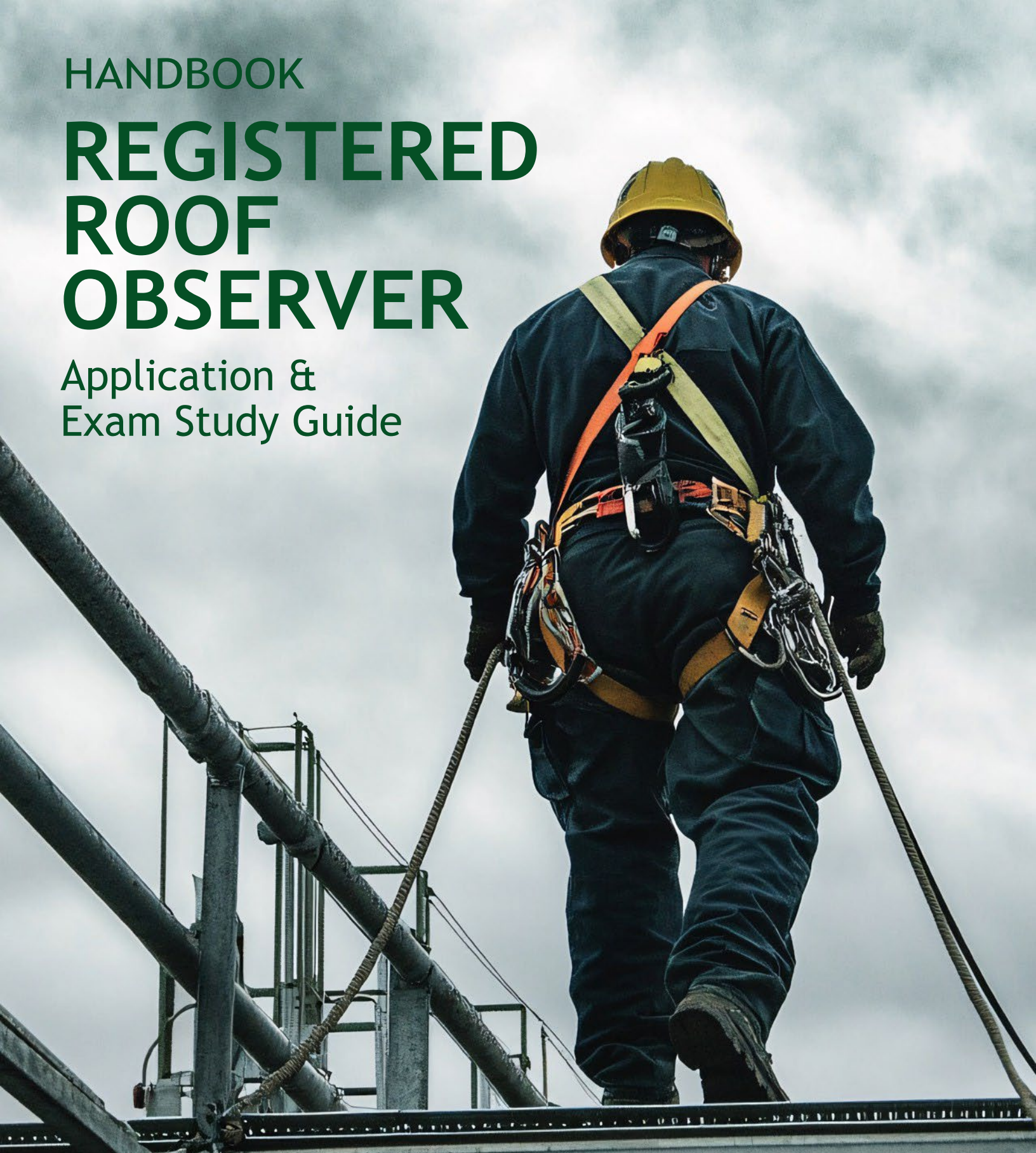


HANDBOOK

# REGISTERED ROOF OBSERVER

Application &  
Exam Study Guide



[iibec.org/credentials](http://iibec.org/credentials)





# APPLICATION FOR REGISTERED ROOF OBSERVER (RRO®)

Dear RRO Applicant:

To become a Registered Roof Observer (RRO), applicants must meet specific requirements. These requirements include verifiable levels of work experience and education; high ethical standards; and a satisfactory score on an online examination.

The scope of work under this task includes your personal observations during roof construction for the assurance of the quality of work performed by another individual. In most cases, the person who performs these services would be under the direction or control of a superior, a roof consultant, an experienced roof observer, and others. In some cases, the roof observer may provide these services directly. Applicants should submit only work experiences done personally, not by a technician under the supervision of the applicant.

All applicants are encouraged to use the online interactive process to complete this application. **Once the application has been submitted to the International Institute of Building Enclosure Consultants (IIBEC), all required information must be provided within one year or the application will expire.**

The application fee is \$375 for IIBEC members and \$475 for nonmembers. Please allow 75 days for application processing. Applications will be processed within 45 days for an additional expediting fee (\$100 for members and \$150 for nonmembers).

An exam registration form will be provided after the completed application has been submitted to IIBEC and approved. Once you register for the exam, your information will be submitted to Meazure Learning, the computer-based testing company. The approved candidate will then be contacted by Meazure Learning to schedule a testing session at one of the 1,000 conveniently located testing centers.

Consult <https://www.assessments.meazurelearning.com/test-site-cities/> for the location of the testing center near you. The online exam fee is \$275 for IIBEC members and \$375 for nonmembers).

A study guide is included with this application. One must have an approved application on file at IIBEC to be eligible to take any exam. Approved applications are valid for two years and reapplication is required if the applicant does not earn the RRO title within that time period. One must wait a minimum of four months to retake.

As an organization focused on advancing the roofing, waterproofing and exterior wall professions, we look forward to receiving your application and encourage your active involvement in IIBEC.

Sincerely,

A handwritten signature in black ink that reads "Alec Jeffries".

