PRACTICAL EXAM

If you wish to receive a Pass/Fail Report on candidates taking the CCO examination(s), please fill out this form and submit it, along with a **$50 processing fee**, to International Assessment Institute when you return your Test Administration materials for each administration:

International Assessment Institute — Attn: CCO Testing
600 Cleveland Street, Suite 900
Clearwater, FL 33755

You must submit this form for each test administration. Scores are the property of the candidate, and his/her consent must be obtained before International Assessment Institute can release the scores to a third party. Please have the candidate sign under the release statement below.

Please type or print neatly.

NAME OF REQUESTOR	PHONE

COMPANY NAME

MAILING ADDRESS

CITY	STATE	ZIP

TEST SITE NUMBER	TEST DATE	SIGNATURE

CANDIDATE RELEASE STATEMENT

Notice to Candidate: By signing this form, you are giving your permission to the National Commission for the Certification of Crane Operators (CCO) and International Assessment Institute to release the details of your test scores directly to the person listed above as the "Requestor."

CANDIDATE NAME (printed)	*Social Security # *(Last Four)*	CANDIDATE RELEASE SIGNATURE
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		

* Social Security Number is required in order to assure correct candidate identification.

METHOD OF PAYMENT FOR CANDIDATE RECERTIFICATION EXAMINATION FEES

Do no send cash.

☐ VISA ☐ MasterCard ☐ DISCOVER ☐ Personal Check ☐ Employer Check ☐ Money Order *Do not staple your check.*

If paying by credit card – complete the following information:

CREDIT CARD NUMBER

SECURITY CODE

EXPIRATION DATE

NAME *(Print as it appears on card)*	SIGNATURE *(on card)*

DETAILED SCORE REPORT REQUEST (CONT'D)
FOR THE PRACTICAL EXAM

TEST SITE NUMBER	TEST DATE	NAME OF REQUESTOR

CANDIDATE RELEASE STATEMENT

Notice to Candidate: By signing this form, you are giving your permission to the National commission for the Certification of Crane Operators (CCO) and International Assessment Institute to release the details of your test scores directly to the person listed above as the "Requestor."

CANDIDATE NAME (printed)	*Social Security # *(Last Four)*	CANDIDATE RELEASE SIGNATURE
9.		
10.		
11.		
12.		
13.		
14.		
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30.		
31.		
32.		

* Social Security Number is required in order to assure correct candidate identification.

PASS/FAIL REPORT REQUEST FORM
FOR THE PRACTICAL EXAM

If you wish to receive a Pass/Fail Report on candidates taking the CCO examination(s), please fill out this form and submit it, along with a **$50 processing fee**, to International Assessment Institute when you return your Test Administration materials for each administration:

International Assessment Institute — Attn: CCO Testing
600 Cleveland Street, Suite 900
Clearwater, FL 33755

IF YOU WOULD LIKE THIS REPORT FAXED TO YOU, ENTER YOUR FAX NUMBER HERE:

You must submit this form for each test administration.

Please type or print neatly.

NAME OF REQUESTOR | PHONE

COMPANY NAME

MAILING ADDRESS

CITY | STATE | ZIP

TEST SITE NUMBER | TEST DATE | SIGNATURE

CANDIDATE NAME (printed)	*SOCIAL SECURITY # *(LAST FOUR)*	CANDIDATE NAME (printed)	*SOCIAL SECURITY # *(LAST FOUR)*
1.		16.	
2.		17.	
3.		18.	
4.		19.	
5.		20.	
6.		21.	
7.		22.	
8.		23.	
9.		24.	
10.		25.	
11.		26.	
12.		27.	
13.		28.	
14.		29.	
15.		30.	

METHOD OF PAYMENT FOR CANDIDATE RECERTIFICATION EXAMINATION FEES *Do not send cash.*

☐ VISA ☐ MasterCard ☐ DISCOVER NETWORK ☐ Personal Check ☐ Employer Check ☐ Money Order *Do not staple your check.*

If paying by credit card – complete the following information:

CREDIT CARD NUMBER

SECURITY CODE

EXPIRATION DATE

NAME *(Print as it appears on card)* | SIGNATURE *(on card)*

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MOBILE CRANE PROGRAM

Test Site Set-Up

Pole Barrier Construction

Test Site Layout Instructions

Sample Test Site Plan

Crane Selection and Set-up

Photographs

Ready Reference Checklist

Test Site Application and Data Sheet

Site Report - Practical Exam

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Test Site Set-Up - Mobile Crane

PRE-TEST CANDIDATE BRIEFING AREA must be located so that waiting candidates are unable to observe testing procedures. It must be provided with:

- CCO candidate instruction materials, including a written description of the examination and copies of the CAD Test Site Layout.
- Operators Manuals and Load Charts for all cranes to be tested on: at least four (4) copies of those pages of the Operator's Manual dealing with operating instructions and one (1) copy of the complete Operator's Manual.
- A VCR or DVD and television for candidates to watch the CCO Practical Exam video.
- An indoor facility suitable for the Pre-Test Briefing of exam candidates, to include:
- Sufficient tables and chairs to seat candidates for the Pre-Test Briefing.
  - — Head table or podium at the front of the room.
  - — Registration table.
  - — Quiet, well-lit, surroundings with a comfortable temperature.
  - — Easy access to unlocked rest rooms stocked with sufficient supplies.
  - — Easy access to a water fountain.
  - — Large signs prominently posted making candidates aware of the location of the test.

BARRELS must be two(2) empty steel drums approximately 22 in. diameter and 34 in. high (e.g. 55 gallon diesel drum), open at one end, and identified as No. 1 and No. 2 by numerals large enough to be clearly seen from the operator's cab.

They must be weighted with twenty (20) lbs. (±10%) of ballast evenly distributed in the base of each barrel, so that the barrel is level. **(FOR LATTICE BOOM CRANES ONLY)**

The ballast must not prevent the overhaul ball from entering the barrel such that the horizontal line cannot drop below the rim.

If sand is used for ballast, ensure it is protected from moisture. Wet sand weighs more than dry sand so care must be taken not to exceed the 20 lbs. ballast weight required for each barrel.

They must be placed within a 22 in. inside diameter painted circle, 2 in. wide (± $\frac{1}{16}$ in.), on a 4 ft. × 4 ft. sheet of CDX (or better) plywood, secured or weighted as necessary to prevent movement.

A spare barrel must be available in case of damage to any of the barrels during the test.

ZIGZAG CORRIDOR is composed of a PVC pole barrier with one tennis ball placed on top of each pole.

POLE is made of 1½ in. white PVC pipe, SHD 40, 36 in. long, painted fluorescent orange or red on top 12 in. (see illustration). The poles must be mounted to a pole base made of two ¾ in. CDX grade (or better) plywood glued together, cut 12 in. long with ends cut square.

As an alternative to plywood, High Density Polyethylene (HDPE), or equivalent, maybe used to construct the pole bases. This material must meet the following requirements:

- — weight: 5 lbs. (±10%).
- — dimensions: 12″× 12″×1½″ (±½″ thick).

The weight must be spread evenly across the base.

Pole bases may be coated with a protective finish if desired, so long as they continue to meet the stated design and construction parameters.

Pole bases must be placed at 2 ft. centers. A taut, brightly colored, longitudinal string line must be placed on the ground under the centerline of each pole base.

To assist the Examiner and Proctor in restoring the Zigzag Corridor between tasks, the tennis balls may be attached to the pole by means of a 12 in. long, #18 nylon string. The string must be attached between 2 – 8 in. from the top of the pole, and to the tennis ball, using two #2 ×1¼ in. sheet metal screws, or equivalent (see *Pole Barrier Construction Diagram*).

During the test, the string loops must face towards the outside of the corridor to avoid the string being snagged on the Test Weight. Also, if this string option is used, the tops of Test Weights must be covered (i.e. not open) for the same reason.

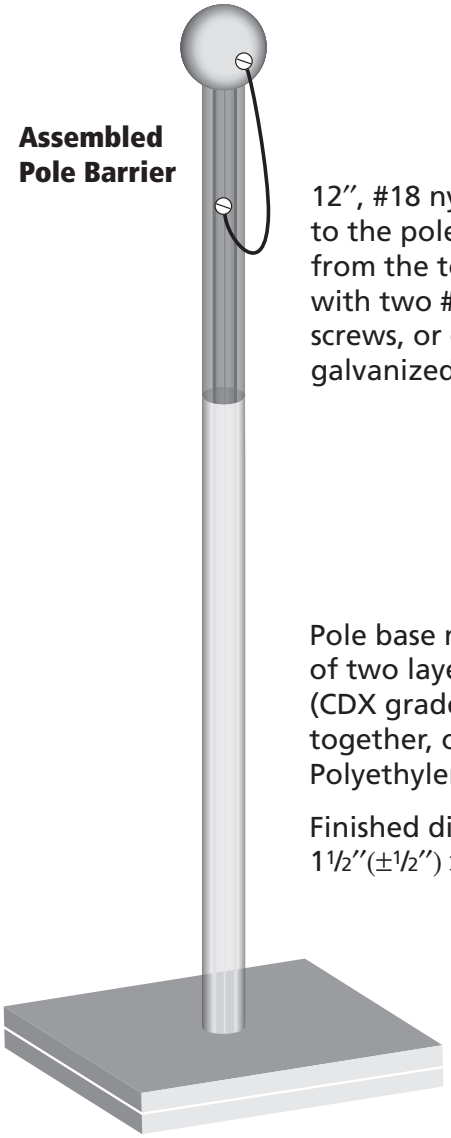
If the string does become snagged during a test, the Examiner must stop the test, restore the corridor to its original condition, and direct the candidate to restart the task.

CIRCLES. The Start, Stop, and Test Weight Circles are 6 ft. inside diameter, painted 2 in. wide and located per the Test Site Plan. Start Circle shall be placed in line with the centerline of the crane, and due left of the Test Weight Circle.

LEVEL. All parts of the test site must be level within 5% of true level and free of debris, stored materials, surface irregularities, or hazards such as overhead power lines, which could interfere with test maneuvers.

Pole Barrier Construction - Mobile Crane

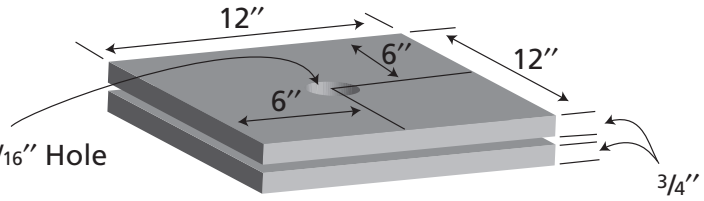
Assembled Pole Barrier



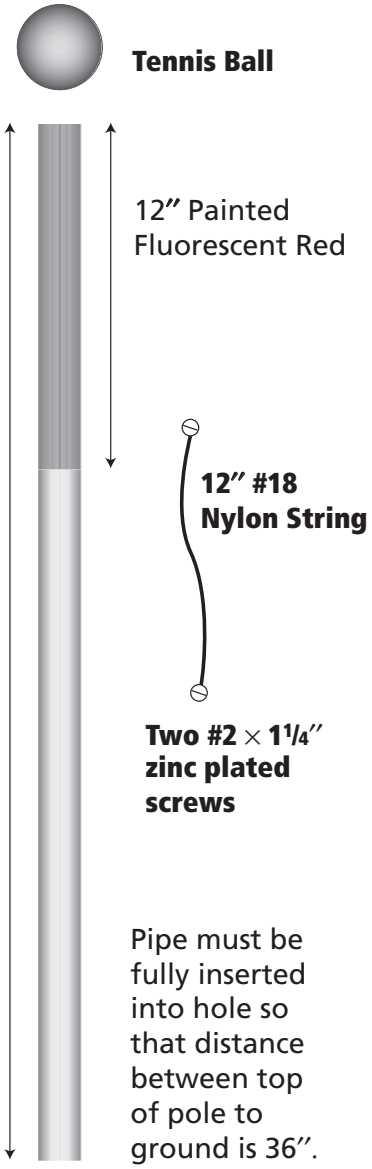
12″, #18 nylon string attached to the pole (between 2″ – 8″ from the top) and tennis ball with two #2 × 1¼″ zinc plated screws, or equivalent galvanized #2 × 1¼″ screws.

Pole base must be made either of two layers of ¾″ plywood (CDX grade or better) glued together, or High Density Polyethylene (HDP).

Finished dimensions must be 1½″(±½″) × 12″ × 12″.



Two sheets of ¾″ × 12″ × 12″ plywood
(CDX grade or better)



Pipe must be fully inserted into hole so that distance between top of pole to ground is 36″.

Test Site Layout Instructions - Mobile Crane

Using the CAD drawing and other information provided by CCO, it is the Test Site Coordinator's responsibility to lay out the test site. It is extremely important that all test equipment (corridor poles, barrels, Test Weight and Stop Circles, etc.) be placed exactly as indicated on the CAD drawings. Failure to do so could result in the test administration being declared invalid and the need to start over.

Before the Practical Examiner can begin testing, (s)he will verify the site is laid out correctly using the Practical Examination Site Report. We have provided a copy of this form in this Handbook. We strongly encourage all Test Site Coordinators to use this form to verify they have followed the site layout directions correctly.

There are various ways to begin the process of laying out the test site, but we recommend the following procedure:

LAY DOWN GRID LINES

1. The layout of the test site is based around two parallel grid lines; one running through the centerline of the crane; and the second through the middle of the last leg of the Zigzag Corridor (see Sample Test Site Plan). Lay out these grid lines on the ground with string as noted on the Test Site Plan. On the first grid line, make a mark that will indicate the center of the rotation of the crane.

LOCATE STOP CIRCLE

2. Next, using the information from the Data Sheet, determine the location of the center of the Stop Circle, at the intersection of the second grid line and the radius from the crane's center of rotation.

PAINT STOP CIRCLE

3. Using this center point, paint a 6 ft. 4 in. outside diameter Stop Circle with a 2 in. wide line (6 ft. inside diameter) on the ground. The Stop Circle is situated at the entrance to the Zigzag Corridor closest to the crane.

LAY OUT ZIGZAG CORRIDOR

4. Working back from the Stop Circle, and using the second grid line as a guide, lay out the Zigzag Corridor using the pole barriers, tennis balls, and string line. The width of the corridor and length of the inside and outside legs are as stated on the CAD layout.

LOCATE TEST WEIGHT CIRCLE

5. Locate the center of the Test Weight Circle at the farthest entrance of the Zigzag Corridor as noted on the CAD layout. Using this center point, paint a 6 ft. 4 in. outside diameter Test Weight Circle with a 2 in. wide line (6 ft. inside diameter) on the ground.

