

Air Leakage Control Installer (ALC)

CERTIFICATION SCHEME HANDBOOK



Notice

Anyone interested in becoming BPI certified as an Air Leakage Control Installer, will need to know the scope of the certification and all requirements.

This certification scheme handbook outlines the knowledge, skills and abilities needed for individuals to become certified as an Air Leakage Control Installer.

Information in this handbook represents the policies at the date of publication for the BPI Air Leakage Control Installer certification. Information in this handbook supersedes information contained in any previously published documents.

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Acknowledgements

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Disclaimer

Eligibility standards, exam content, exam standards, fees, and guidelines are subject to change. BPI will keep the most up-to-date version of this document posted at www.bpi.org. Prior to participating in any available service through BPI, check to ensure that you have based your decision to proceed on the most up-to-date information available. BPI reserves the right to modify documents prior to accepting any application.

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1. About BPI

Founded in 1993, the Building Performance Institute (BPI) is the nation's premier certification and standard-setting organization for home performance professionals. BPI is accredited by the American National Standards Institute, Inc. (ANSI) as a developer of American National Standards and as a certifying body for personnel credentials. BPI develops the technical standards for home energy audits and for energy efficiency, health, and safety improvements. From these standards, BPI develops rigorous written and field exams resulting in one of BPI's 14 professional certifications. BPI understands the importance of impartiality in carrying out its certification activities, manages conflict of interest, and ensures the objectivity of its certification activities.

BPI also offers three programs (BPI GoldStar Contractor for companies, Rating Program for raters, and BPI Product Listing for manufacturers) and three certificates (Building Science Principles, Healthy Housing Principles, Site Supervisor). BPI Certified Professionals hold over 12,000 active certifications supported by over 100 BPI Test Centers and 250 Proctors nationwide. BPI has BPI Goldstar Contractors across the country.

BPI is a 501(c)3 corporation registered in the state of New York. The corporation was incorporated on January 18, 1996 and the corporation number is 14-1789014. The objective of the corporation is to provide credentialing for individuals and corporations involved in the residential retrofit industry. BPI is headquartered in Saratoga Springs, NY.

2. BPI Certification Schemes

BPI offers individual certification in a number of areas in the residential retrofit industry.

The certification schemes are developed and then reviewed on an on-going basis by scheme committees made up of subject matter experts – individuals with the credentials and experience within the industry. The scheme committee review statistics, industry changes and current certification scheme requirements on a regular basis.

Industry input on each certification scheme is encouraged. The scheme committee members will seek input from external sources including, but not limited to:

- industry associations
- professional groups
- government agencies
- consumer/owner advocacy groups

The certification outlined in this scheme handbook is for installers who are involved in the retrofit of existing residential buildings. For a full listing of certifications, see the www.bpi.org website.

For individuals to become BPI ALC certified, successful completion of a written exam to confirm the candidate's knowledge and skills (which will be given orally) and a practicum evaluation is required to confirm the candidate's abilities.

To be certified by BPI, the candidate is not required by BPI to undergo any specific training, whether that would be on-site job training or classroom training. BPI does not approve any training programs. It is up to the individual to decide what training they want to take and where to take it, as it is solely their decision.

The requirements for this certification will be reviewed every five years and modified as required by the scheme committee with input from the residential retrofit industry. Modifications to the certification scheme will be made by BPI on the basis of the non-compliance cases, feedback from industry and technical changes to materials, components, systems, building codes or other relevant items.

3. Outline of the Air Leakage Control Installer Certification

This certification scheme handbook outlines the knowledge, skills and abilities requirements for the Air Leakage Control Installer certification.

This scheme defines the scope of the installation of specific air leakage control measures in accessible and inaccessible unconditioned and semi-conditioned spaces of existing residential homes. These specific measures represent typical air leakage control applications and incorporate the principals of air leakage control, which then can be applied to most air leakage control locations.

Installers will demonstrate their abilities to reduce uncontrolled air movement by creating continuous durable air pressure boundaries in attics, side attics, crawl spaces and other accessible buffer zones by installing and connecting appropriate materials in a durable fashion.