Alec Jeffries  
Vice President of Membership & Credentials



**International Institute of Building Enclosure Consultants**  
434 Fayetteville Street, Ste. 2400 • Raleigh, NC 27601  
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[www.iibec.org](http://www.iibec.org)





# APPLICATION FOR REGISTERED ROOF OBSERVER (RRO®)

## TABLE OF CONTENTS

Please review the enclosed packet to verify that you have the following items:

Instructions .....	i-iii
<b>APPLICATION</b>	
Section 1: Profile Information .....	2
Section 2: Business Information .....	2
Section 3: Employment History .....	3
Section 4: Professional Employment History .....	3
Section 5: Continuing Educational Hours .....	3
Section 6: Standards of Ethical Practice (Code of Ethics) .....	3
Section 7: Affidavit Registration, Authorization, and Release .....	3
<b>ATTACHMENTS</b>	
Attachment Sheet 1: Professional Employment History .....	4
Attachment Sheet 2: Project Contact Register .....	5
Attachment Sheet 3: Continuing Educational Hours Summary .....	6
Attachment Sheet 4: Standards of Ethical Practice (Code of Ethics) .....	7-8
Attachment Sheet 5: Affidavit Form .....	9
Attachment Sheet 6: Payment Form .....	10
Attachment Sheet 7: Checklist .....	11
<b>STUDY GUIDE</b>	
Exam Study Guide .....	12



# INTRODUCTION

## REGISTERED ROOF OBSERVER (RRO®)

### INSTRUCTIONS

#### PURPOSE

1. Establish a high standard for the profession of roof quality assurance observation.
2. Provide education, both primary and advanced, for the QA observer.
3. Encourage members to participate in the educational programs to maintain prescribed standard.
4. Advance the dignity and professionalism of the QA observer and discourage unethical practices.
5. Enlighten the construction industry and the public in general, regarding the value of qualified, knowledgeable quality assurance roof observers.
6. Promote cooperation between related trades to provide for a high level of construction standards.
7. Recognize those QA observers who have obtained a high level of proficiency and knowledge by granting them the title Registered Roof Observer (RRO).

#### GENERAL REQUIREMENTS

1. Applicant must read and write in English in order to sit for the exam.
2. Applicant must qualify in one of the following categories:
  - a. Employment as a QA inspector/ consultant in roofing for a cumulative period of 2 years.
  - b. Experience as a Registered Architect/Professional Engineer, Building Inspector/Official, and/or Facilities/Maintenance/Property Manager for a cumulative period of 2 years.
  - c. Experience in roof construction for a period of 2 years, as a roofer, roof foreman, roof superintendent, etc.
  - d. Employment as a roofing manufacturer's technical or sales representative for a period of 4 years.

#### THE EXAMINATION

The examination will be given at Measure Learning computer-based testing centers. The candidate must achieve a satisfactory score on the exam, which tests knowledge regarding the following types of roofing systems: single-ply, asphalt shingle, modified bitumen, built-up, wood, sprayed polyurethane foam, tile, metal, and slate.

Although not required, the following IIBEC courses are recommended for those pursuing this designation: Reroofing, Roof Warranties and Failures, Rooftop Quality Assurance, and Roofing Technology and Science I and II.



# APPLICATION FOR REGISTERED ROOF OBSERVER (RRO®)

## RENEWAL REQUIREMENTS

1. The Registered Roof Observer must continue his/her activities as a QA observer or in a job requiring the skills of a QA observer and renew his/her credential every year. Credential renewal is the responsibility of the RRO and requirements include:
  - a. Pay a renewal fee annually through the online renewal application process.
  - b. Complete 10 roofing, waterproofing, and/or exterior wall related CEHs. All registrants are encouraged to self-report CEHs via the online portal process.
2. Once the applicant has been registered as a QA observer, he/she must maintain his/ her employment as outlined above. In the event the QA observer discontinues employment in the construction industry or takes employment with a firm that provides services that cause a conflict of interest, then he/she will forfeit his/her registration. Registration granted by IIBEC shall remain its property.

*Continuing Education Hour (CEH) requirements and renewal guidelines are available on the [IIBEC website](#). Credential holders are responsible for reviewing and complying with the current CEH Requirements & Guidelines applicable to their credential.*

\*\* \*\*

**APPLICANT PLEASE NOTE:** *The intention of the RRO Program is to provide a system that can withstand the scrutiny and criticism of the public sector and of governmental agencies. Registration must be meaningful and comprehensive to identify those observers with exemplary knowledge and skills for the betterment of the industry.*

**FOR MORE INFORMATION, please visit <https://iibec.org/credential-faq>.**



# APPLICATION FOR REGISTERED ROOF OBSERVER (RRO®)

The table below outlines related job titles and the responsibilities individuals in those occupations would perform related to the RRO.

Job Position	Job Responsibilities as Related to RRO
<b>Architect/Professional Engineer</b>	Knowledge of different roofing materials, and roof systems and installations when reviewing, specifying and inspecting construction projects
<b>General/Roofing Contractor</b>	Knowledge of different roofing materials, and roof systems and installations when reviewing, selecting, and inspecting construction projects.
<b>Facilities/Maintenance/Property Manager</b>	Knowledge of different roofing materials, and roof systems and installations when maintaining facilities.
<b>Building Inspector/Official</b>	Knowledge of different roofing materials, and roof systems and installations when reviewing and inspecting construction projects.
<b>Roof Consultants</b>	Knowledge of different roofing materials, and roof systems and installations when reviewing, specifying and inspecting construction projects. Provide technical support and advice during the roof system selection process.
<b>Quality Assurance Observer</b>	Knowledge of different roofing materials, and roof systems and installations when performing the duties of on-site roof observations at construction projects.
<b>Material Manufacturers Sales/Technical Representative</b>	Knowledge of different roofing materials, roof systems and installations when providing technical support before, during and after roof system selection and roof installations.

- Applicant must accumulate a minimum of 12 Continuing Educational Hours (CEHs) by attending a minimum of 3 roofing-related seminars or programs (see section 5). Online or in-person programs are acceptable. The applicant also agrees to continue his/her training and education by earning CEHs or in accordance with the operating procedures established by IIBEC. IIBEC's Roofing Technology and Science I and II, and the Rooftop Quality Assurance course are highly recommended for those taking the RRO Exam.
- Applicant must establish that he/she has met certain minimum requirements regarding communication skills, project experience and other matters regarding character and ethics.
- Applicant must complete and submit an RRO application to IIBEC headquarters allowing 75 days for processing prior to the exam along with the appropriate application processing fee.
- Applicant shall have a strong moral and ethical character demonstrated by his/her experiences and professionalism.
- Applicant shall always be totally objective, unbiased and impartial in his/her observations, recommendations and in all of his/her actions.
- Applicant shall never have a conflict of interest or permit him/her to be placed in a position that would allow for a potential conflict of interest. Conflict of interest shall be defined as any activity or employment in which the applicant has any significant financial benefit or other interest, or acceptance of any contribution or benefit that could reasonably appear that such activity, employment, interest or contribution could compromise the individual's professional judgment or prevent the individual from serving in the best interest of the client or employer.



# Begin Your Journey

## Earn Your IIBEC Credential

# APPLICATION FOR REGISTERED ROOF OBSERVER (RRO®)

This application is provided for read-only purposes.  
Please use the IIBEC Portal to fill out and submit your application online.