LOCATE START CIRCLE

6. Paint a 6 ft. 4 in. outside diameter Start Circle with a 2 in. wide line (6 ft. inside diameter) on the ground on the crane centerline to the left of the Test Weight Circle.

POSITION BARRELS

7. Place Barrel No. 1 to the right of the crane in the position and at the radius stated on the CAD Layout. Place Barrel No. 2 180 degrees from Barrel No.1 at the radius indicated on the CAD Layout. Place them on 4 ft. ×4 ft. CDX grade (or better) plywood sheets secured or weighted as described in Test Site Set-Up.

LOCATE DESIGNATED AREA

8. Ensure there is an appropriate area to serve as the Designated Area for Tasks 2 and 4 as illustrated on the CAD Layout.

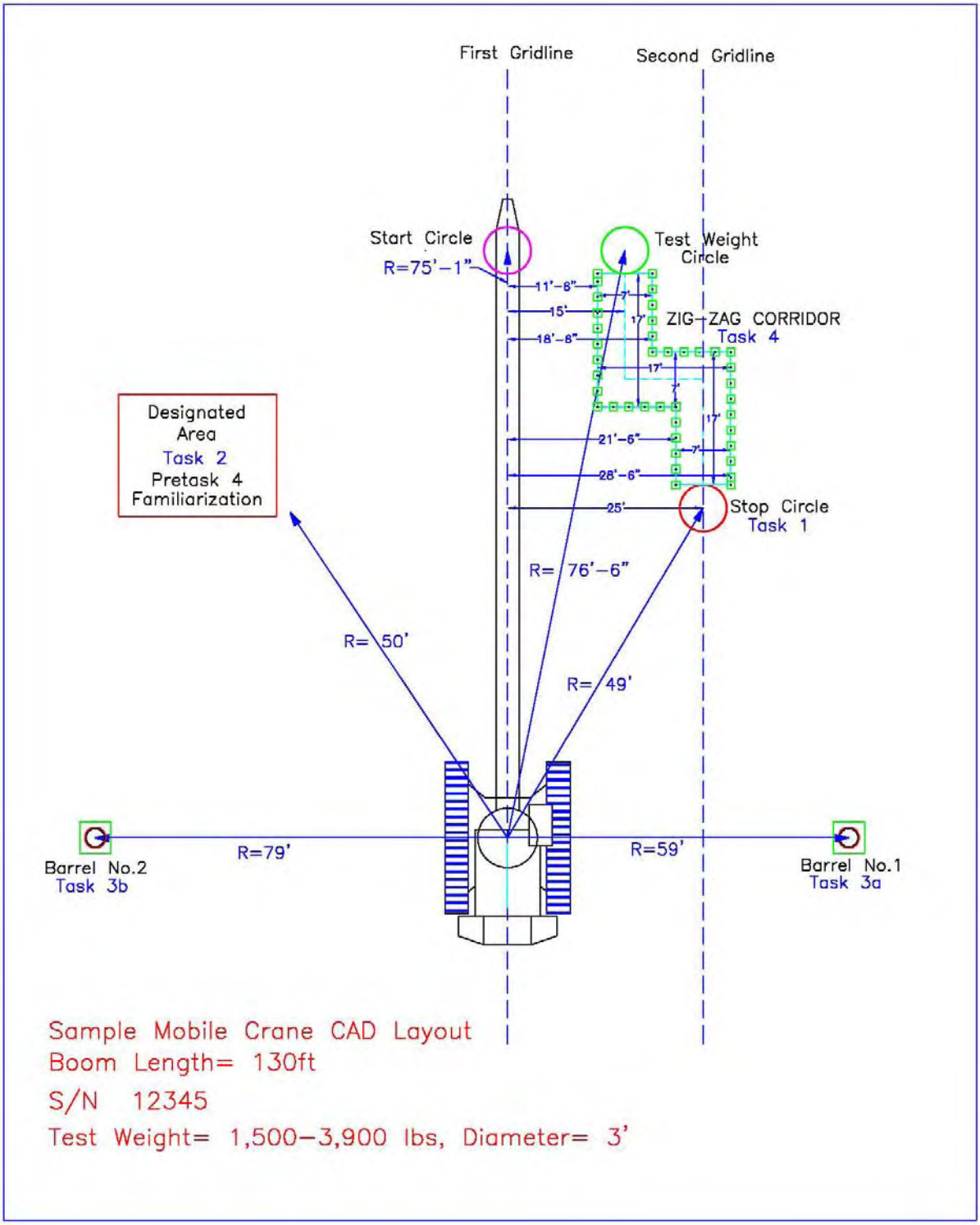
POSITION CRANE

9. Set up the crane on outriggers (if applicable) with the center of rotation of the crane directly above the mark you made on the ground in Step 1. Ensure the boom is over the centerline of the crane and the boom or jib length is as stated on the CAD Layout. The exam tasks will be performed in a roughly 180 degree area.

CHECK FOR OBSTRUCTIONS

10. Ensure there are no obstructions (on the ground or overhead) that could interfere with the safe operation of the crane during the test.

Sample Test Site Plan – Mobile Crane



Crane Selection and Set-Up - Mobile Crane

CCO PRACTICAL EXAM CATEGORIES

The Practical Exam can be taken in one or more of the following Mobile Crane categories:

- Lattice Boom Crane;
- Small Telescopic Crane (fixed cab);
- Large Telescopic Crane (swing cab).

CRANE SELECTION. Mobile Cranes for the Lattice Boom category can be either truck or crawler mounted. Practical Exams may be conducted on land-based mobile cranes mounted on a barge, if desired, including pedestal-mounted upperworks of mobile cranes, but not on marine cranes. For the Small Telescopic Boom (TSS) category, the test crane must have a fixed (non-rotating) operator's station. For the Large Telescopic Boom (TLL) category, the test crane must have an operator's station which rotates with the crane's upperworks.

COMPLIANCE. All cranes used on CCO practical examinations must be in compliance with federal and state OSHA requirements and the current ASME B30.5 Standard.

RIGGING. Slings used to connect the crane's overhaul ball hook and the Test Weight must not exceed 3 ft. in length. It must be of a type that can be quickly and easily attached and detached from the crane hook.

OVERHAUL BALL. The overhaul ball must be 30-48 in. in circumference (10-15 in. in diameter) and have painted or taped around its center a horizontal white line, 2 in. wide. A length of ⅜ in. chain, measured from the bottom of the hook, that can be quickly and easily attached and detached, painted fluorescent orange, must be hung from the bottom center of the overhaul ball. The length of the chain measured from the bottom of the hook must be 3 ft. If necessary, a second overhaul ball may be attached to the first, which shall be freely suspended. The distance between the bottom of the upper ball and the top of the lower ball must be no more than 2 ft.

TEST WEIGHT. The weight of the crane's Test Weight (which must also include the weight of the overhaul ball and any ancillary equipment in place on the Mobile Crane) must be between 20% and 30% of the maximum permissible single line pull of the crane, working on the top layer of rope, operating in low speed range.

Note: Boom trucks and carry decks may have a different Test Weight range that is based on the machine capacity at the longest test radius.

These weights must be verified by a weight ticket or other type of certification documenting the actual load weight. This document must be available to the Examiner.

The weight must:

- be a cylinder, with the same diameter from top to bottom.
- have a continuously smooth surface from top to bottom.
- have a diameter between 2 ft. and 4 ft. (76-152 in. in circumference).
- have a height no more than 2 × its diameter.
- be no more than 5 ft. high.

See photograph for example of a suitable Test Weight.

Attached to the bottom center of the Test Weight must be a 3 ft. length of ⅜ in. chain, painted fluorescent orange or red.

TEST WEIGHT CONSTRUCTION

So long as the requirements for Test Weight design are adhered to, Test Site Coordinators are free to select the most convenient materials and methods available to them. Pipe has a major advantage over other materials in that it has a smooth surface and is perfectly cylindrical, two of the main requirements for CCO Test Weights. Test Site Coordinators can determine how many pick points are used on the Test Weight.

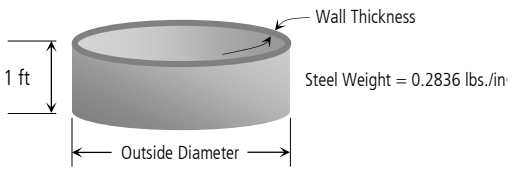
If you expect to change the weight of your Test Weight from time to time to accommodate different types and sizes of cranes, you might consider selecting steel pipe and filling in with loose material (e.g. steel slugs) that can be varied according to specific test requirements. Otherwise, concrete is a popular choice.

The following charts and diagram are provided for test sites selecting either of these two options.

The *Pipe Weight Thickness Chart* provides weights for given pipe wall thickness and outside diameters.

The *Concrete Weight Chart* contains calculated concrete weights for given diameters of pipe. These values can be used as close approximations depending on overall Test Weight size, and the inside diameter and wall thickness of the pipe or other cylindrical material that is used as a form.

PIPE DIAGRAM



PIPE WEIGHT THICKNESS CHART (WEIGHT FOR 1 LINEAR FOOT OF PIPE)

OUTSIDE DIAMETER	PIPE WALL THICKNESS 1/4"	3/8"	1/2"	3/4"
2'0"	63 lbs.	95 lbs.	126 lbs.	186 lbs.
2'6"	80 lbs.	119 lbs.	158 lbs.	235 lbs.
3'0"	96 lbs.	143 lbs.	190 lbs.	283 lbs.
3'6"	112 lbs.	167 lbs.	222 lbs.	331 lbs.
4'0"	128 lbs.	191 lbs.	254 lbs.	379 lbs.

For lengths longer than 1', multiply the weight given in t he table times the pipe length in feet.

Example:
4' diameter x ¾" wall thickness pipe, 4'6" high
Pipe weight = 379 lbs. x 41/2' high = 1,706 lbs.

CONCRETE WEIGHT CHART

DIAMETER	CONCRETE HEIGHT IN TEST WEIGHT 2'0"	2'6""	3'0"	3'6"	4'0"	4'6"	5'0"
2'0"	942 lbs.	1,178 lbs.	1,413 lbs.	1,649 lbs.	1,885 lbs.	2,120 lbs.	2,356 lbs.
2'6"	1,472 lbs.	1,840 lbs.	2,209 lbs.	2,577 lbs.	2,945 lbs.	3,313 lbs.	3,681 lbs.
3'0"	2,120 lbs.	2,650 lbs.	3,180 lbs.	3,711 lbs.	4,241 lbs.	4,771 lbs.	5,301 lbs.
3'6"	2,886 lbs.	3,607 lbs.	4,329 lbs.	5,051 lbs.	5,772 lbs.	6,494 lbs.	7,218 lbs.
4'0"	3,768 lbs.	4,710 lbs.	5,652lbs.	6,594 lbs.	7,536 lbs.	8,478 lbs.	9,420 lbs.

Concrete weights were calculated by using 4050 lbs./yd^3 or 150 lbs./ft^3 of concrete.

Note: boom trucks and carry-decks, may not have the capacity at the longest radius used for testing conditions to use the Test Weight range of 20-30% of the line pull. Verify with CCO the new Test Weight range before constructing a Test Weight for these machines. Also the weight of any attachment devices (rings, hooks, etc.) and wire rope must be included.

All load supporting components must be assembled in accordance with proper rigging practice and working load limits for hardware utilized.
Any specially fabricated structural components which are part of the load supporting system must be designed and fabricated in accordance with the requirements of the current ASME B30.20 Standard, *Below the Hook Lifting Devices.*

REEVING. The test crane must be reeved with a single part line over the main boom point.

JIBS. Booms must have no erected jibs/extensions, auxiliary load lines/blocks, etc. unless specifically authorized by CCO. However, stowed jibs/extensions are permitted, but must be noted by the Test Site Coordinator on the Test Site Application and Data Sheet.

SET-UP. The test crane must be set up and leveled ready for operation, with engine running, in accordance with the manufacturer's recommendations, and in the location specified on the CCO CAD drawing.

BLOCKING. Matting or cribbing must be installed if necessary to provide a sound foundation for the crane. A spirit level (minimum length 2 ft.) must be available for the candidates to verify the crane level condition prior to beginning their testing.

LOAD INDICATORS. If the crane is equipped with a load indicator or load moment indicating (LMI) system, the system must be programmed for the proper load ratings, parts of line, etc. prior to the beginning of any testing. A representative of the host who is familiar with the operation of the crane, and specifically with any LMI system on the crane must be available while testing is being conducted.

TELESCOPING BOOM. After verifying that the telescopic boom has been extended to the designated length, the Practical Examiner will mark the boom in a manner that is clearly visible from the ground to ensure the boom is not telescoped during the test.

Photographs – Mobile Crane

MARKING EQUIPMENT

All test site and crane equipment must be clearly marked in accordance with CCO requirements (see documents *Test Site Set-Up* and *Crane Selection and Set-Up*)

Barrel

Overhaul ball

Corridor Pole

Photographs (Cont'd) - Mobile Crane

TEST WEIGHT

One example of a suitable Test Weight is this 36 in. diameter pipe, cut to a length so that, when filled with concrete, it falls within acceptable weight limits for the type and size of crane selected for the test.

An inverted piece of 3 in. channel set into the base helps protect the chain attachment point from damage each time the weight is set down.

Any specially fabricated structural components that are part of the load-supporting system must be designed and fabricated in accordance with the requirements of the current ASME B30.20 standard, *Below the Hook Lifting Devices.*

SAND

Repackaging sand in resealable plastic bags facilitates handling. It also protects the sand from moisture which might otherwise lead to exceeding the weight requirement of 20 lbs. per barrel. **(FOR LATTICE BOOM CRANE ONLY)**

Photographs (Cont'd) – Mobile Crane

MEASURING THE CORRIDOR AND CIRCLES

All elements of the test site must be laid out in accordance with the *Test Site Layout Instructions, Data Sheet* and *Test Site Plan*. The Test Site Coordinator is responsible for carefully checking all dimensions prior to the arrival of the Practical Examiner.

Examiners verifying corridor width.

Examiners verifying diameter of circles surrounding Barrels for Task 3.