This work includes:

 preparation of attic spaces and crawlspaces including confirmation of air sealing completeness before the installation of loose fill, blanket, or rigid board insulation

The scope of this certification scheme is limited to existing buildings, which are not greater than three stories and does not include:

- sealed flexible mechanically attached membranes, such as the belly wrap under mobile homes or water resistive barriers behind siding
- interior and exterior finish details and more complex housing types
- work scope development or alteration, health and safety analysis, including mechanical ventilation, combustion system analysis or alteration
- installation of loose fill insulation (mineral fiber, fiber glass, cellulose)
- installation of batt or blanket insulation in open walls, attics, or floors
- installation of rigid board insulation
- installation of spray polyurethane foam insulation
- installation of damp spray, wet spray, or insulation blown behind net
- installation of membranes, such as belly wrap under mobile homes or water resistive barriers behind siding in mobile home cavities
- roof vent and gable vent installation or replacement
- access techniques to key framing junctures and limited clearance areas

- skills required to complete all types of insulation in all types of residential construction.
- commercial construction air sealing skills or certification requirements including carpentry, roofing, siding, plastering and drywall, and standard insulation; nor requirements of licensed specialty trades or advanced installation techniques requiring instrumented diagnostic testing or analysis

This document is intended to include all of the tasks an Air Leakage Control Installer may perform, as well as the knowledge, skills, and abilities required to do these tasks. This certification scheme is not an installation standard, an application standard or standard work specification.

Please note that certification is not a license to practice. All certified persons must comply with applicable federal, state and local laws and regulations governing the profession.

4. Preparing for the ALC Exam

There are no prerequisites to take this exam or become certified. Before you register for the exam:

- Download the latest version of the BPI Air Leakage Control Installer scheme handbook from www.bpi.org
- Read and understand all information
- Refer to the Knowledge, Skills, and Abilities to be sure that you understand and can perform the tasks required for this certification
- Obtain reference materials for the field exam and study well in advance of taking the exam

4.1 Special Testing Accommodations

Candidates in need of special testing accommodations, such as a language barrier, or arrangements for persons with disabilities, will submit the appropriate forms as noted in Appendix (C and D).

Candidates under the age of 18 will need to submit the *BPI Parental or Guardian Consent and Wavier of Liaibility Form for Candidates Under the Age of 18* as noted in Appendix E. Candidates will not be allowed to proceed with taking any BPI exams unless this form is signed and completed.

It is highly recommended that you submit your request for accommodation at least thirty (30) days prior to your preferred exam date.

4.2 Proof of Identity

Candidates must provide valid photo identification prior to taking the exam. Please make sure that when registering for the exam, the name used is the same that is listed on the valid photo ID.

Examples of acceptable forms of photo ID are:

- driver's license
- state issued photo ID

- passport
- military identification
- employee identification card

4.3 Certification Fees and Scheduling

BPI certification exams are provided through BPI Test Centers. Please reach out to a local BPI Test Center for fees and scheduling details of exams, as they will vary from Test Center to Test Center. To locate a BPI Test Center, please go to the BPI website (www.bpi.org) and select **Locator** from the top of the page.

BPI does not set schedules for its Test Centers, nor does BPI collect the exam fees.

5. Oral (Verbal) Exams

For this certification, a verbal test instrument will be administered in order to ensure competency in the critical tasks defined by BPI. Candidates' responses to the verbal questions will be recorded to provide documented evidence that they have the appropriate knowledge and skills for certification when the minimum requirements have been met.

The BPI test instrument, covering both knowledge and skills, will be provided orally for this certification by a BPI Test Center proctor. This oral exam will be administered during the time candidates are undergoing the abilities exam. This means that candidates will be asked questions during the time they are demonstrating their abilities.

The verbal exam focuses on the key areas of knowledge and skills for this certification and is weighted appropriately in regards to the critical functions required.

The oral exam is comprised of forty (40) questions to cover knowledge and skills.