## SECTION 1: PROFILE INFORMATION

### Full Name:

\_\_\_\_\_  
Last First Middle Nickname

### Home Address:

\_\_\_\_\_  
Number and Street Apt. Box Road/Rural Route

\_\_\_\_\_  
City County State & Zip Code Phone Email

### Birth:

\_\_\_\_\_  
Date City State Citizenship

Have you ever applied for IIBEC Registered Roof Observer classification before? Yes No

If yes, please give date of application: \_\_\_\_\_

Are you a contractor or employed by one? Yes No

Type: ( ) General ( ) Roofing State and license number for each: \_\_\_\_\_

Are you employed by or own a company that manufactures, distributes, or sells roofing products or materials? Yes No

Identity: \_\_\_\_\_

Do you derive your principal income as a roof consultant or quality assurance observer? Yes No

If no, what percent of your income do you derive as a consultant? % QA observer %

Do you have any conflict of interest (see page ii, item 8 for definition), or do you work for, own, or have interest in any company having such conflicts? Yes No

## SECTION 2: BUSINESS INFORMATION

Employer Business Type: Other: \_\_\_\_\_  
Consulting Architectural Engineering Contractor Manufacturer Distributor

### Name of business:

### Business address:

\_\_\_\_\_  
Number and Street City State Zip

### Business contact:

\_\_\_\_\_  
Phone Fax

Organization: Individual Individual Proprietorship Partnership Corporation

Other [please specify]: \_\_\_\_\_

# APPLICATION FOR REGISTERED ROOF OBSERVER (RRO®)

## SECTION 3: EDUCATION

---

On **Attachment Sheet 1**, provide information regarding your personal work history background and **experience directly related to roofing. Do not include employment in non-related fields.**

## SECTION 4: PROFESSIONAL EMPLOYMENT HISTORY

---

On **Attachment Sheet 2**, list a **minimum of 7** projects for which you claim project experience. The items below refer to services rendered or tasks performed by you, not by someone under your direction. YOUR experience as a roof quality assurance observer, or other position as specified on page i, is being evaluated, not your management ability or the experience of your company or your subordinates.

## SECTION 5: CONTINUING EDUCATIONAL HOURS EARNED

---

On **Attachment Sheet 3**, provide information regarding continuing educational hours earned through your attendance at seminars or programs directly related to roofing. These programs can be online or in- person. Attendance at a minimum of three programs (i.e.: IIBEC, AIA, CSI, BURSI or other approved educational courses) is required and documentation of such attendance must be provided. Programs must be technical in nature (not sales or product oriented). Online programs meeting these requirements are acceptable. Documentation should be in the form of a certificate or letter from the sponsoring organization stating the name of the course, date course was held, and number of credit hours awarded. A minimum of 12 credit hours from a minimum of 3 roofing-related programs is required (credit hours must be earned within the last 10 years). There is a maximum of 16 hours accepted per program.

## SECTION 6: CODE OF ETHICS

---

The Code of Ethics for IIBEC (**Attachment Sheet 4**) is included in this application. It outlines the obligations of the quality assurance observer to the public, the client or employer, the profession and the building industry. The Registered Roof Observer is required to promote and conform to these standards.

## SECTION 7: AFFIDAVIT CERTIFICATION, AUTHORIZATION AND RELEASE

---

Please complete **Attachment Sheet 5** in the presence of a notary and submit to IIBEC electronically with the application.

**Name:** \_\_\_\_\_

**Date:** \_\_\_\_\_

**SECTION 3: PROFESSIONAL EMPLOYMENT HISTORY**

**PAGE \_\_\_ OF \_\_\_**

New                      Update                      Continuation Sheet

.....  
 List in chronological order, beginning with the first employer, applicant’s work history directly related to roofing. Do not include employment in nonrelated fields or employment. Add additional sheets as necessary.

Date	From	To*	(1) Company Name	Description of Experience (Briefly in space provided)
			(2) Address	
			(3) City, State, Zip	
			(4) Title/Position	
			(1)	
			(2)	
			(3)	
			(4)	
			(1)	
			(2)	
			(3)	
			(4)	
			(1)	
			(2)	
			(3)	
			(4)	
			(1)	
			(2)	
			(3)	
			(4)	

\*Type "Present" in this column to indicate current employer.

Name: \_\_\_\_\_

Date: \_\_\_\_\_

**SECTION 4: PROJECT EXPERIENCE**

**PAGE \_\_\_ OF \_\_\_**

Please complete this page with information indicative of the required years of experience.

**Project Register\***

<b>1</b>	<b>Project Name:</b>	_____
	<b>Project Location:</b>	_____
	<b>Project Contact:</b>	<b>Project Contact Telephone #:</b>
	<b>Project Date:*</b>	_____
<b>2</b>	<b>Project Name:</b>	_____
	<b>Project Location:</b>	_____
	<b>Project Contact:</b>	<b>Project Contact Telephone #:</b>
	<b>Project Date:*</b>	_____
<b>3</b>	<b>Project Name:</b>	_____
	<b>Project Location:</b>	_____
	<b>Project Contact:</b>	<b>Project Contact Telephone #:</b>
	<b>Project Date:*</b>	_____
<b>4</b>	<b>Project Name:</b>	_____
	<b>Project Location:</b>	_____
	<b>Project Contact:</b>	<b>Project Contact Telephone #:</b>
	<b>Project Date:*</b>	_____
<b>5</b>	<b>Project Name:</b>	_____
	<b>Project Location:</b>	_____
	<b>Project Contact:</b>	<b>Project Contact Telephone #:</b>
	<b>Project Date:*</b>	_____
<b>6</b>	<b>Project Name:</b>	_____
	<b>Project Location:</b>	_____
	<b>Project Contact:</b>	<b>Project Contact Telephone #:</b>
	<b>Project Date:*</b>	_____
<b>7</b>	<b>Project Name:</b>	_____
	<b>Project Location:</b>	_____
	<b>Project Contact:</b>	<b>Project Contact Telephone #:</b>
	<b>Project Date:*</b>	_____

\*Include month(s) and year(s) of each project. Additional projects and/or contact information may be requested. Duplicate sheet as needed.



**SECTION 7: CODE OF ETHICS****PAGE 1 OF 2****International Institute of Building Enclosure Consultants**

Adopted July 17, 2001 / Revised March 28, 2006 / Revised September 19, 2015 / Revised September 24, 2022

**Introduction**

The International Institute of Building Enclosure Consultants (IIBEC) is dedicated to the highest standards of professionalism, integrity, and competence. The standards contained in this Code of Ethics (Code) are statements of ethical principles by which the professional conduct and obligations of all IIBEC members and registrants shall be guided.

Under the IIBEC Bylaws, all IIBEC members and registrants are required to comply with the Code of Ethics and to report any observed violations. Adherence to this Code must be above reproach and beyond the influence of competing interests. Even the appearance of a conflict of interest shall be avoided.

