

# CCW AIA COURSE OVERVIEW



## Above Grade Waterproofing Systems

- 1 – CONCRETE ROOF DECK
- 2 – GARDEN ROOF & PLAZA DECK
- 3 – PLAZA DECK

## Wall Systems

- 4 – WALL SYSTEMS

## Below Grade Waterproofing & Drainage Systems

- 5 – BELOW GRADE WALLS

## Air & Vapor Barriers

- 6 – AIR & VAPOR BARRIERS

**PROTECTING  
YOUR INVESTMENT**

**ABOVE GRADE  
BELOW GRADE**

# COURSE DESCRIPTIONS

## WPR102-CCW

### Selecting the Best Blindside Waterproofing System

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Learn the history and types of blindside (i.e. pre-applied) waterproofing to prevent moisture transmission in new construction. This one-hour presentation provides information to help design professionals determine what type of blindside waterproofing system to use on various projects. Approved for AIA/HSW Credits.

#### **At the conclusion of the presentation, course attendees will be able to:**

- Better understand what is blindside waterproofing and where is it used
- Better understand the unique challenges related to this type of waterproofing application
- Gain familiarity with the most common product types or technologies available to this waterproofing market segment
- Use the provided tips for writing effective waterproofing and related Specifications with an emphasis on Quality Assurance



## AVB301-CCW

### Adhered Membrane Air & Water Resistive Barriers in Wall Construction

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This one-hour presentation is beginner- to intermediate-level course intended for audiences who have some knowledge of air barriers and building science. The presentation provides information on the code compliance, characteristics, and installation of fully adhered membranes. Approved for AIA/HSW Credits.

#### At the conclusion of the presentation, course attendees will be able to:

- Explain the code requirements for air and water resistive barrier performance. Air barrier and water resistive barrier performance requirements are prescribed by building code. These requirements are presented and discussed, citing examples and test methods. Various materials that provide both air and water resistive barrier performance are discussed.
- Gain familiarity with typical self-adhered and fluid-applied membranes and their important properties. This is the introduction to commercially available membrane products and their essential properties. Features and benefits of the types of products are discussed. Critical properties with corresponding performance criteria are also presented to assist in the writing of specifications for these systems.
- **HSW Justification:** High-performance air and water resistive barriers can dramatically improve a building's energy efficiency, which saves money and reduces environmental impacts. A high-performing air barrier can also improve occupants' comfort, enabling the building's climate control systems to function optimally. These technologies also protect buildings from moisture damage, which inhibits mold growth, corrosion, and rot. Protection from moisture also contributes to the durability of the building's shell and preservation of life safety elements such as the anchoring system of the building facade and even the structural integrity of the wall.

**Course Level Intermediate - For individuals who have some knowledge of the subject area**

## WPR101-CCW

### Selecting the Best Waterproofing System for Your Project

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What is the very best waterproofing system on the planet? The system with the physical properties, long-term performance, installation procedures, and price that best matches your specific project's conditions and requirements. This course will show that one size doesn't fit all when it comes to waterproofing systems. Approved for AIA/HSW Credits.

#### At the conclusion of the presentation, course attendees will be able to:

- Better understand that there is no single waterproofing system that is "best" for all applications and all design considerations
- Better understand the various applications for waterproofing
- Gain familiarity with the most common product types or technologies available to the waterproofing market
- Use the provided tips for writing effective waterproofing and related Specifications with an emphasis on Quality Assurance

# COURSE DESCRIPTIONS

## AVB304-CCW

### Specifying Wall Weatherization Products That Comply with Building Code Fire Safety Provisions

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Design and construction of today's commercial exterior wall assemblies is fraught with many challenges. Building code, public initiatives, and customer expectations are calling for buildings to be ever more energy efficient. As a result, modern wall assemblies often contain membrane air barriers and foam board insulation products. Membrane air barriers and foam board insulation are combustible materials, so their use can trigger a code requirement for NFPA 285, a full wall assembly burn test. Code requirements for NFPA 285 are explained and the types of materials and assemblies that have passed this test are discussed. Finally, guidance is given on how to comply with the NFPA 285 requirement and how to specify wall components and assemblies that pass this test.

#### At the conclusion of the presentation, course attendees will be able to:

- Understand the code intent of fire safety and its effects on materials and assemblies.
- Describe the code-referenced material and assembly burn tests for exterior walls and their significance.
- Assess the relative fire hazard of common wall assembly components.
- Provide spec language for compliance of your project with the NFPA 285 requirement.
- **HSW Justification:** Adhered membrane products used as air and water resistive barriers enable the construction of a more energy efficient, comfortable, and durable built environment. As these are combustible materials, they must be incorporated into the wall assembly in a manner that maintains code-mandated fire safety. This presentation tells how to build with air and water resistive barriers while complying with code-mandated fire safety. Fire safety is a critical life safety issue and one of the primary reasons for the existence and enforcement of building code.

**Course Level Intermediate - For individuals who have some knowledge of the subject area**



## AVB303-CCW

### Providing an Effective Air and Water Resistive Barrier Installation

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Building code requires air barriers in almost all new commercial construction. The air barrier does not provide any value unless it has been installed in a durable and continuous manner. As a means of demanding effective air barrier installation, some jurisdictions prescribe an air barrier continuity plan in their energy code. This seminar provides information for planning and executing a successful installation of fluid-applied and adhered sheet membrane air barriers on exterior walls. Approved for AIA/HSW Credits.