The questions have been developed at a grade 8 English language level.

The passing mark for the oral exam is ninety percent (90%).

Use of any notes, other manuals or materials during the exam is strictly prohibited.

Future discussion or disclosure of the content of the exam, orally or in writing, or by any other means, is prohibited.

Upon failure of the oral portion of the exam, the candidate will be required to re-take the oral portion of the exam in it's entirely and will have one (1) hour to complete it. There is a fee associated for the retake of the exam.

Theft or attempted theft of exam items is punishable to the fullest extent of the law.

Candidates will be observed at all times while taking the exam. This includes direct observation by the examiner as well as audio and video recording of your exam. Their participation in irregular behavior during the exam may result in the invalidation of the results of their exam, termination of their status,

civil liability, criminal prosecution, or other appropriate sanctions.

6. Practicum (Field) Evaluation (Abilities)

A practical evaluation to determine the candidates' abilities has been developed by BPI in order to ensure competency in the critical tasks defined by BPI. This will provide documented evidence that the candidates have the appropriate abilities.

The practicum evaluation exam is constructed where candidates are requested to perform a task. The candidates are provided direction and given the proper tools and equipment to undertake completing the task. Their abilities are then evaluated based on a predetermined set of criteria.

There are eighteen (18) performance line items covering fifty-one (51) abilities to be shown. Three (3) of the eighteen (18) props are gated items and must be completed successfully in order to pass the exam regardless of any other overall score (Large hole with heat source, non-IC recessed light, and full height metal clearance).

The minimum passing score of the fifteen (15) non-gated props is 93%.

The candidates will follow the instructions outlined in the abilities section of the functions and tasks outlined in this document. The candidates will complete the tasks on a single air leakage point and then confirm that the point is air tight by depressurizing the chamber behind the mock-up. If chemical smoke is drawn into the mockup, this indicates that the air leakage control has not been performed adequately.

If the proctor sees evidence of air leakage by the smoke being drawn into the mock-up, the candidate will have the opportunity to make any corrections they see fit. Upon completion, the mock-up will be retested. If there is any evidence that the chemical smoke is being drawn into the mock-up on the second test, then this is considered a failure for that specific air leakage point.

Upon exam failure, the candidates will retest only on the specific air leakage points where the appropriate abilities were not confirmed. When retesting, there is no requirement to show abilities on the air leakage points where they were able to seal the mock up in two tries or less, only the ones that showed air leakage after the second try.

The practicum evaluation will have the candidates demonstrate the ability to properly and completely seal all air leakage and exterior duct leakage in attics, side attics, crawlspaces, attached garages and other areas between conditioned space and outside or attached units as confirmed by visual inspection and smoke test during blower door operation. All materials will be used within their listing for temperature and exposure and installed in conformance to all applicable codes and to manufacturer's recommendations. Seals will be continuous, durable, able to support all expected loads, and impermeable to airflow as indicated by chemical smoke at a pressure difference of 75 Pascals.

The time length for the oral exam and practicum evaluation for abilities will not be greater than seven (7) hours in length.

Use of any notes, other manuals or materials during the practicum evaluation is strictly prohibited.

Candidates may challenge the ALC field exam up to six (6) times in a one-year period. The one-year period begins after the first unsuccessful attempt of the exam, after which time a candidate will have

five (5) more attempts to successfully challenge the exam. There is a cost for each exam. BPI permits twelve (12) months to complete the certification process from the time a candidate takes the first exam.

The practicum evaluation is administered through BPI Test Centers at various locations across the United States. Please go to the BPI website (www.bpi.org) and select **Locator** at the top of the page to find a BPI Test Center near you.

7. Functions and Tasks

The Knowledge, Skills, and Abilities required for this exam are below.