The standards contained in this Code of Ethics are statements of ethical principles having broad applicability to members and registrants of IIBEC.

Members and registrants of IIBEC shall recognize that their profession and their practice may be governed by various laws (federal, state, provincial, local, or otherwise) and regulations regarding professional registration and the conduct of trade. It is their responsibility, therefore, to be familiar with those laws and regulations and to conduct themselves accordingly.

**Standard of Care Statement**

This Code is not intended to define the Standard of Care a member or registrant is required to meet and shall not be used as a reference or part of a civil action against a member or registrant.

**General Obligations**

Members and registrants shall maintain and further their knowledge of the profession in which they practice and shall maintain the utmost standard of professional judgment and conduct. Members and registrants shall conduct themselves and their practice honestly and impartially, serving with integrity the organization (IIBEC), other members, their clients, employers, and the public.

IIBEC does not tolerate harassment, discrimination, racism, violence, retaliation, and other disrespectful or inappropriate behavior. Members and registrants shall conduct themselves with integrity, in a professional manner and treat everyone with respect and dignity,

including those with differences including but not limited to gender, gender identity, race, color, age, disability, sexual orientation, ethnic origin, veteran status, religion, or other legally protected characteristics.

IIBEC members and registrants are committed to diversity and inclusion and shall value and embrace diversity in the profession and participation in IIBEC programs and activities.

**Fundamental Canons**

Members and registrants of IIBEC, in the performance of their duties, shall:

- 1 Hold paramount the safety, health, and welfare of the public.
- 2 Conduct themselves in a professional and respectful manner and recognize the contributions of the project team engaged in consulting, design, and construction.
- 3 Value, and treat with respect and dignity all individuals, regardless of gender, gender identity, race, color, age, disability, sexual orientation, ethnic origin, veteran status, religion, or other legally protected characteristics.

**Rules of Practice****1 Safety, Health, and Welfare of Public Responsibilities:**

- a Adhere to applicable laws and regulations.
- b When necessary, rely on the advice of other competent and qualified persons as to the intent and meaning of such applicable laws and regulations.
- c Be honest in conduct, and promote effective use of resources through transparent, and impartial service with fidelity to the public, employers, associates, and clients;
- d Approve and/or issue only those documents that they prepare or review and that are determined to be safe for public health and welfare, in conformity with accepted industry standards and applicable laws;
- e Neither offer to nor make payments or gifts to public officials, private clients, or industry representatives with the intent of influencing

## SECTION 7: CODE OF ETHICS

PAGE 2 OF 2

that person's judgment or decision in connection with an existing or prospective project in which the member/registrant is interested.

- f Do not mislead about the results that can be achieved through the use of the members' or registrants' services or products, nor shall the members or registrants state that they can achieve results by means that violate applicable laws;
- g If a member's or registrant's judgment is overruled under circumstances that, in the opinion and best professional judgment of the member or registrant, may endanger life may cause substantial damage to property, or is not compliant with applicable laws and regulations, the member or registrant shall:
  - i Advise an employer and/or client about the decision,
  - ii Refuse to consent to the decision, and
  - iii Notify the appropriate Authority Having Jurisdiction charged with the enforcement of the applicable laws or regulations.

**2 Professional Responsibility:**

- a Be respectful and considerate to others in obtaining work and employment, and while participating in IIBEC events;
- b Exercise unprejudiced and unbiased judgment and conduct when performing services;
- c Make accurate, truthful, and appropriate statements or claims about their qualifications, experiences, or performance;
- d Perform services in areas of professional and personal competence;
- e Undertake assignments only when qualified by education and experience in the specific technical fields involved;
- f Further knowledge of technical and non-technical capabilities including, but not limited to, the science, principles, and ethics of the profession and community;
- g Evaluate and decline activity or employment, financial or other interest, and refuse contribution if it reasonably appears that such involvement could compromise judgment and the best interests of the clients or employers. Provide full disclosure to the client or employer and obtain consent thereto;
- h Restrict the use of their names or firms nor associate in business ventures with persons

or firms that they have reason to believe are engaged in fraudulent or dishonest business or professional practices.

- i Similar to statement c. above Engage only in accurate, appropriate, and truthful promotion of their practice;
- j Be objective and truthful in reports, statements, testimony, and on social media;
- k Maintain client and employer confidentiality when applicable;
- l Comply with obligations relating to confidential information and applicable data privacy laws in relation to its use, processing, and storage of professional and personal data;
- m Refrain from making false statements about the work of others and shall not maliciously injure or attempt to injure the prospects, practice, or employment position of others;
- n Develop and disseminate accurate information related to consultation, design, and construction of building enclosure systems.
- o Do not accept compensation – financial or otherwise – from more than one party for services on the same project, or for services pertaining to the same project, unless the circumstances are fully disclosed.
- p Members and registrants having substantial information leading to a reasonable belief that another member or registrant has committed a violation of this Code that raises a serious question as to the honesty, trustworthiness, or fitness of the other member or registrant are encouraged to initiate a complaint with the IIBEC Ethics Committee and/or applicable Authority Having Jurisdiction.

**Enforcement and Amendment**

- 1 Enforcement of the Code of Ethics is administered through the IIBEC Ethics Committee, appointed by the IIBEC Board of Directors, and the Board of Directors as set forth in the IIBEC Ethics Administrative Procedures.
- 2 The IIBEC Code of Ethics may be amended by the IIBEC Board of Directors upon a two-thirds vote of the Board.

**For more information, please visit [IIBEC.org/membership/code-of-ethics/](https://iibec.org/membership/code-of-ethics/).**

**Name:** \_\_\_\_\_

**Date:** \_\_\_\_\_

**SECTION 8:**

**AFFIDAVIT REGISTRATION AUTHORIZATION AND RELEASE (TO BE NOTARIZED)**

.....  
**State (Province) of**

\_\_\_\_\_

**County of**

\_\_\_\_\_

\_\_\_\_\_, being first duly sworn, deposes and says:

Applicant's Name

I, the Applicant named above, have read the contents hereof, and to the best of my knowledge and belief the statements contained in this application are true in substance and effect and are made in good faith. I hereby subscribe to and agree to conform to the Code of Ethics for the International Institute of Building Enclosure Consultants (IIBEC). I shall endeavor never to place myself in a conflict of interest or permit myself to be placed in a position that would allow for a potential conflict of interest. Conflict of interest shall be defined as any activity or employment having any significant financial or other interest, or acceptance of any contribution if it would reasonably appear that such activity, employment, interest or contribution could compromise my professional and objective judgment as a Waterproofing Consultant or prevent me from serving the best interest of my client.