Ready Reference Checklist - Mobile Crane

YOU WILL NEED A MOBILE CRANE IN EITHER OF THE FOLLOWING CATEGORIES:

- ☐ Lattice Boom Crane (truck or crawler)
- ☐ Small Telescopic Boom Crane (fixed cab)
- ☐ Large Telescopic Boom Crane (swing cab)

YOU WILL NEED THE FOLLOWING FOR EACH CRANE TO BE TESTED ON:

- ☐ A cylindrical Test Weight, diameter 2 ft.-4 ft. (76-152 in. in circumference), weight (including rigging) to be calculated at 20-30% of rated single line pull on top layer of rope including overhaul ball and any auxiliary components.
- ☐ Two (2) lengths of ⅜ in. chain, painted fluorescent orange or red, that measure 3 ft. long from the bottom inside edge of the Test Weight and from the bottom of the crane hook.
- ☐ Overhaul ball, 30-48 in. in circumference, with a 2 in. wide horizontal line painted or taped around the center.
- ☐ Suitable rigging to attach the Test Weight to the hook, no more than 3 ft. long.
- ☐ Two (2) empty steel drums approximately 22 in. outside diameter and 34 in. high (e.g. 55 gallon diesel drum), open at one end.
- ☐ Forty (40) lbs. of non-permeable ballast for ballasting the barrels (20 lbs. each). **(FOR LATTICE BOOM CRANE ONLY)**
- ☐ PVC pipe, white, 1½ in, SHD 40, sufficient to make forty-two (42), 36 in. long poles.
- ☐ Two 4 ft. x 4 ft. sheets of ¾ in. CDX-grade (or better) plywood, placed under Barrels secured or weighted as necessary to prevent movement.
- ☐ ¾ in. CDX grade (or better) plywood or high density polyethylene, sufficient to create forty-two (42) pole bases, 1 ½" (± ½") x 12" x 12".
- ☐ Forty-two (42) tennis balls.
- ☐ Forty-two feet of #18 nylon string, to attach tennis balls to poles (optional).
- ☐ Eighty-four (84) 1¼ in. zinc plated (galvanized) screws, or equivalent, to secure nylon string to tennis balls and poles (optional).
- ☐ 500 ft. brightly colored, string line (for Zigzag Corridor and test site layout use).
- ☐ Spirit level to verify level (minimum 2 ft. length).
- ☐ Paint (fluorescent orange or red) for painting the tops of the poles and chain.
- ☐ Paint (white) for identifying the barrels, marking the overhaul ball, marking circles.
- ☐ Hand-held wind speed indicator (anemometer).
- ☐ Two (2) 100 ft. tape measures and one 30 ft. steel tape.
- ☐ Stop watches and clipboards for Examiner(s) and Proctor(s).

EQUIPMENT SOURCES.

Anemometers: West Marine, PO Box 50070, Watsonville, CA 95077. 1-800-262-8464. www.westmarine.com.

HDPE bases: House of Plastics, 2580 S. Orange Blossom Trail, Orlando, FL 32805. 1-888-707-5278. plastics@hopu.com.

CCO does not endorse or recommend particular vendors of any equipment.

TEST SITE APPLICATION & DATA SHEET

PRACTICAL EXAMINATION – MOBILE CRANE

Please type or print neatly.

NAME | TEST SITE #

HOST COMPANY

HOST COMPANY MAILING ADDRESS

CITY | STATE | ZIP

HOST PHONE | HOST FAX | HOST E-MAIL

TEST SITE ADDRESSS (physical address of where the crane will be set up, no PO Box's)

CITY | STATE | ZIP

CHECK BOXES AS APPROPRIATE

☐ **New Test Site** ☐ **Existing Test Site** ☐ **$50 Site Fee for 2007 already paid** ☐ **$50 Site Fee for 2007 enclosed**

TEST SITE COORDINATOR NAME | PHONE | E-MAIL

PRACTICAL EXAMINER NAME | Accreditation #

DATES(S) OF TEST

The Practical Examination Test Site Coordinator assumes total responsibility for the following items:

1. **Selection of cranes and verification that at all times during the testing process the cranes are in compliance with federal and state OSHA requirements and the current ASME B30 standard.**
2. **Verification that candidate's application for the practical test is complete.**
3. **Verification that candidate is physically and mentally capable of safe operation the day of test.**
4. **Personal injury and / or property damage resulting from or caused in anyway by the act of participation in the CCO Practical Examination.**

HOST COMPANY NAME

HOST COMPANY REPRESENTATIVE

TEST SITE COORDINATOR SIGNATURE | DATE

METHOD OF PAYMENT FOR TEST SITE APPLICATION FEES

Do not send cash.

☐ VISA ☐ MasterCard ☐ Personal Check Enclosed ☐ Employer Check Enclosed ☐ Money Order Enclosed

Do not staple your check.

If paying by credit card — complete the following information

CREDIT CARD NUMBER | EXPIRATION DATE

NAME (Print as it appears on card) | SIGNATURE (on card) | SECURITY CODE*

Checks and money orders should be made payable to: **NCCCO**

* Three digit security code located on the back of the card in the signature panel.

Please send Application and payments to:

National Commission for the Certification of Crane Operators
Western Regional Office
57 West 200 South, Suite 404, Salt Lake City, Utah 84101
Fax: 801-363-3806

TEST SITE APPLICATION & DATA SHEET (CONT'D)

PRACTICAL EXAMINATION – MOBILE CRANE

INSTRUCTIONS FOR COMPLETING THIS DATA SHEET

Photocopy this form for use with every crane you plan to test on.

Please ensure to include the load charts, working area diagrams, and range diagrams for each test crane in its proposed configuration.

CCO CANNOT PROCESS THIS APPLICATION WITHOUT ALL THIS INFORMATION.

SECTION A *Complete as fully as possible, including your desired test date if known.*

HOST COMPANY NAME		TEST SITE #	
TEST SITE ADDRESS		APPLICATION DATE	DATE OF TEST
CITY	STATE	ZIP	

SECTION B — CRANE TYPE: *Check the box next to the type of the crane you plan to test on.*

☐ Lattice Boom ☐ Large Telescopic (Swing Cab) ☐ Small Telescopic (Fixed Cab)

SECTION C: *Provide data for items 1 thru 13 using the crane's load chart. Answer items 5 thru 7 ONLY if you plan to test on a telescopic boom crane. Answer item 8 ONLY if you plan to test on a lattice boom crane with a capacity of 50 tons or less. Answer item 9 ONLY if you plan to test on a lattice boom crane with a capacity of more than 50 tons.*

1. Make / Model:	2. Serial Number:	3. Max. rated capacity (tons):

4. Configuration of crane *(counterweight, boom type, rope size and type, ancillary equipment, working area, outrigger spread, boom truck bed length, etc.)*

Answer items 5 thru 7 for TELESCOPIC BOOM CRANES only.

5. Max. full powered boom: _____ ft.

6. Boom Length range between: _____ ft. *(70% full power boom)* and _____ ft. *(75% full power boom)*

7. Closest listed on load chart = _____ ft.

Answer item 8 for LATTICE BOOM CRANES UP TO 50 TONS CAPACITY only.

8. 80 ft. of boom ± shortest section at value listed on the load chart=_____ ft.

Answer item 9 for LATTICE BOOM CRANES ABOVE 50 TONS CAPACITY only.

9. 120 ft. of boom ± shortest section at value listed on the load chart= _____ ft.

10. Maximum permissible single line pull on the top layer of rope for the crane as configured: _____ lbs.

11. Test Weight range between: _____ lbs. *(20% of line pull)* and _____ lbs. *(30% of line pull)*

Note: Carry-decks and Boom Trucks may have a different Test Weight range that is based on the machine capacity at the longest test radius.

12. Height of Test Weight: _____ ft.

13. Diameter of Test Weight: _____ ft. + 4 ft. = Width of zigzag corridor:_____ ft.

SECTION D — TO BE COMPLETED BY CCO: *Leave this section blank.*

14. Length of inside legs of corridor: _____ ft. 15. Length of outside legs of corridor: _____ ft.

16. Radius from centerline of crane to:

Center Barrel 1: _____ ft. Center to Barrel 2: _____ ft. Center Stop Circle: _____ ft.

17. Radius with _____ ft. boom at 50 degree angle = _____ ft.

Capacity in this configuration (may be limited by single line pull): _____ lbs.

SITE REPORT
PRACTICAL EXAMINATION — Mobile Crane

CCO has established specific conditions and guidelines that each Practical Examination Test Site must adhere to. This Site Report is designed to ensure these conditions are met. The Examiner is required to perform a site inspection prior to the start of the first examination and complete the Site Report form. The Examiner must arrive at the test site in sufficient time to verify, by measuring with a tape, the accuracy of the course layout with respect to the CCO Test Site Plan. The Examiner must also conduct a visual inspection of the crane for proper set-up prior to testing any applicant. This site report must be presented on demand to any Practical Test Auditor.

Please type or print neatly.

TEST SITE	DATE

NAME OF TEST SITE COORDINATOR

Check the following items for compliance.

PRE-TEST CANDIDATE BRIEFING AREA

An indoor facility suitable for the Pre-Test Briefing of exam candidates, to include:

- ☐ Sufficient tables and chairs to seat candidates for the Pre-Test Briefing.
- ☐ Equipped with a VCR or DVD and television or computer for candidates to watch the CCO Practical Exam video.
- ☐ Located so that waiting candidates are unable to observe other candidates being tested.

Candidate Materials Available:

- ☐ A written description of the examination (Candidate Handbook).
- ☐ A plan view of the Test Site Layout.
- ☐ Operators Manuals and Load Charts for all cranes to be tested on, at least one extra copy of those pages of the Operator's Manual dealing with operating instructions.
- ☐ One (1) copy of the complete Operator's Manual.
- ☐ Instructions for the LMI system, if the crane is so equipped.

This section is to be completed for each crane used during the testing session.

Make/Model of Crane:	Serial Number of Crane:

TEST SITE SET-UP

- ☐ Entire course is level within 5% of true level.
- ☐ Zigzag Corridor has no more than a 6 in. maximum change in elevation.
- ☐ Free of debris, stored materials, surface irregularities, or hazards such as overhead power lines, which could interfere with test maneuvers.

Using the Test Site Plan, verify the following measurements:

- ☐ Distance from the center of rotation of the crane to the center of Barrel #1.
- ☐ Distance from the center of rotation of the crane to the center of the Stop Circle.
- ☐ Distance from the center of rotation of the crane to the center of the Test Weight Circle.
- ☐ Distance from the center of rotation of the crane to the center of Barrel #2.
- ☐ Distance from the centerline of the crane to the second leg of the Zigzag Corridor.
- ☐ Distance from the centerline of the crane to the first leg of the Zigzag Corridor.

- ☐ Length of the two long sides of the Zigzag corridor.
- ☐ Length of the four short sides of the Zigzag corridor (10 ft.).
- ☐ Width of the Zigzag corridor.
- ☐ Poles placed at 2 ft. centers.

Barrels

- ☐ Two (2) empty steel drums, 22 in. diameter and 34 in. high (e.g. 55 gallon diesel drums), open at one end. Identified as No. 1 and No. 2 in letters large enough to be clearly seen from the operator's cab.
- ☐ **For Lattice Boom Cranes only,** barrels are weighted with twenty (20) lbs. of ballast, evenly distributed in the base, so that the barrel is level.
- ☐ The ballast does not prevent the overhaul ball from entering the barrel such that the horizontal line cannot drop below the rim.
- ☐ Each placed within a 22 in. inside diameter painted circle, 2 in. wide (± 1/16 in.).
- ☐ Each placed on 4 ft. × 4 ft. sheet of CDX grade (or better) plywood.
- ☐ Secured and weighted as necessary to prevent movement.
- ☐ A spare barrel is available.

Poles

- ☐ Made of 1½ in. white PVC pipe, SHD. 40, 36 in. long.
- ☐ Top 12 in. painted fluorescent orange or red.
- ☐ Mounted to a platform made of two layers of ¾ in. CDX grade (or better) plywood, or high density polyethylene, cut 12 in. square.
- ☐ A taut, longitudinal string line placed on the ground through the centerline of each pole base.
- ☐ Spare poles and bases available.

Circles

- ☐ Start Circle is 6 ft. inside diameter, painted 2 in. wide and located per the Test Site Plan.
- ☐ Start Circle is in line with the centerline of the crane and due left of the Test Weight Circle.
- ☐ Stop Circle is 6 ft. inside diameter, painted 2 in. wide and located per the Test Site Plan.
- ☐ Test Weight Circle is 6 ft. inside diameter, painted 2 in. wide and located per the Test Site Plan.

CRANE SELECTION AND SET-UP

- ☐ Crane as identified in the Test Site Plan.

Test Crane

- ☐ Set up and leveled, in the location specified, ready for operation, with engine running, in accordance with the manufacturer's recommendations.
- ☐ Boom length is as stated on Test Site Plan.
- ☐ The telescopic boom is extended to the designated length, and marked in a manner that is clearly visible from the ground to ensure the boom is not telescoped during the test.
- ☐ Rigging between the overhaul ball and the Test Weight does not exceed 3 ft. in length.
- ☐ If a second overahul ball is used, it is attached with a sling at a distance between the bottom of the upper ball and the top of the lower ball of not more than 2 ft.

Overhaul Ball

- ☐ 30 – 48 in. in circumfrence (10 – 15 in. in diameter) with a horizontal whilte line, 2 in. wide, painted or taped around its center.
- ☐ A length of ⅜ in. chain that can be quickly and easily attached and detached:
  - ☐ painted fluorescent orange or red
  - ☐ attached to bottom center of overhaul ball
  - ☐ measures 36 in. from bottom of hook

Test Weight

- ☐ Weight as indicated in Test Site Plan.
- ☐ Verified by a weight ticket or other type of certification documenting the actual load weight available to the Examiner.
- ☐ Cylindrical in shape.
- ☐ The diameter of the Test Weight is between 2 ft. – 4 ft. (76 – 152 in. circumference).
- ☐ Height is no more than 2 x its diameter and in any case does not exceed 5 ft. in height.
- ☐ Method of attachment is by a sling not exceeding 3 ft. in length.
- ☐ A 36 in. length of ⅜ in. chain.

  NOTE: In order to measure the chain length, attach the Test Weight to the crane hook. Raise the Test Weight until the chain barely touches the ground and measure from the lowest edge of Test Weight to ground.
- ☐ Chain is painted fluorescent orange or red.
- ☐ Chain is attached to the bottom center of the Test Weight.

Reeving

- ☐ The test crane is reeved with a single part line over the main boom point, or jib if used.

Jibs

- ☐ Boom has no erected jib or extensions, auxiliary load loine/blocks, etc. (stowed jibs/extensions are permitted), unless otherwise indicated in CCO Test Site Plan.

Blocking

- ☐ Matting or cribbing installed, as necessary, to provide a sound foundation for the crane.
- ☐ A spirit level is available (for the candidates to verify the crane level condition prior to beginning their testing).