#### At the conclusion of the presentation, course attendees will be able to:

- List common requirements to address during pre-construction.
- Explain the requirements for project and substrate conditions.
- Summarize the contents of a typical quality control program.
- List common items for inspection before completion of the air barrier installation.
- **HSW Justification:** High-performance air and water resistive barriers can dramatically improve a building's energy efficiency, which saves money and reduces environmental impacts. A high-performing air barrier can also improve occupants' comfort, enabling the building's climate control systems to function optimally. These technologies also protect buildings from moisture damage, which inhibits mold growth, corrosion, and rot. Protection from moisture also contributes to the durability of the building's shell and preservation of life safety elements such as the anchoring system of the building facade and even the structural integrity of the wall.

**Course Level Intermediate - For individuals who have some knowledge of the subject area**

## AVB302-CCW

### Selecting the Best Air & Water Resistive Barrier for your Wall

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The air and water resistive barrier (AWRB) business has grown substantially in the last few years. Many manufacturers have entered the market and aggressively promote their products. With so many product choices and conflicting messages, selecting a material for your project can be intimidating and confusing. Approved for AIA/HSW Credits.

#### At the conclusion of the presentation, course attendees will be able to:

- Describe the major types of adhered Air & Water Resistive Barriers (AWRBs) in the U.S. market
- Explain how project conditions and wall assembly design influence AWRB material
- Assess the installer friendliness of the major types of AWRB systems
- **HSW Justification:** High-performance air and water resistive barriers can dramatically improve a building's energy efficiency, which saves money and reduces environmental impacts. A high-performing air barrier can also improve occupants' comfort, enabling the building's climate control systems to function optimally. These technologies also protect buildings from moisture damage, which inhibits mold growth, corrosion, and rot. Protection from moisture also contributes to the durability of the building's shell and preservation of life safety elements, such as the anchoring system of the building facade and even the structural integrity of the walls.

**Course Level Intermediate - For individuals who have some knowledge of the subject area**

# COURSE DESCRIPTIONS

## IS0301-CCW

### Polyisocyanurate Foam “PIR” Insulation for Exterior Wall Assemblies

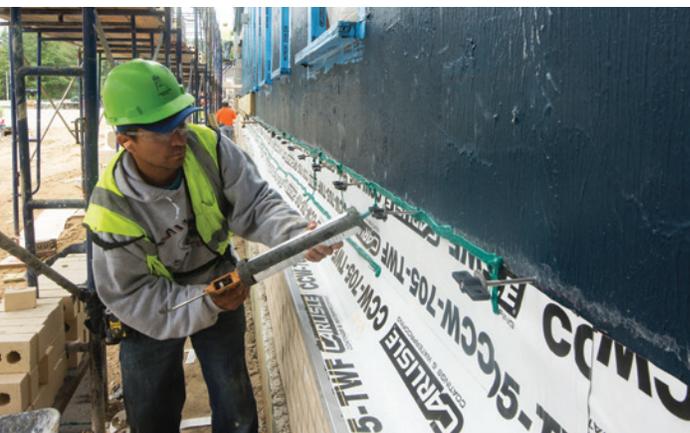
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This one-hour presentation is an in-depth discussion of the use of PIR for exterior wall construction. Topics covered are material fundamentals, product track record in construction, advantages in wall construction, and installation techniques. Approved for AIA/HSW Credits.

#### At the conclusion of the presentation, course attendees will be able to:

- **List the basic characteristics and important physical properties of polyiso foam board insulation:** Attendees will learn about polyiso chemistry, how the product is made, foam core and facer characteristics, and physical properties of polyiso specified in ASTM standards and construction documents. Finally, the presenter will discuss R-value in some depth, including its definition, how insulation provides R-value, and the scientific reasons why polyiso exhibits measurably higher R-value than other types of insulation.
- **Summarize insulation history:** Describe fiber insulation, foam insulation, and “ci”. A brief history of building insulation materials is presented. Fundamentals of R-value and the behavior of fiber and foam insulation is explained. Building code continuous insulation (ci) requirements and typical materials used for compliance are presented.
- **Describe the development, testing, and features/benefits of PIR insulation in building construction applications:** The presenter will discuss the origin of PIR, how long it’s been on the market, how it’s made, and where it’s commonly used. Additional discussion topics include the properties required in the PIR standard specification ASTM C1289, PIR compliance with code-required fire safety, and the benefits and limitations of PIR use in building envelope applications.
- **Compare PIR to other plastic foam in wall insulation applications:** Compare physical properties and fire safety properties of PIR with other plastic foam insulations. Other products compared are spray polyurethane foam (SPF), expanded polystyrene foam (EPS), and extruded polystyrene foam (XPS).
- **Compare PIR to mineral wool (MW) in wall insulation applications:** Compare the physical properties and installation requirements of PIR and MW for wall applications. Address compliance with fire safety requirements and fire risk assessment. Present comparative behavior of PIR and MW when subjected to short-term water immersion.
- **HSW Justification:** Continuous insulation, or “ci”, is prescribed by building code as it dramatically improves buildings’ energy efficiency, which saves money and reduces environmental impact. Ci can also improve occupants’ comfort by enabling the building’s climate control systems to maintain the temperature set point. Ci can also keep critical wall components above the dew point, which prevents condensation and frost that can cause mold growth, corrosion, and rot. Condensation prevention can also contribute to the durability of the building’s shell and preservation of life safety elements such as the anchoring system of the building facade and even the structural integrity of the wall. Polyiso provides all of these ci features, while also complying with code-mandated fire safety.

**Course Level, Intermediate - For individuals who have some knowledge of the subject area**



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