I also hereby authorize any individual, company or institution with whom I have been associated to furnish IIBEC with any information concerning my qualifications for Registered Waterproofing Consultant which they have on record or otherwise, and do hereby release the individual, company or institution and all individuals connected therewith from all liability for any damage whatsoever incurred by me as a result of their furnishing such information.

Subscribed and sworn to before me this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_\_

\_\_\_\_\_  
(Signature of Applicant)

(SEAL)

My Commission expires \_\_\_\_\_

\_\_\_\_\_  
(Signature of Notary Public)



# APPLICATION FOR REGISTERED ROOF OBSERVER (RRO®) Payment Form

Enclosed is a check in the amount of:  \$375.00 member fee  \$475.00 nonmember fee

Plus, expediting fee:  \$100.00 member fee  \$150.00 nonmember fee

Charge the following to my:  VISA  MasterCard  American Express  Discover

\$375.00 member fee  \$475.00 nonmember fee

Plus, expediting fee:  \$100.00 member fee  \$150.00 nonmember fee

\_\_\_\_\_  
Name on Card Expiration Date

\_\_\_\_\_  
Account Number 3-or 4-Digit Verification Value Code

\_\_\_\_\_  
Signature Date

\_\_\_\_\_  
Telephone Cell Phone

**Bill to Address: (If different from what is listed on page 1 of the application):**

\_\_\_\_\_  
Number and Street Apt. Box Road/Rural Route

\_\_\_\_\_  
City State Zip

\*Please allow 75 days for application processing. Applications will be processed within 45 days for the expediting fee listed above. **Once the application is submitted, all outstanding information must be received within 1 year or the application will become null and void.**



**International Institute of Building Enclosure Consultants**  
434 Fayetteville Street, Ste. 2400 • Raleigh, NC 27601  
(T) 919-859-0742 or 800-828-1902 • (F) 919-859-1328  
Email: [spatterson@iibec.org](mailto:spatterson@iibec.org)



**CHECKLIST TO ACCOMPANY**

**APPLICATION FOR REGISTERED ROOF OBSERVER (RRO®)**

**Attachment Sheet 7**

**Name:** \_\_\_\_\_

**Date:** \_\_\_\_\_

**Check or initial in the block at the right indicates that you have completed that requirement of the application.**

- 1. Application fee enclosed (\$375.00 members/\$475.00 nonmembers) .....
- 2. Completed Sections 1 and 2 of the application .....
- 3. Section 3 of application – Attachment Sheet 1::
  - a. All dates are listed .....
  - b. College transcript(s) have been submitted, if applicable.....
  - c. Brief description of experience under each employer is listed .....
- 4. Section 4 of application – Attachment Sheet 2:
  - a. Each project for which I claim experience is listed on Attachment Sheet II .....
  - b. All names, addresses, telephone numbers and dates of projects listed .....
  - c. All projects listed represent my experience (not someone under my direction) .....
  - d. All projects claimed truly reflect worthy experience under the appropriate heading.....
- 5. Section 5 of application – Attachment Sheet 3:
  - a. All course names, sponsoring organization, dates, documentation and credit hours claimed .....
  - b. I have attended a minimum of 3 roofing programs (min. 12 hours total) .....
- 6. Section 6 of application – Attachment Sheet 4:
 

I have read and agree to abide by the IIBEC Code of Ethics .....
- 7. Section 7 of application – Attachment Sheet 5:
  - a. Affidavit has been executed and notarized .....
- 8. Once an application has been submitted to IIBEC the time limit to provide all outstanding information is one year.....

Online applications submittal preferred. Allow 75 days for processing.

This is to certify that I have completed the application as required by the association, I have checked all details and entries, and herewith submit said application for registration. I understand that registration is contingent upon meeting the requirements of IIBEC and successful completion of the required examinations.

\_\_\_\_\_  
Signature of Applicant

\_\_\_\_\_  
Date

# Exam Study Guide

Prepared By RRO Examination Development Subcommittee



[iibec.org/credentials](http://iibec.org/credentials)





# STUDY GUIDE FOR REGISTERED ROOF OBSERVER (RRO®) EXAM

## TABLE OF CONTENTS

Introduction .....	14
References .....	15
Test Objectives.....	16
Sample Questions .....	17-20
Exhibits.....	21-22
Answers for Sample Questions .....	23

# STUDY GUIDE FOR RRO® EXAM

## INTRODUCTION

One early goal of IIBEC was to develop a recognized and highly regarded registration program for Roof Quality Assurance Observers. The registration program was authorized by the IIBEC Board of Directors in 1989 and implemented in 1992. The primary beneficiaries of this program are the public, the roofing industry, and those who become registered.

IIBEC offers its RRO Program to all applicants, members and non-members. Registration is a two-part program based on an application process along with satisfactory performance on a comprehensive computer-based examination.

This study guide outlines subjects that are addressed in the examination; however, it is not intended to be an inclusive listing of every topic. This document is strictly a guide.

The latest RRO exam revision was completed in December 2017 in compliance with the Standard for the Accreditation of Certification Programs as published by the National Commission for Certifying Agencies (NCCA). A committee of subject matter experts followed a rigorous psychometric process in its development.

The examination is not tailored to any one particular area of roof observation, or to the design and construction practices unique to any geographic area. It deals primarily with roof observations in general. It may include all phases of roof observations (methodology and construction), both steep and low-slope roofing, and all systems (shingle, tile, slate, single-ply, modified bitumen, built-up, wood, metal and spray applied systems).

In order to receive a passing score on the examination, the examinee must be thoroughly familiar with the basic methodology of Q.A.O. and have a broad knowledge of: basic roof science, documentation and reporting, field testing observation, construction documents, roles, responsibilities and ethics, and roof systems and materials. Preparation for the exam is essential and is unique to each individual depending on one's experience.

The exam is offered online by Meazure Learning, a computer-based testing company. It consists of 75 choice questions and is up to three hours in duration.

Consult <https://www.assessments.meazurelearning.com/test-sitocities> for a conveniently located testing site near you.

Approved applications have a two-year shelf life; and once the application has expired, reapplication will be required. **Candidates who do not initially pass an exam will have the option to retry every four months.**

Although not required, IIBEC offers education programs that may be useful for anyone pursuing this designation: [Recommended Courses for the RRO](#). These courses are available through the IIBEC storefront, [LearnUpon](#).