Load Indicators

- ☐ If the crane is equipped with a load indicator or load moment indicating (LMI) system, the system must be programmed for the proper load ratings, parts of line, etc. prior to the beginning of any testing. A representative of the test host organization who is familiar with the operation of the crane, and specifically with any LMI system on the crane, must be available near the test area during the times testing is being conducted.

Test Weight Rigging

- ☐ All load supporting components must be assembled in accordance with proper rigging practice and working load limits for the hardware utilized. Any specially fabricated structural components which are part of the load supporting system must be designed and fabricated in accordance with the requirements of the current ASME B30.20 Standard, Below the Hook Lifting Devices.

Test Course Set-Up

- ☐ The Practical Examiner whose signature appears at the end of this Test Site Report attests that he/she has set up the course. *(Check only if the Practical Examiner has set up the test course.)*

DEVIATIONS FROM STANDARD TEST CONDITIONS OR TEST SITE PARAMETERS.

Describe fully any deviations from the approved Test Site Set-Up and Crane Selection and Set-Up.

TEST SITE REPORT WAIVER

Under the modified reporting provisions for permanent practical test sites, the requirement for a Site Report prior to each test is waived. This option is available only to test sites where there has been no change in test crane, test site/location and Test Site Coordinator in the last six months. If it has been more than six months since the last full Site Report was submitted, another full Site Report must be conducted. If the Test Site Coordinator requests a Test Site Report Waiver, the Examiner must have the Test Site Coordinator read the following attestation, and sign below:

TEST SITE COORDINATOR ATTESTATION

I attest that there have been no changes to the test crane or test site/location since the last site report was conducted (if this was more than six months ago, a full Site Report must be conducted). I further attest that I was the Test Site Coordinator at this site when the last site report was conducted, and have continued to act in this capacity since that time.

SIGNATURE OF TEST SITE COORDINATOR	DATE
PRINTED NAME OF TEST SITE COORDINATOR	DATE LAST SITE REPORT CONDUCTED

I attest that this is a true and accurate report of the above named Test Site.

SIGNATURE OF EXAMINER	DATE
PRINTED NAME OF EXAMINER	EXAMINER ACCREDITATION NUMBER

This SITE REPORT is to be completed by the Examiner prior to each testing session and sent with candidate score sheets to:

International Assessment Institute — Attention: CCO Testing
600 Cleveland Street, Suite 900
Clearwater, Florida 33755

Phone: 727-449-8525
Fax: 727-461-2746

TOWER CRANE PROGRAM

Test Site Set-Up

Pole Barrier Construction

Test Site Layout Instructions

Sample Test Site Plan

Crane Selection and Set-up

Photographs

Ready Reference Checklist

Test Site Application and Data Sheet

Site Report - Practical Exam

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Test Site Set-Up - Tower Crane

PRE-TEST CANDIDATE BRIEFING AREA must be located so that waiting candidates are unable to observe testing procedures. It must be provided with:

- CCO candidate instruction materials, including a written description of the examination and copies of the CAD Test Site Layout.
- Operators Manuals and Load Charts for all cranes to be tested on: at least four (4) copies of those pages of the Operator's Manual dealing with operating instructions and one (1) copy of the complete Operator's Manual.
- A VCR or DVD and television for candidates to watch the CCO Practical Exam video.
- An indoor facility suitable for the Pre-Test Briefing of exam candidates, to include:
  - Sufficient tables and chairs to seat candidates for the Pre-Test Briefing.
  - Head table or podium at the front of the room.
  - Registration table.
  - Quiet, well-lit, surroundings with a comfortable temperature.
  - Easy access to unlocked rest rooms stocked with sufficient supplies.
  - Easy access to a water fountain.
  - Large signs prominently posted making candidates aware of the location of the test.

ZIGZAG CORRIDOR is composed of a PVC pole barrier with one tennis ball placed on top of each pole.

POLE is made of 1½ in. white PVC pipe, SHD .40, 36 in. long, painted fluorescent orange or red on top12 in. (see illustration). The poles must be mounted to a pole base made of two ¾ in. CDX grade (or better) plywood glued together, cut 12 in. long with ends cut square.

As an alternative to plywood, High Density Polyethylene (HDPE), or equivalent, maybe used to construct the pole bases. This material must meet the following requirements:

- weight: 5 lbs. (±10%) .
- dimensions: 12" ×12" ×1½" (±½" thick).

The weight must be spread evenly across the base.

Pole bases may be coated with a protective finish if desired, so long as they continue to meet the stated design and construction parameters.

Pole bases must be placed at 2 ft. centers. A taut, brightly colored, longitudinal string line must be placed on the ground through the centerline of each pole base.

To assist the Examiner and Proctor in restoring the Zigzag Corridor between tasks, the tennis balls maybe attached to the pole by means of a 12 in. long, #18 nylon string. The string must be attached between 2 – 8 in. from the top of the pole, and to the tennis ball, using two #2 ×1¼ in. sheet metal screws, or equivalent (see *Pole Construction Barrier Diagram*).

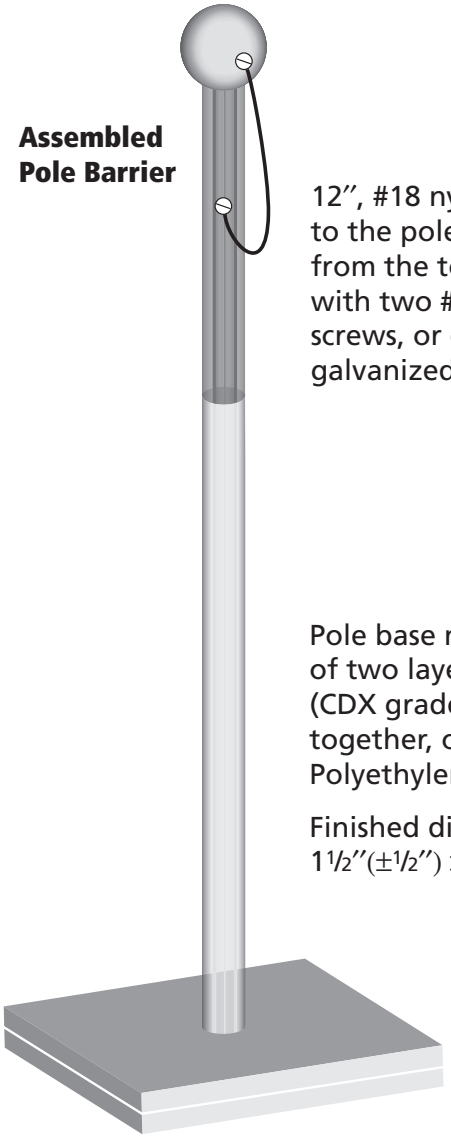
During the test, the string loops must face towards the outside of the corridor to avoid the string being snagged on the Test Weight. Also, if this string option is used, the tops of Test Weights must be covered (i.e. not open) for the same reason.

If the string does become snagged during a test, the Examiner must stop the test, restore the corridor to its original condition, and direct the candidate to restart the task.

CIRCLES. The Start, Stop, Load, and Test Weight Circles are 7 ft. inside diameter, painted 2 in. wide and located per the Test Site Plan. Start Circle shall be placed in line with the centerline of the crane, and due left of the Test Weight Circle.

LEVEL. All parts of the test site must be level within 5% of true level and free of debris, stored materials, surface irregularities, or hazards such as overhead power lines, which could interfere with test maneuvers.

Pole Barrier Construction - Tower Crane

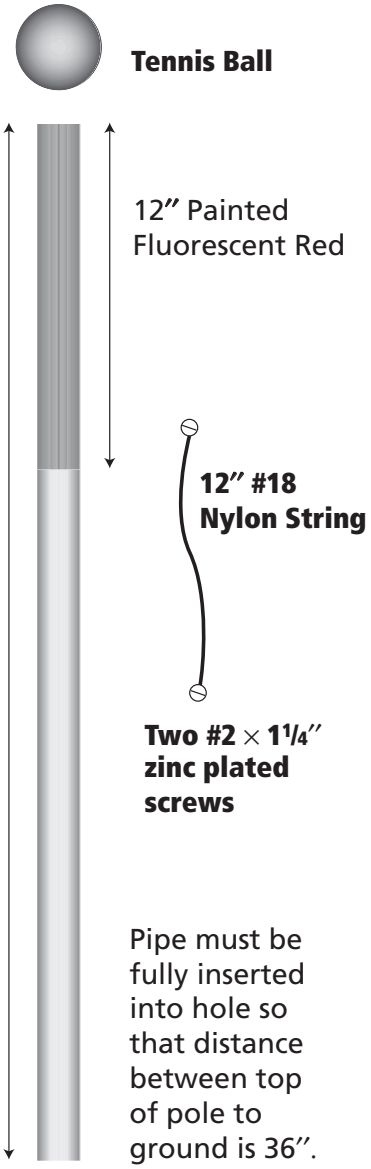


Assembled Pole Barrier

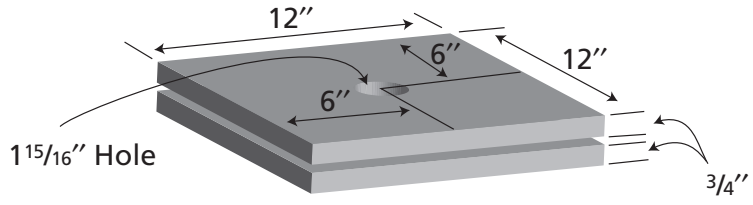
12″, #18 nylon string attached to the pole (between 2″ – 8″ from the top) and tennis ball with two #2 × 1¼″ zinc plated screws, or equivalent galvanized #2 × 1¼″ screws.

Pole base must be made either of two layers of ¾″ plywood (CDX grade or better) glued together, or High Density Polyethylene (HDP).

Finished dimensions must be 1½″(±½″) × 12″ × 12″.



Pipe must be fully inserted into hole so that distance between top of pole to ground is 36″.



Two sheets of ¾″ × 12″ × 12″ plywood
(CDX grade or better)

Test Site Layout Instructions - Tower Crane

Using the CAD drawing and other information provided by CCO, it is the Test Site Coordinator's responsibility to lay out the test site. It is extremely important that all test equipment (corridor poles, Test Weight and Stop Circles, etc.) be placed exactly as indicated on the CAD drawings. Failure to do so could result in the test administration being declared invalid and the need to start over.

Before the Practical Examiner can begin testing, (s)he will verify the site is laid out correctly using the Practical Examination Site Report. We have provided a copy of this form in this Handbook. We strongly encourage all Test Site Coordinators to use this form to verify they have followed the site layout directions correctly.

There are various ways to begin the process of laying out the test site, but we recommend the following procedure:

LAY DOWN GRID LINES

1. The layout of the test site is based around two parallel grid lines; one running through the centerline of the crane; and the second through the middle of the last leg of the Zigzag Corridor (see Sample Test Site Plan). Lay out these grid lines on the ground with string as noted on the Test Site Plan. On the first grid line, make a mark that will indicate the center of the rotation of the crane.

LOCATE STOP CIRCLE

2. Next, using the information from the Data Sheet, determine the location of the center of the Stop Circle, at the intersection of the second grid line and the radius from the crane's center of rotation.

PAINT STOP CIRCLE

3. Using this center point, paint a 7 ft. –4 in. outside diameter Stop Circle with a 2 in. wide line (7 ft. inside diameter) on the ground. The Stop Circle is situated at the entrance to the zigzag corridor closest to the crane.

LAY OUT ZIGZAG CORRIDOR

4. Working back from the Stop Circle, and using the second grid line as a guide, lay out the Zigzag Corridor using the pole barriers, tennis balls, and string line. The width of the corridor and length of the inside and outside legs are as stated on the CAD layout.

LOCATE TEST WEIGHT CIRCLE

5. Locate the center of the Test Weight Circle at the farthest entrance of the Zigzag Corridor as noted on the CAD layout. Using this center point, paint a 7 ft. 4 in. outside diameter circle with a 2 in. wide line (7 ft. inside diameter) on the ground.

LOCATE START CIRCLE

6. Paint a 7 ft. 4 in. outside diameter Start Circle with a 2 in. wide line (7 ft. inside diameter) on the ground on the crane centerline to the left of the Test Weight Circle.

LOCATE LOAD CIRCLE

7. Locate the Load Circle that is 38 ft. from the axis of rotation. Paint a 7 ft. 4 in. outside diameter circle with a 2 in. wide line (7 ft. inside diameter) on the ground. Set the 11 pole bases tangent to the outside of the circle at 2 ft. on-center spacing.

LOCATE DESIGNATED AREA

8. Ensure there is an appropriate area to serve as the Designated Area for Tasks 2 and 3 as illustrated on the CAD Layout.

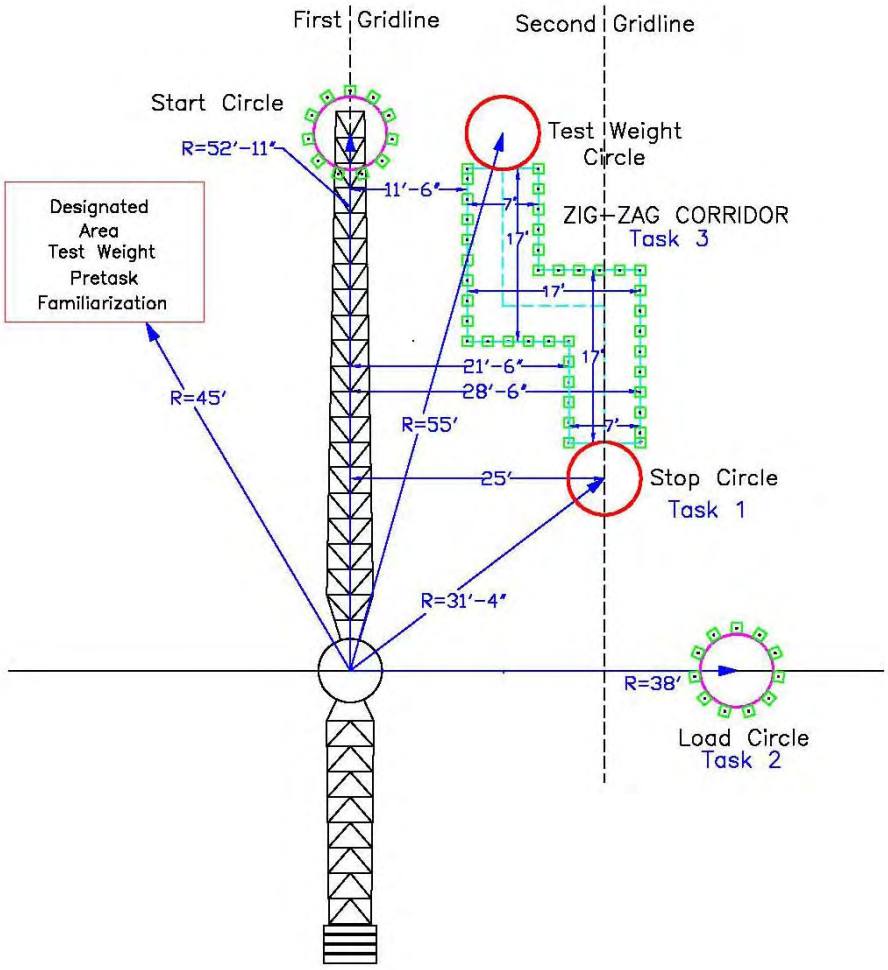
POSITION CRANE

9. Set up the crane on outriggers (if applicable) with the center of rotation of the crane directly above the mark you made on the ground in Step 1. Ensure the boom is over the centerline of the crane and the boom or jib length is as stated on the CAD Layout. The exam tasks will be performed in a roughly 90 degree area.