- K = Knowledge, shown on written or verbal test
- S = Skill, shown on written test, diagram, or interactive tool
- A = Ability, demonstrated on prop or in house

#		Description of Task or Function	Reason	K	S	Α
1		Before work				
	а	Choose basic personal protective equipment needed for air sealing work in attics and crawlspaces (N95 dust mask or better, safety glasses, gloves, coveralls, kneepads).	Reduce injury and irritation.			X
	b	Demonstrate knowledge that fires can start when a burnable material such as a wood product, paper facing, rubber caulk or plastic foam contacts a heat source like a chimney or metal flue; or insulation traps heat over a non-IC recessed light or improper wiring.	Prevent fires.	Х		
	С	List an example of a non-combustible airtight material suitable for contact with a chimney heat source.	Recognize safe material.	X		
	d	List an acceptable sealant for contact with the heat source.	Recognize safe material.	X		
	е	Demonstrate knowledge that combustion products can hurt the occupants and damage the building unless all fumes go up the chimney before and after air sealing work, whether fans are on or off.	Carbon Monoxide buildup, other fumes and extra moisture.	Х		
	f	Demonstrate knowledge that solid materials like gypsum board ceilings, plywood subfloors and wall sheathing stop air and only allow air leakage between sections at open joints, gaps, penetrations, framing edges, chases, ducts, and transitions between materials and assemblies.	What to attach to, where to look for air leaks.	Х		

#		Description of Task or Function	Reason	K	S	Α
	g	Demonstrate knowledge that that foam with gaps, loose fill and batt insulation can't work properly when air moves through it or circulates between insulation and the interior.	Air can carry heat and cooling away.	Х		
	h	Inspect and don proper personal protective equipment (PPE).	Confirm that the installer has basic safety and construction skills to conduct work.			x
	i	Demonstrate safe and proper use of hand tool and power tools including utility knife, sheet metal snip, hammer, pry bar, screw gun, caulk gun, ½ inch electric drill with side handle and 2 9/16 self-feed bit, reciprocating saw.	Installer needs to be able to use proper tools for the work.			Х
	j	Demonstrate knowledge of basic construction materials and proper materials-handling techniques.	Installer needs to know what materials need to be used and when they can be used.	X		
	k	Demonstrate knowledge that floor or wall cavities used as ducts must be blocked from the exterior with material rated for use in ducts: i.e. ductboard or metal plus mastic sealant. Show on diagram where to block between floor return and open exterior wall.	Ducts open to exterior walls are duct leaks just like attic or crawlspace ducts and require similar materials.	X		
2		Uncover bypasses (interactive tool, prop or house)				
	а	Locate and uncover bypasses from crew leader's diagram or instructions. In a selected area, move insulation and other obstructions aside to expose all sides of bypass openings across any framing to intact surface of solid finish material.	Prepare to seal solid to solid material. Find all fire and other hazards.		Х	
	b	Demonstrate ability to distribute body and equipment weight while in the attic to avoid damage to interior finish materials	No damage to building or workers.	Х		
3		On each of the following specific tasks 3.1-3.8 (in house: first find and uncover): • Select the appropriate materials • Cut to fit • Seal continuous airtight	Learn the steps and repeat at each detail.			

#		Description of Task or Function	Reason	K	S	Α
		Confirm seal with chemical smoke ¹ (with the blower door or fan on prop running)				
#		Description of Task or Function	Reason	K	S	Α
3.1		Close and seal large opening (no heat source).				
	а	Select rigid air-impermeable barrier material that matches use and exposure: - air impermeable - strong enough to support expected weight or pressure - listed for use uncovered in attic and crawlspaces, gypsum board or equal if open to interior	Reduce opening to what sealant can bridge. Material must allow a permanent, stable repair.			X
	b	Infill framing to match existing where opening is wider than 24" or required for support of air barrier material.				Х
	С	Cut material to fit opening: friction fit if inset or lap >1" on edges if folded for inset stapling or lapped across opening.			х	
	d	Fasten edges where needed to stabilize until sealant is set or to prevent movement or sag.			Х	
	е	Seal edges with foam, caulk, or mastic; include all secondary gaps, openings, offsets and penetrations between barrier and surrounding substrate.			х	
	f	Check with chemical smoke to confirm the seal is complete and continuous all around and adheres to both substrate and barrier material.				х
3.2		Large opening with heat source (chimney): provide barrier and sealant materials that won't burn or melt.	Code requires clearance to combustibles. Surface of wood or oil chimney pipe can reach ignition temperatures.			