# STUDY GUIDE FOR RRO® EXAM

## REFERENCES

	<b>Title</b>	<b>Author</b>	<b>Pub. Date</b>
<b>1</b>	Construction Specifications Principles and Applications	H. Meier/D. Wyatt	2008
<b>2</b>	Manual of Low-Slope Roof Systems – Fourth Edition	C.W. Griffin & R.L. Fricklas	2006
<b>3</b>	NRCA Roofing Manual: Architectural Metal Flashings	NRCA	2018
<b>4</b>	NRCA Roofing Manual: Membrane Roof Systems	NRCA	2019
<b>5</b>	NRCA Roofing Manual: Metal Panel & SPF Roof Systems	NRCA	2016
<b>6</b>	NRCA Steep-Slope Roofing Systems	NRCA	2017
<b>7</b>	IIBEC Code of Ethics	NRCA	2017
<b>8</b>	RCI Manual of Practice	RCI (now IIBEC)	2010
<b>9</b>	The Project Resource Manual: CSI Manual of Practice, 5th Edition	CSI	2005

\*The references listed above are only some of the many that were used in the development of this exam. This is meant to serve as a guide to illustrate the types of references used; this is not a recommendation or suggestion to purchase all of the publications listed. The most useful tool in preparation for the exam is the following list of skills, knowledge and responsibilities identified by the task force as those associated with acceptable performance within the quality assurance observer profession. It is recommended that the applicant review this list as it relates to one's experience/skill set and then prepare accordingly with the courses and/or publications which may be helpful to the individual.

# STUDY GUIDE FOR RRO® EXAM

As part of the exam revision process, the committee of subject matter experts systematically compiled a list of domains that relate to the responsibilities, knowledge, and skills associated with acceptable performance within the roof consulting profession. This list provided the organizational framework for the exam and is included below. The percentage of questions on the exam from each section is indicated.

Sections	Section/Domain Title	Percentage of questions from section on exam
<b>SECTION 1</b>	<b>BASIC ROOF SCIENCE</b>	<b>8%</b>
Objective 1.1	<b>Describe a basic understanding of thermal moisture, drainage and wind principles related to roof construction.</b>	
<b>SECTION 2</b>	<b>DOCUMENTATION AND REPORTING</b>	<b>9%</b>
Objective 2.1	<b>Describe the monitoring, recording and reporting of roof installation.</b>	
Objective 2.2	<b>Demonstrate basic math operations as related to roof construction.</b>	
<b>SECTION 3</b>	<b>FIELD TESTING OBSERVATION</b>	<b>5%</b>
Objective 3.1	<b>Describe field testing procedures.</b>	
<b>SECTION 4</b>	<b>CONSTRUCTION DOCUMENTS</b>	<b>11%</b>
Objective 4.1	<b>Describe standards and construction documents.</b>	
<b>SECTION 5</b>	<b>ROLES, RESPONSIBILITIES AND ETHICS</b>	<b>19%</b>
Objective 5.1	<b>Describe the roles and responsibilities of the RRO.</b>	
Objective 5.2	<b>Demonstrate project-specific roles.</b>	
Objective 5.3	<b>Demonstrate ethics governing the behavior of the RRO.</b>	
Objective 5.4	<b>Demonstrate appropriate PPE, personal safety requirements and job site hazards. roof condition. assessments.</b>	
<b>SECTION 6</b>	<b>ROOF SYSTEMS AND MATERIALS</b>	<b>48%</b>
Objective 6.1	<b>Describe low-slope roofing systems</b>	
Objective 6.2	<b>Describe steep-slope roof systems</b>	
Objective 6.3	<b>Describe metal roof systems</b>	
Objective 6.4	<b>Describe liquid membranes</b>	
Objective 6.5	<b>Describe sheet metal flashings</b>	
Objective 6.6	<b>Describe roof accessories</b>	
Objective 6.7	<b>Describe roof insulation</b>	
Objective 6.8	<b>Describe roof deck types</b>	
	<b>TOTAL PERCENTAGE</b>	<b>100%</b>

# RRO® EXAM SAMPLE QUESTIONS

## Refer to Exhibit #1

- Which two materials would be appropriate for item A shown in the exhibit? (Choose two.)
  - glass fiber insulation
  - polyisocyanurate insulation
  - polyurethane insulation
  - mineral wool insulation
- When is it appropriate for a change directive to be issued?
  - When total agreement on the terms of the change order cannot be reached in a timely manner.
  - When the owner and contractor have agreed on the change in contract amount and time after discovery of an unforeseen condition.
  - When change in the work exceeds 10% of the contract amount.
  - When the RRO submits a statement of non-compliance.

## Refer to Exhibit #2

- Referring to the exhibit, which total percent of the project is complete?
  - 34%
  - 56%
  - 63%
  - 72%
- Who controls the delivery, storage, and handling required for project materials?
  - the designer of record
  - the roof observer
  - the building owner
  - the contractor
- Who is responsible for providing the RRO with personal protection equipment?
  - project manager
  - contractor
  - RRO's employer
  - building owner
- A contractor is installing an SPF roof. At a minimum, how many degrees should the ambient temperature be above the dew point for this roof?
  - 2 degrees F [1.1 degrees C]
  - 5 degrees F [2.8 degrees C]
  - 7 degrees F [3.9 degrees C]
  - 10 degrees F [5.5 degrees C]
- A coating is being applied over an existing metal roof. Which instrument will measure the thickness of the coating during application?
  - optical comparator
  - wet-and-dry-bulb psychrometer
  - wet-mil gauge
  - loupe
- According to NRCA, which two metals are solderable? (Choose two.)
  - prefinished aluminum
  - galvanized steel
  - galvalume
  - stainless steel
- When installing fire- and pressure-treated wood shake and shingles, which nail must be used?
  - copper
  - 316 stainless steel
  - electro-galvanized steel
  - hot-dipped galvanized steel
- Which two deck types are considered nailable? (Choose two.)
  - precast concrete
  - steel deck
  - light-weight insulating concrete
  - channel slabs

## RRO® SAMPLE EXAM QUESTIONS

11. The RRO is observing the Contractor install a 1/2" (13 mm) wood fiber cover board over the base layer of insulation; however the Construction Documents state that a 3/4" (19 mm) perlite cover board is to be installed. What should the RRO do?
- A. Assume that the 1/2" (13 mm) wood fiber was approved.
  - B. Assume that the Contractor is not installing the correct material.
  - C. Contact the Owner immediately.
  - D. Notify the Contractor, record the deviation and contact the Designer Authority.
12. How would a change to the Specifications be made prior to the submittal of bids?
- A. Change Order
  - B. Change Directive
  - C. Purchase Order
  - D. Addendum
13. Which of the following seaming procedures is appropriate for TPO membranes?
- A. Hot-air welding
  - B. Solvent-welding
  - C. Liquid-applied adhesive
  - D. Mastic-applied
14. The RRO observes that the temperature of the roofing asphalt at the point of application is too low. How should the RRO determine what the proper asphalt temperature at the point of application is?
- A. Review the flash point of the asphalt.
  - B. Review the finish blowing temperature of the asphalt.
  - C. Review the EVT of the asphalt.
  - D. Review the temperature gauge at the asphalt kettle.
15. Which of the following could be a cause of blistering on an SBS roof?
- A. Voids in the interply moppings
  - B. Excessive amounts of asphalt
  - C. Incorrect type of asphalt
  - D. Improper installation of the underlayment
16. Which of the following surface textures are acceptable for SPF?
- A. Smooth, orange peel, coarse orange peel, or popcorn
  - B. Smooth, orange peel, coarse orange peel, or treebark
  - C. Smooth, orange peel, popcorn or verge of popcorn
  - D. Smooth, orange peel, coarse orange peel, or verge of popcorn
17. Per OSHA, what is the proper distance from the wall that the base of a ladder should be placed?
- A. One-fifth of the working height
  - B. One-fourth of the working height
  - C. One-third of the working height.
  - D. One-half of the working height
18. The RRO would be involved in which of the following tasks:
- A. Direct construction means and methods
  - B. Document and quantify unforeseen conditions
  - C. Accept material substitutions
  - D. Help enforce project schedule