CHECK FOR OBSTRUCTIONS

10. Ensure there are no obstructions (on the ground or overhead) that could interfere with the safe operation of the crane during the test.

Sample Test Site Plan – Tower Crane



HAMMERHEAD TOWER CAD LAYOUT
WOLF HAMMERHEAD TOWER CRANE
Hook Height= 60ft – 200ft
Hook Radius= 70ft Minimum
S/N XXXXXXXXXXX
Test Weight= 1,500–2,000 lbs, Diameter= 3'

This is a typical sample of a Tower Crane Practical Test Layout. It is not to be used in an actual test situation.

Crane Selection and Set-Up - Tower Crane

CCO PRACTICAL EXAM CATEGORIES

The Practical Exam can be taken on either of the following types of Tower cranes:

- Hammerhead;
- Luffer;
- Self Erector.

CRANE SELECTION. Tower cranes for the CCO Practical Examinations must have:

- minimum manufacturer's capacity rating of 40 meter ton or the Test Weight does not exceed 80% of the maximum capacity at the longest testing radius.
- minimum hook height of 60 ft.
- minimum hook reach of 70 ft.
- lever or joystick controls either console or remote control mounted.

COMPLIANCE. All cranes used on CCO Practical Examinations must be in compliance with federal and state OSHA requirements and the current ASME B30.3 Standard.

RIGGING. Slings used to connect the crane's load hook and the Test Weight must not exceed 4 ft. in length. It must be of a type that can be quickly and easily attached and detached from the crane's load hook.

TEST WEIGHT. The crane's Test Weight includes the weight of any ancillary equipment in place on the Tower Crane and must be between 1,500 and 2,000 lbs.

These weights must be verified by a weight ticket or other type of certification documenting the actual load weight. This document must be available to the Examiner.

The weight must:

— be a cylinder, with the same diameter from top to bottom.

— have a continuously smooth surface from top to bottom.

— have a diameter of 3 ft.

— be no more than 5 ft. high.

See photograph for example of a suitable Test Weight.

Attached to the bottom inside rim at 0, 90, 180, and 270 degrees must be four – 3 ft. lengths of ⅜ in. chain, painted fluorescent orange or red.

Load Hook Chain. A 3 ft. length of 3/8 in. chain, measured from the bottom of the hook, that can be quickly and easily attached and detached, must be painted fluorescent orange or red and be hung from the load hook.

TEST WEIGHT CONSTRUCTION. So long as the requirements for Test Weight design are adhered to, Test Site Coordinators are free to select the most convenient materials and methods available to them. Pipe has a major advantage over other materials in that it has a smooth surface and is perfectly cylindrical, two of the main requirements for CCO Test Weights. Test Site Coordinators can determine how many pick points are used on the Test Weight.

The following charts and diagram are provided for test sites selecting either of these two options.

The *Pipe Weight Thickness Chart* provides weights for given pipe wall thickness and outside diameters.

The *Concrete Weight Chart* contains calculated concrete weights for given diameters of pipe. These values can be used as close approximations depending on overall Test Weight size, and the inside diameter and wall thickness of the pipe or other cylindrical material that is used as a form.

Note that the weight of the bottom and top plates along with any bracing (if used), must be added to the weight of the pipe and concrete when calculating the overall weight of the Test Weight. Also the weight of any attachment devices (rings, hooks, etc.) and wire rope must be included.

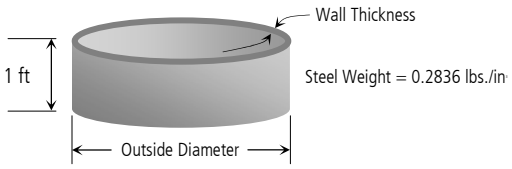
All load supporting components must be assembled in accordance with proper rigging practice and working load limits for hardware utilized.

Any specially fabricated structural components which are part of the load supporting system must be designed and fabricated in accordance with the requirements of the current ASME B30.20 Standard, *Below the Hook Lifting Devices*.

REEVING. The test crane must be reeved with two part line.

SET-UP. The test crane must be set up and leveled ready for operation, with engine running, in accordance with the manufacturer's recommendations, and in the location specified on the CCO CAD drawing.

PIPE DIAGRAM



PIPE WEIGHT THICKNESS CHART (WEIGHT FOR 1 LINEAR FOOT OF PIPE)

OUTSIDE DIAMETER	PIPE WALL THICKNESS 1/4"	3/8"	1/2"	3/4"
2'0"	63 lbs.	95 lbs.	126 lbs.	186 lbs.
2'6"	80 lbs.	119 lbs.	158 lbs.	235 lbs.
3'0"	96 lbs.	143 lbs.	190 lbs.	283 lbs.
3'6"	112 lbs.	167 lbs.	222 lbs.	331 lbs.
4'0"	128 lbs.	191 lbs.	254 lbs.	379 lbs.

For lengths longer than 1', multiply the weight given in t he table times the pipe length in feet.

Example:
4' diameter x ¾" wall thickness pipe, 4'6" high
Pipe weight = 379 lbs. x 41/2' high = 1,706 lbs.

CONCRETE WEIGHT CHART

DIAMETER	CONCRETE HEIGHT IN TEST WEIGHT 2'0"	2'6""	3'0"	3'6"	4'0"	4'6"	5'0"
2'0"	942 lbs.	1,178 lbs.	1,413 lbs.	1,649 lbs.	1,885 lbs.	2,120 lbs.	2,356 lbs.
2'6"	1,472 lbs.	1,840 lbs.	2,209 lbs.	2,577 lbs.	2,945 lbs.	3,313 lbs.	3,681 lbs.
3'0"	2,120 lbs.	2,650 lbs.	3,180 lbs.	3,711 lbs.	4,241 lbs.	4,771 lbs.	5,301 lbs.
3'6"	2,886 lbs.	3,607 lbs.	4,329 lbs.	5,051 lbs.	5,772 lbs.	6,494 lbs.	7,218 lbs.
4'0"	3,768 lbs.	4,710 lbs.	5,652 lbs.	6,594 lbs.	7,536 lbs.	8,478 lbs.	9,420 lbs.

Concrete weights were calculated by using 4050 lbs./yd^3 or 150 lbs./ft^3 of concrete.

BLOCKING. Matting or cribbing (Self Erector) must be installed if necessary to provide a sound foundation for the crane. A spirit level (minimum length 2 ft.) must be available for the candidates to verify the crane level condition prior to beginning their testing.

LOAD INDICATORS. If the crane is equipped with a load indicator or load moment indicating (LMI) system, the system must be programmed for the proper load ratings, parts of line, etc. prior to the beginning of any testing. A representative of the test host, who is familiar with the operation of the crane and specifically with any LMI system on the crane, must be available while testing is being conducted.

Photographs – Tower Crane

MARKING EQUIPMENT

All test site and crane equipment must be clearly marked in accordance with CCO requirements (see documents *Test Site Set-Up* and *Crane Selection and Set-Up*)

TEST WEIGHT

One example of a suitable Test Weight is this 36 in. diameter pipe, cut to a length so that, when filled with concrete, it falls within acceptable weight limits.

Any specially fabricated structural components that are part of the load-supporting system must be designed and fabricated in accordance with the requirements of the current ASME B30.20 Standard, *Below the Hook Lifting Devices*.

Load Hook

Corridor Pole

Photographs (Cont'd) - Tower Crane

MEASURING THE CORRIDOR AND CIRCLES

All elements of the test site must be laid out in accordance with the *Test Site Layout Instructions, Data Sheet* and *Test Site Plan*. The Test Site Coordinator is responsible for carefully checking the dimensions prior to the arrival of the Practical Examiner.

Examiners verifying corridor length

Examiners verifying diameter of the Stop Circle.

Ready Reference Checklist - Tower Crane

YOU WILL NEED A TOWER CRANE OF THE FOLLOWING TYPES:

- ☐ Hammerhead
- ☐ Luffer
- ☐ Self Erecting

YOU WILL NEED THE FOLLOWING FOR EACH CRANE TO BE TESTED ON:

- ☐ A cylindrical test weight, diameter 3 ft. (114 in. in circumference), weight (including rigging) must be between 1,500 – 2,000 lbs.
- ☐ One (1) 3 ft. length of 3/8 in. chain, measured from the bottom of the hook, that can be quickly and easily attached and detached, must be painted fluorescent orange or red and be hung from the load hook.
- ☐ Four (4) lengths of ⅜ in. chain, painted fluorescent orange or red, that are easily detachable and measure 3 ft. long when attached to the bottom inside edge of the test weight.
- ☐ Suitable rigging to attach the test weight to the hook, no more than 4 ft. long.
- ☐ PVC pipe, white, 1½ in, SHD. 40, sufficient to make sixty-four (64), 36 in. long poles.
- ☐ ¾ in. CDX grade (or better) plywood or high density polyethylene, sufficient to create sixty-four (64) pole bases, 1½" (± ½") x 12" x 12".
- ☐ Sixty-four (64) tennis balls.
- ☐ Forty-two feet of #18 nylon string, to attach tennis balls to poles (optional).
- ☐ 120 1¼ in. zinc plated (galvanized) screws, or equivalent, to secure nylon string to tennis balls and poles (optional).
- ☐ 500 ft. brightly colored, string line (for Zigzag Corridor and test site layout use).
- ☐ Spirit level to verify level (minimum 2 ft. length for Self Erecting Crane only).
- ☐ Paint (fluorescent orange or red) for painting the tops of the poles and chain.
- ☐ Paint (white) for marking circles.
- ☐ Hand-held wind speed indicator (anemometer).
- ☐ Two (2) 100 ft. tape measures and one 30 ft. steel tape.
- ☐ Stop watches and clipboards for Examiner(s) and Proctor(s).

EQUIPMENT SOURCES.
Anemometers: West Marine, PO Box 50070, Watsonville, CA 95077. 1-800-262-8464. www.westmarine.com.
HDPE bases: House of Plastics, 2580 S. Orange Blossom Trail, Orlando, FL 32805. 1-888-707-5278. plastics@hopu.com.
CCO does not endorse or recommend particular vendors of any equipment.

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TEST SITE APPLICATION & DATA SHEET

PRACTICAL EXAMINATION – TOWER CRANE

Please type or print neatly.

NAME | TEST SITE #

HOST COMPANY

HOST COMPANY MAILING ADDRESS

CITY | STATE | ZIP

HOST PHONE | HOST FAX | HOST E-MAIL

TEST SITE ADDRESSS (physical address of where the crane will be set up, no PO Box's)

CITY | STATE | ZIP

CHECK BOXES AS APPROPRIATE

☐ **New Test Site** ☐ **Existing Test Site** ☐ **$50 Site Fee for 2007 already paid** ☐ **$50 Site Fee for 2007 enclosed**

TEST SITE COORDINATOR NAME | PHONE | E-MAIL

PRACTICAL EXAMINER NAME | ACCREDITATION #

DATES(S) OF TEST

The Practical Examination Test Site Coordinator assumes total responsibility for the following items:

1. **Selection of cranes and verification that at all times during the testing process the cranes are in compliance with federal and state OSHA requirements and the current ASME B30 standard.**
2. **Verification that candidate's application for the practical test is complete.**
3. **Verification that candidate is physically and mentally capable of safe operation the day of test.**
4. **Personal injury and / or property damage resulting from or caused in anyway by the act of participation in the CCO Practical Examination.**

HOST COMPANY NAME

HOST COMPANY REPRESENTATIVE

TEST SITE COORDINATOR SIGNATURE | DATE

METHOD OF PAYMENT FOR TEST SITE APPLICATION FEES

Do not send cash.

☐ VISA ☐ MasterCard ☐ Personal Check Enclosed ☐ Employer Check Enclosed ☐ Money Order Enclosed ***Do not staple your check.***

If paying by credit card complete the following information

CREDIT CARD NUMBER | EXPIRATION DATE

NAME (Print as it appears on card) | SIGNATURE (on card) | SECURITY CODE*

Checks and money orders should be made payable to: **NCCCO** *** Three digit security code located on the back of the card in the signature panel.**

Please send Application and payments to:

National Commission for the Certification of Crane Operators
Western Regional Office
57 West 200 South, Suite 404, Salt Lake City, Utah 84101
Fax: 801-363-3806

TEST SITE APPLICATION & DATA SHEET (CONT'D)

PRACTICAL EXAMINATION – TOWER CRANE

INSTRUCTIONS FOR COMPLETING THIS DATA SHEET

Photocopy this form for use with every crane you plan to test on.

Please ensure to include the Tower Crane capacity charts for each test crane in its proposed configuration. CCO CANNOT PROCESS THIS APPLICATION WITHOUT ALL THIS INFORMATION.

SECTION A *Complete as fully as possible, including your desired test date if known.*

HOST COMPANY NAME	TEST SITE #	
TEST SITE ADDRESS	APPLICATION DATE	DATE OF TEST
CITY	STATE	ZIP

SECTION B — CRANE TYPE: *Check the box's next to the type of the crane and control system you plan to test on.*

☐ Hammerhead ☐ Self Erecting ☐ Luffer ☐ Cab Operated ☐ Remote Control

Self Erecting Tower Cranes when used for Practical Exams must have lever or joystick controls either console or remote control mounted. Manufacturer's documentation for capacity rating, hook height, and hook reach must be submitted for all cranes.

SECTION C: *Provide data for items 1 thru 8 using the crane's load chart.*

1. Make / Model:	2. Serial Number:	3. Rated Capacity (40 meter ton Min.):

4. Configuration of crane *(counterweight, rope size and type, ancillary equipment etc.)*

Answer items 5 thru 8.