¹ Checking with smoke is an ability that is repeated with each specific air sealing skill because air sealing is not complete until it is confirmed complete. Hidden gaps and incomplete contacts are common and if any are present this technician needs to know and finish the job before he moves to the next task.

#		Description of Task or Function	Reason	K	S	Α
	а	Select air-impermeable noncombustible barrier: sheet metal, flashing or cement board. Select non- combustible sealant.	Must stop air. Plastic foam melts and burns-not allowed. Duct board not listed above 150° F.			Х

#		Description of Task or Function	Reason	K	S	Α
	b	Cut metal with shears, utility scissors or knife to fit. Make circle cut from both sides at chimney allowing 3-4" extra length for overlap and 2" extra width for edge folding/fastening to framing.	Cutting and folding sheet metal needs different skills than cutting other materials.			X
	С	Fold edges of metal barrier to fit between framing members and to provide inset stapling flange.	Improves stiffness and strength of attachment.			Х
	d	Fasten perimeter with staples or screws and seal to substrate with normal sealant foam or caulk.	If you foam before stapling it is a mess. Perimeter will leak air if not sealed. Okay to set bead of caulk first.			X
	е	For heat sources in large chases: maintain non-combustible material to beyond 2" clearance space and make transition to standard rigid barrier on remainder. Provide fold or framing at transition for stiffness. Use non-combustible sealant within clearance space.	Some chases are too large for rolled metal flashing.			×
	f	Select noncombustible caulk to seal gap between barrier material and chimney including any laps in barrier, with sealant that meets ASTM 136; alternate for propane/natural gas-only vents 600 degree F Silicone RTV sealant listed for use on gas vents. Demonstrate ability to select sealant appropriate to the temperature requirement of the chimney to seal gap between barrier material and chimney including any laps in barrier.	Match material to temperature requirements of chimney or vent.	X		
	g	Apply noncombustible caulk to seal gap between barrier material and chimney including any laps in barrier. Sealant must extend onto facing.	Complete the seal and maintain fire safety.			x
	h	Confirm with smoke and touch up as needed.				Х

#		Description of Task or Function	Reason	K	S	Α
3.3		Foam at gaps and over backer	Sealant of choice in attics, crawlspaces, etc.			
	а	Option: demonstrate ability to apply 1 part foam for gaps up to 1-5/16" wide annular space at penetrations and 1-1/2" depth - full thickness of plate for fire stop.	Make continuous airtight seal. Follow conditions for use in International Code Council (ICC) Evaluation Service (ES) report, UL listing. Range of temp.			X
	b	Demonstrate knowledge that 2-part sealant foam may be used for gaps up to 2" wide without backing.	Make continuous airtight seal. Fastest and most flexible. Flows into gaps best.	x		
	С	Provide fiber glass or mineral wool backing material under foam for gaps up to 4" wide (wall tops) and where ignition barrier is required between foam and interior.	Provides support during cure time; ignition barrier to interior.			Х
	d	Demonstrate need for rigid backer for foam for openings > 4" wide; gypsum board or equal where a thermal barrier is required (variation on 3.1 barrier above with up to 2" gap allowed for foam).	Rigid backing recommended for large openings.	X		
	е	Inject foam into adjacent smaller gaps and penetrations.	Airtight seal at all leaks in specified area, no omissions.			х
	f	Foam at least 1" onto substrate and barrier material in a continuous seal.	Bond to adjacent materials.			х
	g	Confirm with smoke and touch up if needed.	1-part foam gaps >1" can leak at dimples and spots where it lifts away from surfaces.			х
3.4		Sealed airtight box over non-IC recessed light that conforms to NFPA 70 (national electric code) and fixture requirements.	Fire hazard. Elec. Code requires clearance. Many recessed lights will not be changed to			