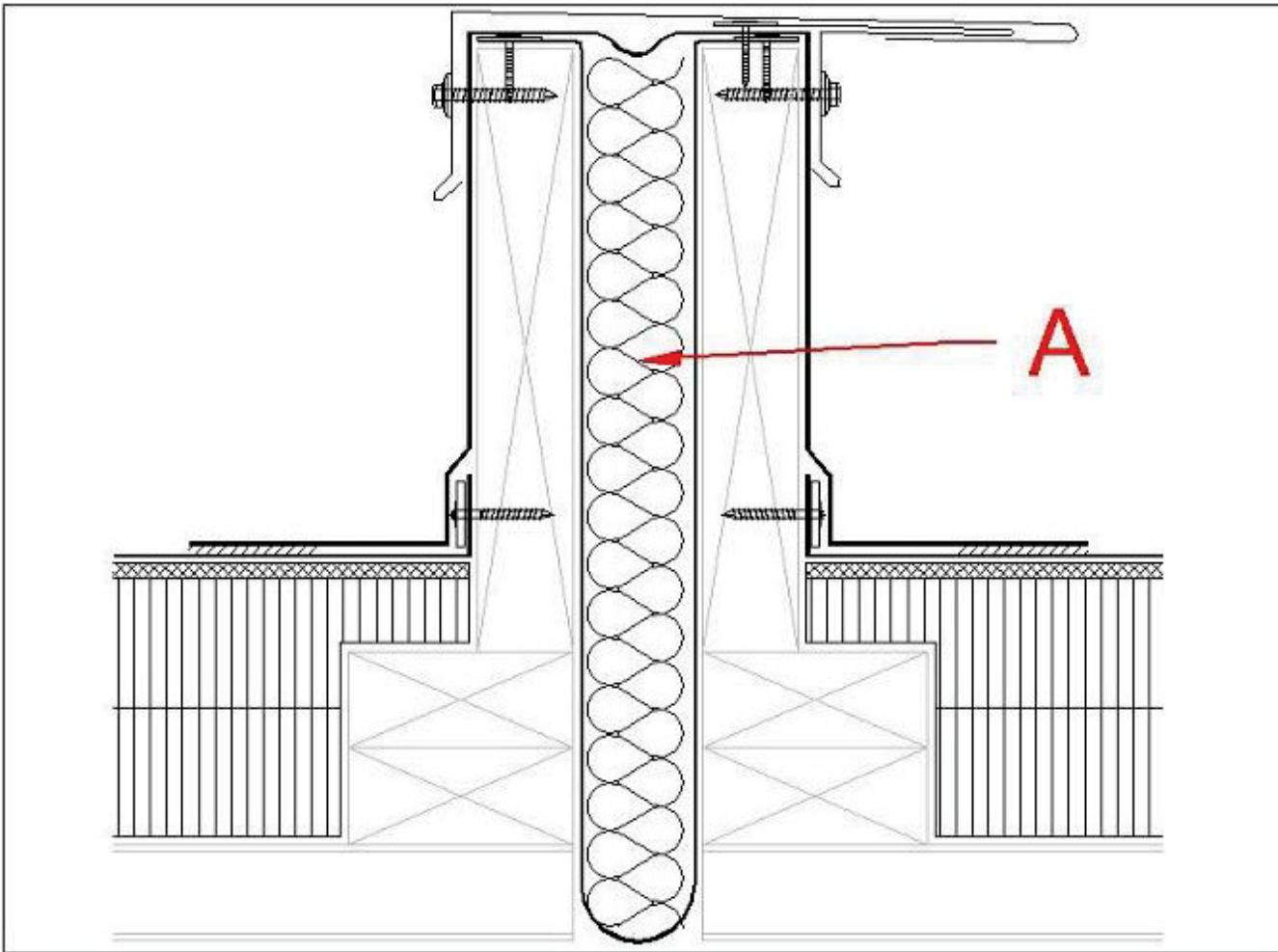
## RRO® SAMPLE EXAM QUESTIONS

19. The RRO is reviewing the installation of a roof system over a steel deck. The RRO observes that the deck has been modified in order to accommodate the installation of piping with an opening between 8 in. to 13 in. (200 mm to 325 mm) in diameter. The RRO is concerned about the integrity of the deck around this opening. What action should the RRO take?
- A. Tell the Roofing Contractor to remove the piping and repair the deck opening.
  - B. Inform the Roofing Contractor that plate reinforcement is required over the top of the deck due to the size of the opening.
  - C. Inform the Roofing Contractor that plate reinforcement is required on the underside of the deck due to the size of the opening.
  - D. Document the condition and contact the Designer of Record for direction.
20. A roof is 85 squares in area. The Contractor has 1/8th of the total roof left to complete. What area has been completed so far?
- A. 10 squares
  - B. 70 squares
  - C. 1,063 sq. ft. (99 sq. m.)
  - D. 7,438 sq. ft. (691 sq. m.)
21. When installing asphalt shingle on a plywood deck, what is the MINIMUM depth the nails should penetrate through the plywood deck?
- A. 1/8" (3 mm)
  - B. 1/4" (6 mm)
  - C. 1/2" (13 mm)
  - D. 3/4" (19 mm)
22. According to the NRCA Roofing Manual, how often should a termination bar be fastened on single-ply base flashings?
- A. 6" (150 mm)
  - B. 8" (200 mm)
  - C. 12" (300 mm)
  - D. 18" (450 mm)
23. What is the MAXIMUM roof slope recommended for the application of a coal-tar roof?
- A. Less than 1/4 inch per foot
  - B. Less than 1/2 inch per foot
  - C. Less than 3/4 inch per foot
  - D. Less than 1 inch per foot
24. Proper documentation of Contractor manpower, crew size, weather conditions, and weather related work stoppages can be used to determine which of the following?
- A. If the Contractor's crews are being efficient with the installation of the material
  - B. If the Contractor should be paid for the work completed
  - C. If the RRO should direct the contractor to add manpower
  - D. If contract time extensions are granted, or if financial penalties are imposed
25. ASTM D312 - Standard Specification for Asphalt Used in Roofing lists four types of roofing asphalt based on resistance to flow. The preferred type of asphalt for a built-up membrane being installed on a roof having a slope greater than 1:12 is: bable cause of the reported dripping at the roof drain openings?
- A. Type I Asphalt.
  - B. Type II Asphalt.
  - C. Type III Asphalt
  - D. Type IV Asphalt
26. What information should be contained in the RRO's daily report?
- A. Work activities, installation procedures, and the RRO's opinion of Contractor performance
  - B. Work activities, materials being used, and installation procedures
  - C. Work activities, equipment being used, and number of apprentices on the job
  - D. Work activities, Contractor break times, and weather conditions