5. Load Hook Height (60 ft. min. required)_____

6. Minimum Capacity at 70 ft. Radius _____

7. Minimum Jib Length (70 ft. min. is required) _____

8. Jib Type ☐ Fixed ☐ Folding ☐ Telescoping

The following are the Tower Crane Test Weight Specifications.

9. Test Weight Range between: 1,500 lbs. to 2,000 lbs.

10. Test Weight Height: _____ ft. *(No taller than 5 ft.)*

11. Test Weight Diameter: 3 ft.

SITE REPORT
PRACTICAL EXAMINATION — TOWER CRANE

CCO has established specific conditions and guidelines that each Practical Examination Test Site must adhere to. This Site Report is designed to ensure these conditions are met. The Examiner is required to perform a site inspection prior to the start of the first examination and complete the Site Report form. The Examiner must arrive at the test site in sufficient time to verify, by measuring with a tape, the accuracy of the course layout with respect to the CCO Test Site Plan. The Examiner must also conduct a visual inspection of the crane for proper set-up prior to testing any applicant. This site report must be presented on demand to any Practical Test Auditor.

Please type or print neatly.

TEST SITE	DATE

NAME OF TEST SITE COORDINATOR

Check the following items for compliance.

PRE-TEST CANDIDATE BRIEFING AREA

An indoor facility suitable for the Pre-Test Briefing of exam candidates, to include:

- ☐ Sufficient tables and chairs to seat candidates for the Pre-Test Briefing.
- ☐ Equipped with a VCR or DVD and television or computer for candidates to watch the CCO Practical Exam video.
- ☐ Located so that waiting candidates are unable to observe other candidates being tested.

Candidate Materials Available:

- ☐ A written description of the examination (Candidate Handbook).
- ☐ A plan view of the Test Site Layout.
- ☐ Operators Manuals and Load Charts for all cranes to be tested on, at least one extra copy of those pages of the Operator's Manual dealing with operating instructions.
- ☐ One (1) copy of the complete Operator's Manual.
- ☐ Instructions for the LMI system, if the crane is so equipped.

This section is to be completed for each crane used during the testing session.

Make/Model of Crane:	Serial Number of Crane:

TEST SITE SET-UP

- ☐ Entire course is level within 5% of true level.
- ☐ Zigzag Corridor has no more than a 6 in. maximum change in elevation.
- ☐ Free of debris, stored materials, surface irregularities, or hazards such as overhead power lines, which could interfere with test maneuvers.

Using the Test Site Plan, verify the following measurements:

- ☐ Distance from the center of rotation of the crane to the center of the Stop Circle.
- ☐ Distance from the center of rotation of the crane to the center of the Test Weight Circle.
- ☐ Distance from the center of rotation of the crane to the center of the Start Circle.
- ☐ Distance from the center of rotation of the crane to the center of the Load Circle.
- ☐ Distance from the centerline of the crane to the second leg of the Zigzag Corridor.
- ☐ Distance from the centerline of the crane to the first leg of the Zigzag Corridor.

SITE REPORT (CONT'D)

Test Site #: _____

PRACTICAL EXAMINATION – TOWER CRANE

- ☐ Length of the two long sides of the Zigzag Corridor.
- ☐ Length of the four short sides of the Zigzag Corridor.
- ☐ Width of the Zigzag Corridor.
- ☐ Poles placed at 2 ft. centers.

Poles

- ☐ Made of 1½ in. white PVC pipe, SHD. 40, 36 in. long.
- ☐ Top 12 in. painted fluorescent orange or red.
- ☐ Mounted to a platform made of two layers of ¾ in. CDX grade (or better) plywood, or high density polyethylene, cut 12 in. square.
- ☐ A taut, longitudinal string line placed on the ground through the centerline of each pole base.
- ☐ Spare poles and bases available.

Circles

- ☐ Start Circle is 7 ft. inside diameter, painted 2 in. wide and located per the Test Site Plan.
- ☐ Start Circle is in line with the centerline of the crane and due left of the Test Weight Circle.
- ☐ Stop Circle is 7 ft. inside diameter, painted 2 in. wide and located per the Test Site Plan.
- ☐ Test Weight Circle is 7 ft. inside diameter, painted 2 in. wide and located per the Test Site Plan.

CRANE SELECTION AND SET-UP

- ☐ Crane as identified in the Test Site Plan.

Test Crane

- ☐ Set up and leveled, in the location specified, ready for operation, with engine running, in accordance with the manufacturer's recommendations.
- ☐ Jib length is as stated on Test Site Plan.
- ☐ Rigging between the load hook and the Test Weight does not exceed 4 ft. in length.

Load Hook

- ☐ Minimum height as indicated on Test Site Plan.
- ☐ A length of 3/8 in. chain that can be quickly and easily attached and detached from hook:
  - ☐ Chain is painted fluorescent orange or red.
  - ☐ Chain is attached to bottom center of Load Hook.
  - ☐ Chain measures 36 in. from bottom of hook.

Test Weight

- ☐ Weight as indicated in Test Site Plan.
- ☐ Verified by a weight ticket or other type of certification documenting the actual load weight and made available to the Examiner.
- ☐ Cylindrical in shape.
- ☐ The diameter of the Test Weight is 3 ft. in diameter(114 in. circumference).
- ☐ Height is no more than 1-1/2 times its diameter and in any case does not exceed 5 ft. in height.
  NOTE: In order to measure the chain length, attach the Test Weight to the crane hook. Raise the Test Weight until the chain barely touches the ground and measure from the lowest edge of Test Weight to ground.
- ☐ Chain is painted fluorescent orange or red.
- ☐ Four 36 in. lengths of 3/8 in. chain, removable and attached on the inside bottom rim at 0, 90, 180, and 270 degrees.

SITE REPORT (CONT'D)

Test Site #: _____

PRACTICAL EXAMINATION – TOWER CRANE

Blocking

- ☐ Matting or cribbing installed, as necessary, to provide a sound foundation for the crane.
- ☐ A spirit level is available (for the candidates to verify the crane level condition prior to beginning their testing).

Load Indicators

- ☐ If the crane is equipped with a load indicator or load moment indicating (LMI) system, the system must be programmed for the proper load ratings, parts of line, etc. prior to the beginning of any testing. A representative of the test host organization who is familiar with the operation of the crane, and specifically with any LMI system on the crane, must be available near the test area during the times testing is being conducted.

Test Weight Rigging

- ☐ All load supporting components must be assembled in accordance with proper rigging practice and working load limits for the hardware utilized. Any specially fabricated structural components which are part of the load supporting system must be designed and fabricated in accordance with the requirements of the current ASME B30.20 Standard, Below the Hook Lifting Devices.

Test Course Set-Up

- ☐ The Practical Examiner whose signature appears at the end of this Test Site Report attests that he/she has set up the course. *(Check only if the Practical Examiner has set up the test course.)*

DEVIATIONS FROM STANDARD TEST CONDITIONS OR TEST SITE PARAMETERS.

Describe fully any deviations from the approved *Test Site Set-Up* and *Crane Selection and Set-Up*

SITE REPORT (CONT'D)

Test Site #: _____

PRACTICAL EXAMINATION – TOWER CRANE

TEST SITE REPORT WAIVER

Under the modified reporting provisions for permanent practical test sites, the requirement for a Site Report prior to each test is waived. This option is available only to test sites where there has been no change in test crane, test site/location and Test Site Coordinator in the last six months. If it has been more than six months since the last full Site Report was submitted, another full Site Report must be conducted. If the Test Site Coordinator requests a Test Site Report Waiver, the Examiner must have the Test Site Coordinator read the following attestation, and sign below:

TEST SITE COORDINATOR ATTESTATION

I attest that there have been no changes to the test crane or test site/location since the last site report was conducted (if this was more than six months ago, a full Site Report must be conducted). I further attest that I was the Test Site Coordinator at this site when the last site report was conducted, and have continued to act in this capacity since that time.

SIGNATURE OF TEST SITE COORDINATOR	DATE
PRINTED NAME OF TEST SITE COORDINATOR	DATE LAST SITE REPORT CONDUCTED

I attest that this is a true and accurate report of the above named Test Site.

SIGNATURE OF EXAMINER	DATE
PRINTED NAME OF EXAMINER	EXAMINER ACCREDITATION NUMBER

This SITE REPORT is to be completed by the Examiner prior to each testing session and sent with candidate score sheets to:

International Assessment Institute — Attention: CCO Testing
600 Cleveland Street, Suite 900
Clearwater, Florida 33755

Phone: 727-449-8525
Fax: 727-461-2746

OVERHEAD CRANE PROGRAM

Test Site Set-Up

Pole Barrier Construction

Test Site Layout Instructions

Sample Test Site Plan

Crane Selection and Set-up

Photographs

Ready Reference Checklist

Test Site Application and Data Sheet

Site Report - Practical Exam

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Test Site Set-Up - Overhead Crane

PRE-TEST CANDIDATE BRIEFING AREA must be located so that waiting candidates are unable to observe testing procedures. It must be provided with:

- CCO candidate instruction materials, including a written description of the examination and copies of the CAD Test Site Layout.
- Operators Manuals for all cranes to be tested on: at least four (4) copies of those pages of the Operator's Manual dealing with operating instructions and one (1) copy of the complete Operator's Manual.
- A VCR or DVD and television for candidates to watch the CCO Practical Exam video.
- An indoor facility suitable for the Pre-Test Briefing of exam candidates, to include:
  - Sufficient tables and chairs to seat candidates for the Pre-Test Briefing.
  - Head table or podium at the front of the room.
  - Registration table.
  - Quiet, well-lit, surroundings with a comfortable temperature.
  - Easy access to unlocked rest rooms stocked with sufficient supplies.
  - Easy access to a water fountain.
  - Large signs prominently posted making candidates aware of the location of the test.

RIGHT ANGLE CORRIDOR is composed of a PVC pole barrier with one tennis ball placed on top of each pole and two PVC horizontal pole obstructions.

POLE is made of 1½ in. SHD. 40 white PVC pipe, 36 in. long, painted fluorescent orange or red on the top 12 in. (see illustration). The poles must be mounted to a pole base made of two ¾ in. CDX grade (or better) plywood, glued together, cut 12 in. long with ends cut square.

As an alternative to plywood, High Density Polyethylene (HDPE), or equivalent, maybe used to construct the pole bases. This material must meet the following requirements:

- weight: 5 lbs. (±10%).
- dimensions: 12" ×12" ×1½" (±½" thick).

The weight must be spread evenly across the base.

Pole bases may be coated with a protective finish if desired, so long as they continue to meet the stated design and construction parameters.

Pole bases must be placed at 2 ft. centers. A taut, brightly colored, longitudinal string line must be placed on the ground through the centerline of each pole base.

To assist the Examiner and Proctor in restoring the Right Angle Corridor between tasks, the tennis balls may be attached to the PVC pole by means of a 12 in. long, #18 nylon string. The string must be attached between 2 – 8 in. from the top of the pole, and to the tennis ball, using two #2 ×1¼ in. sheet metal screws, or equivalent (see *Pole Barrier Construction Diagram*).

During the test, the string loops must face towards the outside of the corridor to avoid the string being snagged on the Test Weight. Also, if this string option is used, the tops of Test Weights must be covered (i.e. not open) for the same reason.

If the string does become snagged during a test, the Examiner must stop the test, restore the corridor to its original condition, and direct the candidate to restart the task.

CIRCLES. The Test Weight Circle has a 42 in. outside diameter circle and a 48 in. outside diameter circle. Circle #1 has a 42 in. outside diameter circle. All circles have 2 in. wide painted lines.

CHAIN AND RING ASSEMBLY

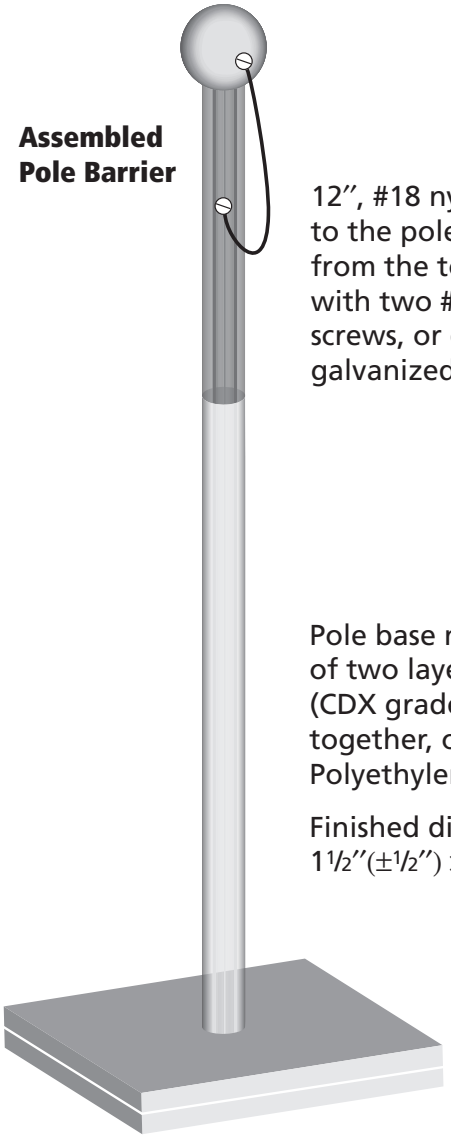
The Chain assembly consists of ½ in. chain segments coupled together with ⅜ in. Master Links with a 4 in. ring at one end and one oblong ring to fit over the Load Hook.

The Pin assembly consists of a 6" x 6" angle iron or equivalent with a 6 in. long ½ in. diameter round stock, welded at a 45˚ angle *(see course, Pin and Chain Assembly drawing).*

LEVEL. All parts of the test site must be level within 5% of true level and free of debris, stored materials, surface irregularities, or other hazards. Which could interfere with test maneuvers.