#		Description of Task or Function	Reason	K	S	Α
		Demonstrate knowledge that: no insulation above or within 3" of sides including any wiring box and ballast.	sealed IC or flush mount. Air sealers should know what to do.			
	а	Demonstrate ability to measure barrier and cut enough to maintain side clearance from insulation of 3 inches or more around fixture and any attached wiring boxes for full height of insulation.	Non-IC lights are proven fire hazards in contact with or under insulation.			X
	b	Demonstrate ability to provide air-impermeable non-insulating top panel of ½" gypsum board or equal that extends to meet all sides	Gypsum board allows drying both ways and works in many climates. Avoid cold side vapor retarders like metal or covers that could melt.			X
	С	Demonstrate ability to cut or notch sides to fit over irregularities and reach to ceiling.	For air tightness, box must seal to ceiling and all edges.			х
	d	Demonstrate ability to seal all joints and seams in box and between box and ceiling with foam, mastic, sealant, compatible tape, or joint compound with joint tape.	To make air barrier continuous over fixture.			Х
	Ф	Check with smoke and touch up as needed.	Check your work is complete before moving on.			Х
3.5		(Exterior) duct sealing with mastic and mesh tape.	Ducts are still air leaks when they are off. Air sealers will be the only ones to see them and should know what to do. Different sealing skills are needed.			
	а	Demonstrate ability to open duct insulation to seal connections at joints, takeoffs, boots, trunks and gaps to interior (duct chases and register boots).	Duct wrap does not stop leakage.			х
	b	Demonstrate ability to fasten loose metal duct sections with zip-in screws	Reconnect and keep from falling apart in attic or crawlspace.			х

#		Description of Task or Function	Reason	K	S	Α
	С	Demonstrate ability to provide mesh tape on moveable joints and gaps >1/4". Provide infill metal as required and duct tape on wide gaps >3/4" and lap mesh tape 1" beyond duct tape.	Stronger joint, supports mastic and prevents fallout.			X
	d	Demonstrate ability to provide mastic over mesh tape and just mastic on all joints < 1/4".	Makes ducts continuous.			Х
	е	Demonstrate ability to join flex duct liner to start collar with mastic, hold with tie strap and zip-in screw.	Attach airtight and keep flex liner on start collar.			Х
	f	Demonstrate ability to seal between duct boot and substrate with mastic, acrylic sealant or joint compound plus tape.	Opening to interior finish, sealant must match if visible.			х
	g	Demonstrate ability to seal duct chase from metal to ceiling or other substrate as above at 3.1 or 3.3 with sealed barrier or foam over backer.	Connect air barrier across opening – airflows in chase can now benefit interior.			Х
	h	Demonstrate ability to check all joints visually, confirmed with smoke.				Х
3.6		Extend air barrier: Box around pipes in attic, box over drop down stairs, box behind built-ins open to attic. Thin membranes, like house wrap	Protect pipes from freezing. Bring operable/critical details inside. Move air/thermal barrier to where it is practical and reduces risk			
	а	Demonstrate ability to select barrier material: rigid foam, ductboard or supported air impermeable membrane to enclose pipes, built-ins, open drawers, provide sealed box with lid over drop down stairs.	Pipe insulation only works for a short time if pipes are isolated.	Х		
	b	Demonstrate ability to open any flooring or cavity to expose finish on all sides where box will be placed (uncover).	Open cavities allow air to short circuit the cover.			х
	С	Demonstrate ability to remove any insulation or other debris between pipes and interior.	Don't isolate pipes.			Х