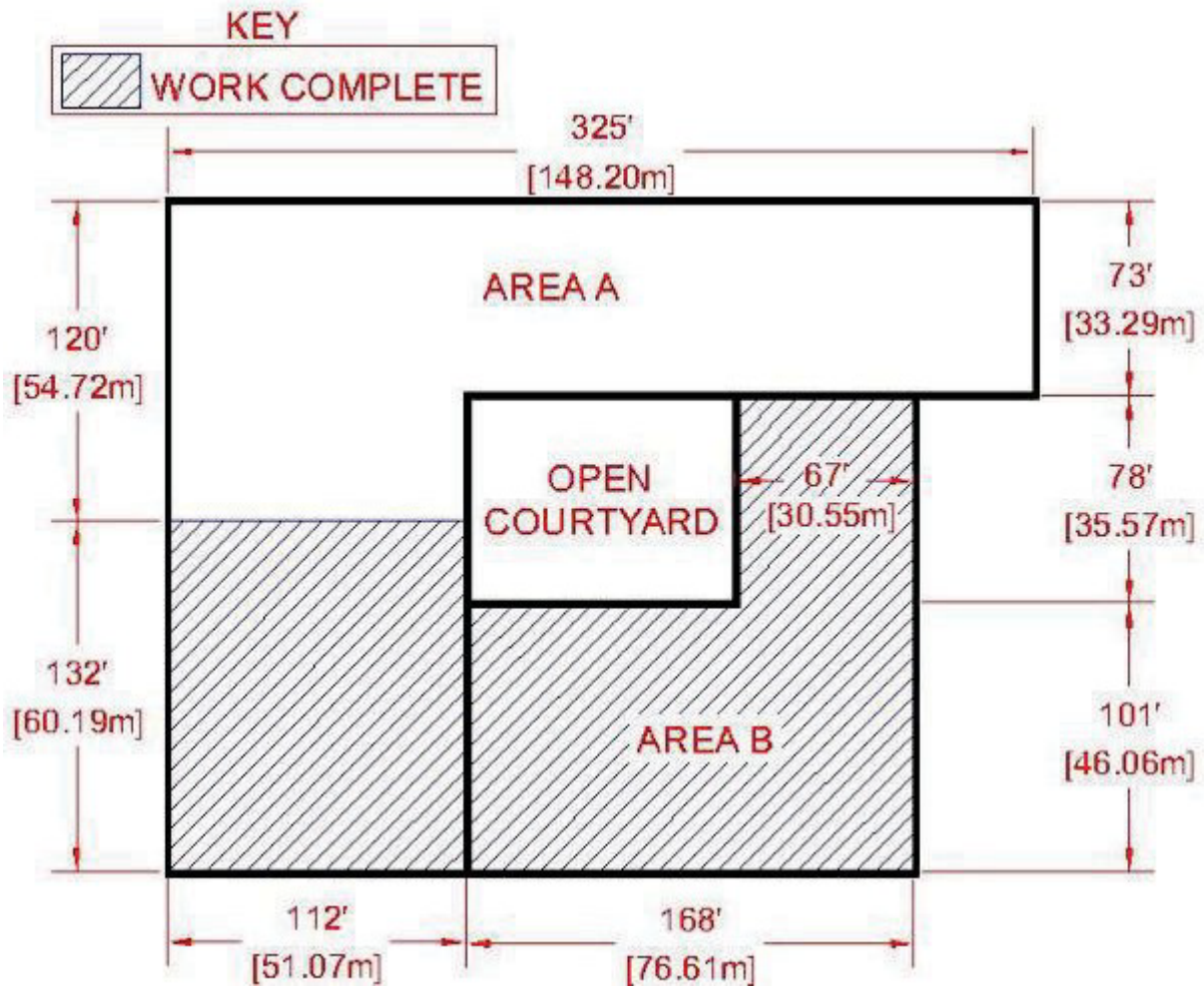
## RRO® SAMPLE EXAM QUESTIONS

27. In what Division in the CSI Specification Format would the RRO expect to find criteria for thermal roof insulation?
- A. Division 6
  - B. Division 7
  - C. Division 8
  - D. Division 9
28. NRCA recommends that the board size of polyisocyanurate roof insulation in adhered application not exceed:
- A. 2' x 4' (600 x 1200 mm)
  - B. 3' x 4' (900 x 1200 mm)
  - C. 4' x 4' (1200 x 1200 mm)
  - D. 4' x 8' (1200 x 2400 mm)
29. The RRO is observing the installation of a slate roof system with a pitch of 10:12. What is the recommended head lap for 12" x 24" (300 mm x 600 mm) slate?
- A. 2" (50 mm) head lap
  - B. 3" (75 mm) head lap
  - C. 4" (100 mm) head lap
  - D. 6" (150 mm) head lap
30. When on site, the RRO observes the Contractor is not properly storing material on a daily basis. What is the appropriate action the RRO should take?
- A. Record observations in the field report and report the condition to the Contractor and Design Authority.
  - B. Inform the Contractor of the discrepancy and give the Contractor the opportunity to correct the problem.
  - C. Inform the Owner that the Contractor is not complying with the Specifications
  - D. Assist the Contractor with correcting the discrepancy.

**EXHIBIT #1**



# EXHIBIT #2



## ANSWERS TO SAMPLE QUESTIONS

Note your answers. Review the appropriate document(s) in those areas to better understand the rationale behind the indicated correct answer.

IIBEC provides [Recommended Courses](#) for pursuing the RRO designation.

1. A and D
2. A
3. B
4. D
5. C
6. B
7. C
8. B and D
9. B
10. B and C
11. D
12. D
13. A
14. C
15. A
16. D
17. B
18. B
19. D
20. D
21. A
22. C
23. A
24. D
25. D
26. B
27. B
28. C
29. B
30. A



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