Pole Barrier Construction - Overhead Crane

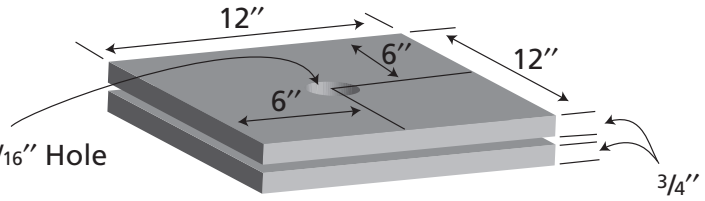
Assembled Pole Barrier



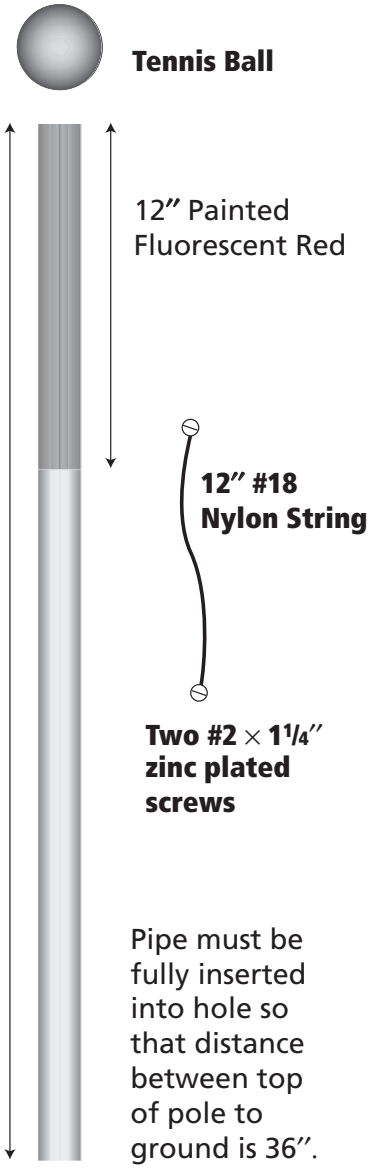
12″, #18 nylon string attached to the pole (between 2″ – 8″ from the top) and tennis ball with two #2 × 1¼″ zinc plated screws, or equivalent galvanized #2 × 1¼″ screws.

Pole base must be made either of two layers of ¾″ plywood (CDX grade or better) glued together, or High Density Polyethylene (HDP).

Finished dimensions must be 1½″(±½″) × 12″ × 12″.



Two sheets of ¾″ × 12″ × 12″ plywood
(CDX grade or better)



Pipe must be fully inserted into hole so that distance between top of pole to ground is 36″.

Test Site Layout Instructions – Overhead Crane

Using the CAD drawing and other information provided by CCO, it is the Test Site Coordinator's responsibility to lay out the test site. It is extremely important that all test equipment (Corridor Poles, Test Weight, Chain and Ring Assembly, Circles, and Obstructions, etc.) be placed exactly as indicated on the CAD layouts. Failure to do so could result in the test administration being declared invalid and the need to start over.

Before the Practical Examiner can begin testing, (s)he will verify the site is laid out correctly using the Practical Examination Site Report. We have provided a copy of this form in this Handbook. We strongly encourage all Test Site Coordinators to use this form to verify they have followed the site layout directions correctly.

There are various ways to begin the process of laying out the test site, but we recommend the following procedure:

LAY DOWN GRID LINES

1. The layout of the test site is based around two parallel gridlines; one running through the center of the Circle #1; and the second running through the center of the Test Weight Circle (see Sample Test Site Plan). Lay out these grid lines on the ground with string as noted on the CAD layout.

LOCATE TEST WEIGHT CIRCLE

2. On the left end of the first gridline, make a mark that will indicate the center of the Test Weight Circle.

PAINT TEST WEIGHT CIRCLE

3. Using this center point, paint on the ground/floor a 2 in. wide, 48 in. outside diameter Test Weight Circle and a 2 in. wide inner 42 in. outside diameter circle. The Test Weight Circle is situated at the lower entrance to the Right Angle Corridor. Lay out PVC poles and bases at 2 ft. centers around and tangent to the outer 48 in. circle.

LAY OUT RIGHT ANGLE CORRIDOR

4. Working back from the Test Weight Circle, and using the first gridline as a guide, lay out the Right Angle Corridor using the pole barriers, tennis balls, and string lines. Width of the corridor and length of the corridor legs are as stated on the CAD layout.

LOCATE CIRCLE #1

5. Locate the center of Circle #1 at the farthest entrance of the Right Angle Corridor as noted on the CAD layout. Using this center point, paint a 2 in. wide, 42 in. outside diameter circle on the ground.

LAY OUT OBSTRUCTION LINES

6. Paint or tape a line 4 ft. before and after the 1st obstruction and a line 4 ft. before the 2nd obstruction.

PLACE OBSTRUCTIONS

7. Notch the designated PVC poles (per the CAD layout) that hold the pole obstructions. Place a 1½ in. PVC pole horizontally on the designated pole bases.

LAY OUT TROLLEY LAYDOWN

8. Locate a 9 ft., 1 in. painted/taped line running perpendicular to the grid lines (per the CAD layout). Lay down the 10' x 27" (approximately) carpet runner so that it is centered the long way on the 1 in. line.

PLACE SQUARE TARGETS

9. Place center of targets according to the Course, Pin, and Chain Assembly layout.

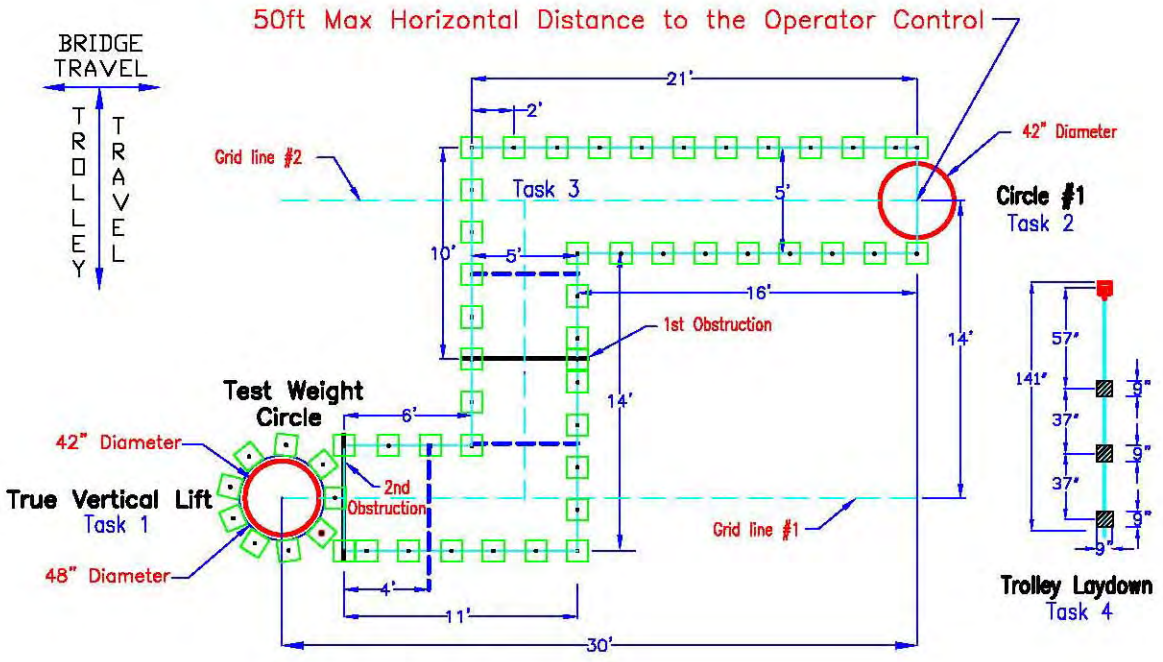
PLACE PIN ASSEMBLY

10. Place and align Pin Assembly at the beginning of the 1 in. line per the Course, Pin, and Chain Assembly layout.

CHECK FOR OBSTRUCTIONS

11. Ensure there are no obstructions (on the ground or overhead) that could interfere with the safe operation of the crane during the test.

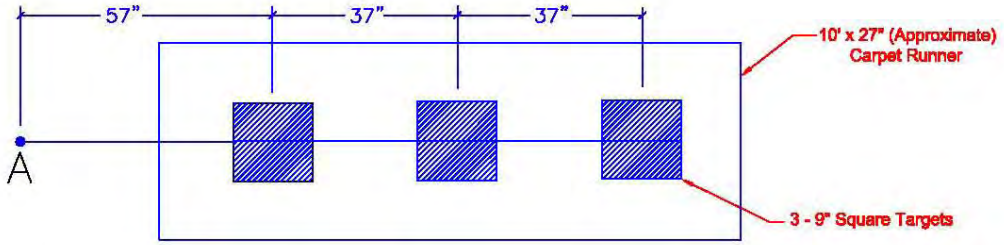
Sample Test Site Plan



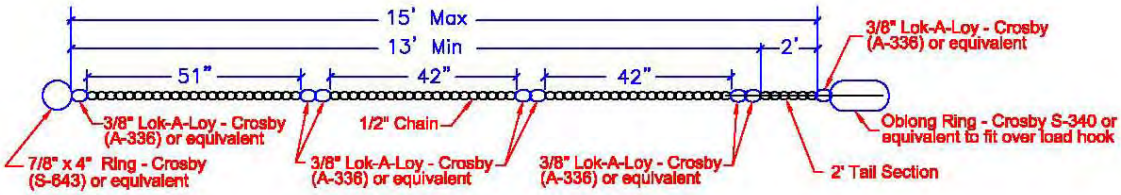
SAMPLE OVERHEAD CRANE CAD LAYOUT
Bridge Span= 25ft Minimum
Crane Lift=13'Min–15'Max
S/N XXXXXXXXX
Test Weight= 1,500–2,000 lbs, Diameter= 3'

This a typical sample of an Overhead Crane Practical Test Layout. It is not to be used in an actual test situation.

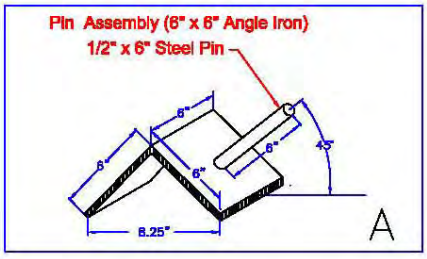
Sample Course, Pin, and Chain Assembly



Task # 4 Course Layout



Chain and Ring Assembly - 13' -15'



Crane Selection and Set-Up - Overhead Crane

CCO PRACTICAL EXAM CATEGORIES

The Practical Exam can be taken on the following types of Overhead cranes:

- Cab Operated;
- Pendant/Remote Control.

CRANE SELECTION. The Overhead Crane Exam can be taken on either a Cab or Pendant/Remote Control crane.

COMPLIANCE. All cranes used on CCO Practical Examinations must be in compliance with federal and state OSHA requirements and the current ASME B30.2 Standard.

RIGGING. Slings used to connect the crane's load hook and the Test Weight must not exceed 3 ft. in length. They must be of a type that can be quickly and easily attached and detached from the crane's load hook.

TEST WEIGHT. The weight of the crane's Test Weight must be between 1,500 and 2,000 lbs. and be 3 ft. in diameter.

The weight must be verified by a weight ticket or other type of certification documenting the actual load weight. This document must be available to the Examiner.

The weight must:

- — be a cylinder, with the same diameter from top to bottom.
- — have a continuously smooth surface from top to bottom.
- — have a diameter of 3 ft. (113 in. in circumference).
- — be no more than 5 ft. high.

See photograph for example of a suitable Test Weight.

Attached to the bottom center of the Test Weight must be a 36 in. length of ⅜ in. chain, painted fluorescent orange or red.

TEST WEIGHT CONSTRUCTION. So long as the requirements for Test Weight design are adhered to, Test Site Coordinators are free to select the most convenient materials and methods available to them. Pipe has a major advantage over other materials in that it has a smooth surface and is perfectly cylindrical, two of the main requirements for CCO Test Weights. Test Site Coordinators can determine how many pick points are used on the Test Weight.

The following charts and diagram are provided for test sites selecting either of these two options.

The *Pipe Weight Thickness Chart* provides weights for given pipe wall thickness and outside diameters.

The *Concrete Weight Chart* contains calculated concrete weights for given diameters of pipe. These values can be used as close approximations depending on overall Test Weight size, and the inside diameter and wall thickness of the pipe or other cylindrical material that is used as a form.

Note that the weight of the bottom and top plates along with any bracing (if used), must be added to the weight of the pipe and concrete when calculating the overall weight of the Test Weight.

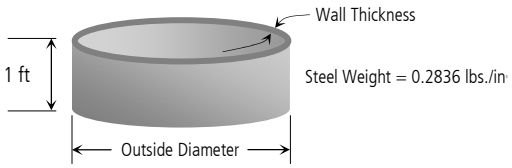
All load supporting components must be assembled in accordance with proper rigging practice and working load limits for hardware utilized.

Any specially fabricated structural components which are part of the load supporting system must be designed and fabricated in accordance with the requirements of the current ASME B30.2 Standard, *Below the Hook Lifting Devices*.

REEVING. The test crane must be reeved with a minimum two part line.

SET-UP. The test crane must be set up and leveled ready for operation in accordance with the manufacturer's recommendations, and in the location specified on the CCO CAD drawing.

PIPE DIAGRAM



PIPE WEIGHT THICKNESS CHART (WEIGHT FOR 1 LINEAR FOOT OF PIPE)

OUTSIDE DIAMETER	PIPE WALL THICKNESS 1/4"	3/8"	1/2"	3/4"
2'0"	63 lbs.	95 lbs.	126 lbs.	186 lbs.
2'6"	80 lbs.	119 lbs.	158 lbs.	235 lbs.
3'0"	96 lbs.	143 lbs.	190 lbs.	283 lbs.
3'6"	112 lbs.	167 lbs.	222 lbs.	331 lbs.
4'0"	128 lbs.	191 lbs.	254 lbs.	379 lbs.

For lengths longer than 1', multiply the weight given in t he table times the pipe length in feet.

Example:

4' diameter x ¾" wall thickness pipe, 4'6" high
Pipe weight = 379 lbs. x 4 ½' high = 1,706 lbs.

CONCRETE WEIGHT CHART

DIAMETER	CONCRETE HEIGHT IN TEST WEIGHT 2'0"	2'6""	3'0"	3'6"	4'0"	4'6"	5'0"
2'0"	942 lbs.	1,178 lbs.	1,413 lbs.	1,649 lbs.	1,885 lbs.	2,120 lbs.	2,356 lbs.
2'6"	1,472 lbs.	1,840 lbs.	2,209 lbs.	2,577 lbs.	2,945 lbs.	3,313 lbs.	3,681 lbs.
3'0"	2,120 lbs.	2,650 lbs.	3,180 lbs.	3,711 lbs.	4,241 lbs.	4,771 lbs.	5,301 lbs.
3'6"	2,886 lbs.	3,607 lbs.	4,329 lbs.	5,051 lbs.	5,772 lbs.	6,494 lbs.	7,218 lbs.
4'0"	3,768 lbs.	4,710 lbs.	5,652 lbs.	6,594 lbs.	7,536 lbs.	8,478 lbs.	9,420 lbs.

Concrete weights were calculated by using 4050 lbs./yd^3 or 150 lbs./ft^3 of concrete.

Photographs – Overhead Crane

MARKING EQUIPMENT

All test site and crane equipment must be clearly marked in accordance with CCO requirements (see documents *Test Site Set-Up* and *Crane Selection and Set-Up*)

Load Hook

TEST WEIGHT

One example of a suitable Test Weight is this 36 in. diameter pipe, cut to a length so that, when filled with concrete, it falls within acceptable weight limits.

Any specially fabricated structural components that are part of the load-supporting system must be designed and fabricated in accordance with the requirements of the current ASME B30.20 standard, *Below the Hook Lifting Devices*.

Corridor Pole

Photographs (Cont'd) – Overhead Crane

MEASURING THE CORRIDOR AND CIRCLES

All elements of the test site must be laid out in accordance with the *Test Site Layout Instructions, Data Sheet* and *Test Site Plan*. The Test Site Coordinator is responsible for carefully checking the dimensions prior to the arrival of the Practical Examiner.

Examiners verifying corridor

Ready Reference Checklist - Overhead Crane

YOU WILL NEED A CRANE THAT MEETS THE CCO PRACTICAL EXAMINATION CATEGORY YOU PLAN TO TEST IN:

- ☐ Overhead Crane (Powered Functions for Hoist, Bridge, and Trolley).

YOU WILL NEED THE FOLLOWING FOR EACH CRANE TO BE TESTED ON:

- ☐ A cylindrical Test Weight, diameter 3 ft. (113 in. in circumference), weight (including rigging) to be within the range of 1,500 to 2,000 lbs.
- ☐ One length of ⅜ in. chain, painted fluorescent orange or red, that measure 3 ft. long when attached to the bottom center of the Test Weight.
- ☐ Suitable rigging to attach the Test Weight to the hook, no more than 3 ft. long.
- ☐ PVC pipe, white, 1 ½ in., SHD. 40, sufficient to make fifty-four (54), 36 in. long poles.
- ☐ ¾ in. CDX grade (or better) plywood or high density polyethylene, sufficient to create fifty-four (54) pole bases, 1 ½" (± ½") x 12" x 12".
- ☐ Fifty-four (54) tennis balls.
- ☐ Fifty-four feet of #18 nylon string, to attach tennis balls to poles (optional).
- ☐ One hundred eight (108) 1 ¼ in. zinc plated (galvanized) screws, or equivalent, to secure nylon string to tennis balls and poles (optional).
- ☐ Two horizontal poles painted red or orange 12 in. on ends and 12 in. in the middle.
- ☐ 500 ft. brightly colored, string line (for Right Angle Corridor and CAD layout use).
- ☐ Paint (fluorescent orange or red) for painting the tops of the poles and chain.
- ☐ Paint (white) for marking circles.
- ☐ Hand-held wind speed indicator (anemometer) for outside testing only.
- ☐ One (1) 100 ft. tape measure and one 30 ft. steel tape (carpenters).
- ☐ Stop watches and clipboards for Examiner(s) and Proctor(s).

EQUIPMENT SOURCES.
Anemometers: West Marine, PO Box 50070, Watsonville, CA 95077. 1-800-262-8464. www.westmarine.com.
HDPE bases: House of Plastics, 2580 S. Orange Blossom Trail, Orlando, FL 32805. 1-888-707-5278. plastics@hopu.com.
CCO does not endorse or recommend particular vendors of any equipment.

TEST SITE APPLICATION & DATA SHEET

PRACTICAL EXAMINATION – OVERHEAD CRANE

Please type or print neatly.

NAME | TEST SITE #

HOST COMPANY

HOST COMPANY MAILING ADDRESS

CITY | STATE | ZIP

HOST PHONE | HOST FAX | HOST E-MAIL

TEST SITE ADDRESSS (physical address of where the crane will be set up, no PO Box's)

CITY | STATE | ZIP

CHECK BOXES AS APPROPRIATE

☐ **New Test Site** ☐ **Existing Test Site** ☐ **$50 Site Fee for 2007 already paid** ☐ **$50 Site Fee for 2007 enclosed**

TEST SITE COORDINATOR NAME | PHONE | E-MAIL

PRACTICAL EXAMINER NAME | ACCREDITATION #

DATES(S) OF TEST

The Practical Examination Test Site Coordinator assumes total responsibility for the following items:

1. **Selection of cranes and verification that at all times during the testing process the cranes are in compliance with federal and state OSHA requirements and the current ASME B30 standard.**
2. **Verification that candidate's application for the practical test is complete.**
3. **Verification that candidate is physically and mentally capable of safe operation on the day of test.**
4. **Personal injury and / or property damage resulting from or caused in any way by the act of participation in the CCO Practical Examination.**

HOST COMPANY NAME

HOST COMPANY REPRESENTATIVE

TEST SITE COORDINATOR SIGNATURE | DATE

METHOD OF PAYMENT FOR TEST SITE APPLICATION FEES

Do not send cash.

☐ VISA ☐ MasterCard ☐ Personal Check Enclosed ☐ Employer Check Enclosed ☐ Money Order Enclosed ***Do not staple your check.***

If paying by credit card complete the following information

CREDIT CARD NUMBER | EXPIRATION DATE

NAME (Print as it appears on card) | SIGNATURE (on card) | SECURITY CODE*

Checks and money orders should be made payable to: **NCCCO** *** Three digit security code located on the back of the card in the signature panel.**

Please send Application and payments to:

National Commission for the Certification of Crane Operators
Western Regional Office
57 West 200 South, Suite 404, Salt Lake City, Utah 84101
Fax: 801-363-3806

TEST SITE APPLICATION & DATA SHEET (CONT'D)

PRACTICAL EXAMINATION – OVERHEAD CRANE

INSTRUCTIONS FOR COMPLETING THIS DATA SHEET

Photocopy this form for use with every crane you plan to test on.

Please ensure to include the manufacturer's data to support sections B and C below. CCO CANNOT PROCESS THIS APPLICATION WITHOUT ALL THIS INFORMATION.

SECTION A *Complete as fully as possible, including your desired test date if known.*

HOST COMPANY NAME		TEST SITE #	
TEST SITE ADDRESS		APPLICATION DATE	DATE OF TEST
CITY		STATE	ZIP

SECTION B — CRANE TYPE: *Check all boxes that apply for the type of the crane you plan to test on.*

☐ CAB Operated	☐ Remote Control	☐ Pendant Control	☐ Variable Frequency Drive	☐ Magnetic Control
☐ Bridge	☐ Gantry	☐ Semi Gantry	☐ Cantilever Gantry	
☐ Top Running	☐ Underhung	☐ Single Girder	☐ Double Girder	

Cranes used for CCO Practical Exams must have powered bridge, trolley, and hoist functions.

SECTION C: *Provide data for items 1 thru 6 using the manufacturer's operating manual.*

1. Make / Model:	2. Serial Number:	3. Rated Capacity (5 ton Min.):

4. Configuration of crane *(rope size and type, ancillary equipment, etc.)*

Answer items 5 thru 6.

5. Bridge Length (25 ft. min. required) _____

6. Load Hook Height (13 ft. min. required) _____

The following are the Overhead Crane Test Weight Specifications.

7. Test Weight Range: 1,500 lbs. to 2,000 lbs.

8. Test Weight Height: _____ ft. *(No taller than 5 ft.)*

9. Test Weight Diameter: 3 ft.

SITE REPORT
PRACTICAL EXAMINATION – OVERHEAD CRANE

CCO has established specific conditions and guidelines that each Practical Examination Test Site must adhere to. This Site Report is designed to ensure these conditions are met. The Examiner is required to perform a site inspection prior to the start of the first examination and complete the Site Report form. The Examiner must arrive at the test site in sufficient time to verify, by measuring with a tape, the accuracy of the course layout with respect to the CCO Test Site Plan. The Examiner must also conduct a visual inspection of the crane for proper set-up prior to testing any applicant. This site report must be presented on demand to any Practical Test Auditor.

Please type or print neatly.

TEST SITE	DATE

NAME OF TEST SITE COORDINATOR

Check the following items for compliance.

PRE-TEST CANDIDATE BRIEFING AREA

An indoor facility suitable for the Pre-Test Briefing of exam candidates, to include:

- ☐ Sufficient tables and chairs to seat candidates for the Pre-Test Briefing.
- ☐ Equipped with a VCR or DVD and a television or computer for candidates to watch the CCO Practical Exam video.
- ☐ Located so that waiting candidates are unable to observe other candidates being tested.

Candidate Materials Available:

- ☐ A written description of the examination (Candidate Handbook).
- ☐ A plan view of the Test Site Layout.
- ☐ Operators Manuals for all cranes to be tested on, at least one extra copy of those pages of the Operator's Manual dealing with operating instructions.

This section is to be completed for each crane used during the testing session.

Make/Model of Crane:	Serial Number of Crane:

TEST SITE SET-UP

- ☐ Entire course is level within 5% of true level.
- ☐ Right Angle Corridor has no more than a 6 in. maximum change in elevation.
- ☐ The maximum distance for the course set-up on a cab-operated crane is 50 ft. horizontal from the operator controls to the center of Circle #1.
- ☐ Free of debris, stored materials, surface irregularities, or hazards which could interfere with test maneuvers.

Using the Test Site Plan, verify the following measurements:

- ☐ Distance from the gridline #1 to gridline #2.
- ☐ Distance from the center of Circle #1 to center of Test Weight Circle along gridline #1.
- ☐ Distance from the center of Circle #1 to the end of the long leg of Circle #1 corridor.
- ☐ Distance from the center of Circle #1 to the end of the short leg of Circle #1 corridor.
- ☐ Length of the middle corridor legs.
- ☐ Length of the long leg side of the Test Weight Circle corridor.
- ☐ Length of the short leg side of the Test Weight Circle corridor.
- ☐ Width of the Right Angle Corridor.
- ☐ Poles placed at 2 ft. centers.
- ☐ Horizontal PVC poles placed according to site plan.
- ☐ Taped lines located correctly before & after horizontal pole obstructions.

Poles

- ☐ Made of 1½ in. white PVC pipe, SHD. 40, 36 in. long.
- ☐ Top 12 in. painted fluorescent orange or red.
- ☐ Mounted to a platform made of two layers of ¾ in. CDX grade (or better) plywood, or high density polyethylene (HDPE), cut 12 in. square.
- ☐ A taut, longitudinal string line placed on the ground through the centerline of each pole base.
- ☐ Spare poles and bases available.

Obstructions

- ☐ Made of 1½ in. white PVC pipe, SHD. 40, 72 in. long (2).

Circles

- ☐ Test Weight Circle (outer) is 48 in. outside diameter, painted 2 in. wide and located per the Test Site Plan.
- ☐ Test Weight Circle (inner) is 42 in. outside diameter, painted 2 in. wide and located per the Test Site Plan.
- ☐ Circle #1 is 42 in. outside diameter, painted 2 in. wide and located per the Test Site Plan.

Course, Pin, and Chain Assembly

- ☐ Task #4 course setup as identified in the Test Site Plan.
- ☐ Chain assembly is no less than 13 ft. and no more than 15 ft. in length.
- ☐ Pin assembly as identified in the Course, Pin, and Chain Assembly drawing.

CRANE SELECTION AND SET-UP

- ☐ Crane as identified in the Test Site Plan.

Test Crane

- ☐ Set up in the location specified, ready for operation in accordance with the manufacturer's recommendations.
- ☐ Bridge length is as stated on Test Site Plan.
- ☐ Hook height is as stated on the Test Site Plan.
- ☐ Rigging between the Load Hook and the Test Weight does not exceed 3 ft. in length.

Test Weight

- ☐ Weight as indicated in Test Site Plan.
- ☐ Verified by a weight ticket or other type of certification documenting the actual load weight available to the Examiner.
- ☐ Cylindrical in shape.
- ☐ The diameter of the Test Weight is 3 ft. (113 in. circumference).
- ☐ Height is no more than 2 x its diameter and in any case does not exceed 5 ft. in height.
- ☐ Method of attachment is by a sling not exceeding 3 ft. in length.
- ☐ A 36 in. length of ⅜ in. chain.

  NOTE: In order to measure the chain length, attach the test weight to the crane hook. Raise the Test Weight until the chain barely touches the ground and measure from the lowest edge of Test Weight to ground.

  - ☐ Chain is painted fluorescent orange or red.
  - ☐ Chain is attached to the bottom center of the Test Weight.

Test Weight Rigging

- ☐ All load supporting components must be assembled in accordance with proper rigging practice and working load limits for the hardware utilized. Any specially fabricated structural components which are part of the load supporting system must be designed and fabricated in accordance with the requirements of the current ASME B30.20 standard, *Below the Hook Lifting Devices*.

Test Course Set-Up

- ☐ The Practical Examiner whose signature appears at the end of this Test Site Report attests that he/she has set up the course. *(Check only if the Practical Examiner has set up the test course.)*

DEVIATIONS FROM STANDARD TEST CONDITIONS OR TEST SITE PARAMETERS.

Describe fully any deviations from the approved *Test Site Set-Up* and *Crane Selection and Set-Up.*

TEST SITE REPORT WAIVER

Under the modified reporting provisions for permanent practical test sites, the requirement for a Site Report prior to each test is waived. This option is available only to test sites where there has been no change in test crane, test site/location and Test Site Coordinator in the last six months. If it has been more than six months since the last full Site Report was submitted, another full Site Report must be conducted. If the Test Site Coordinator requests a Test Site Report Waiver, the Examiner must have the Test Site Coordinator read the following attestation, and sign below:

TEST SITE COORDINATOR ATTESTATION

I attest that there have been no changes to the test crane or test site/location since the last site report was conducted (if this was more than six months ago, a full Site Report must be conducted). I further attest that I was the Test Site Coordinator at this site when the last site report was conducted, and have continued to act in this capacity since that time.

SIGNATURE OF TEST SITE COORDINATOR	DATE
PRINTED NAME OF TEST SITE COORDINATOR	DATE LAST SITE REPORT CONDUCTED

I attest that this is a true and accurate report of the above named Test Site.

SIGNATURE OF EXAMINER	DATE
PRINTED NAME OF EXAMINER	EXAMINER ACCREDITATION NUMBER

This SITE REPORT is to be completed by the Examiner prior to each testing session and sent with candidate score sheets to:

International Assessment Institute — Attention: CCO Testing
600 Cleveland Street, Suite 900
Clearwater, Florida 33755

Phone: 727-449-8525
Fax: 727-461-2746

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IMPORTANT CONTACT INFORMATION

NATIONAL COMMISSION FOR THE CERTIFICATION OF CRANE OPERATORS

2750 Prosperity Avenue, Suite 505
Fairfax, VA 22031-4312

Phone: 703-560-2391
Fax: 703-560-2392
E-Mail: info@nccco.org

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