#		Description of Task or Function	Reason	K	S	Α
	d	Demonstrate ability to notch barrier to fit around all framing at perimeter of enclosure box back to interior finish material. Alternate: seal perimeter below flooring to interior finish all around in separate step and seal barrier to flooring.	Leave no escape for air or any short circuits around barrier.			X
	е	Demonstrate knowledge that some air barrier materials need a spacer to protect them from heat and sharp edges at steam or hot water pipes.	Don't melt or tear air barrier.	Х		
	f	Demonstrate ability to install air barrier box or supported membrane in a continuous fashion, with adequate fasteners to maintain attachment. Alt: fasten frame and attach weatherstrip seal at operable cover over drop down stairs or whole house fan.	Keep barrier in place and allow sealant to cure without movement.			X
	g	Demonstrate ability to seal seams and perimeter of barrier material.				Х
	h	Check with smoke and touch up as needed.				Х
3.7		Unducted fan in attic, Extend new insulated duct from exhaust fan to exterior, seal assembly.	Exhaust fan gap to finish, housing, and dampers all leak.			
	а	Select insulated flex duct for bath fan and metal duct for kitchen fan. Match duct diameter to meet or exceed cross sectional area of fan exhaust.	Minimize back pressure and prevent condensation.		Х	
	b	Match duct length and elbows for smooth turns and no excess length. Cut and fit, fasten sections	Quietest fan operation and best flow with least resistance.			Х
	С	Show on diagram where to install termination at exterior wall, roof or soffit. Select termination size to meet or exceed cross sectional area of duct.	Find the shortest route to the location with the least risk of water entry.		Х	
	d	Show where connections and seals are needed to make duct airtight to the exterior. Show termination with attachment or add connector for airtight exhaust duct attachment through sheathing or soffit.	Prevent new condensation from fan exhaust. Deliver 100% of fan exhaust to exterior.		Х	

#		Description of Task or Function	Reason	K	S	Α
	е	Demonstrate ability to seal and fasten duct to fan housing and termination, use tie straps and retaining screws.	Complete the connection.			Х
	f	Demonstrate ability to seal fan cabinet and gap to substrate. Provide tape or backing to keep sealant in place.	Seal all gaps from interior finish to termination.			X
	g	Check with smoke and touch up (negative pressure).	Confirm seal complete.			Х
	h	Check with smoke and correct (positive pressure).	Confirm airflow out of fan – dampers operate okay.			Х
3.8		Weatherstrip door. Install on prop ALC mockup 8; or side attic door, drop-down stair, access hatch, basement, or exterior door.	Different abilities than other sealing. Operable part of attic air barrier or ext operable door			
	а	Select stop-type weatherstrip with flexible gasket and carrier adequate to close gap between operable door and frame.	Door weatherstrip often leaks air when new or with "normal" retrofit.	Х		
	b	Demonstrate ability to cut to fit, miter corners tight, set in bead of sealant.	See gaps are closed at all irregularities.			Х
	С	Demonstrate ability to install weatherstrip fitted tight to door in closed position. Fasten in place (prop, if used, must provide access to all sides for fitting and visual inspection).	See that compression seal contacts all surfaces.			X
	d	Demonstrate ability to check door operation and closure so function is okay.	Door must still operate.			X
	е	Check with smoke, adjust as needed, and improve seal to stop smoke movement				Х
4		Check for completeness of airsealing in specified area. Uncover all gaps openings and penetrations in specified area.	So far only 1 example of each type has been done. Connect all parts to assemble a pressure boundary			
	а	Demonstrate ability to seal airtight any remaining gaps and openings between individual details	Candidate can complete a specified area.			Х

#		Description of Task or Function	Reason	K	S	Α
		inside specified section to complete specified attic/crawlspace section.				
	b	Demonstrate knowledge that all includes connecting to adjacent section. Show seal at perimeter of specified section to connect to other sections.	Connect sections, connect attic to wall, leave no escape route for air.		X	
	С	Candidate Visual check: confirmed seals complete with chemical smoke during application.				X
	d	Confirm material Confirm cut and fit Confirm seal 100% Confirm no smoke movement at 75 pa				X
5		General				
	а	demonstrate knowledge that fires can start when a burnable material such as a wood product, paper facing, rubber caulk or plastic foam contacts a heat source like a chimney; or any insulation traps heat over a non-IC recessed light or improper wiring.	Recognize a heat source-chimney vent or fireplace in wall. Don't cause a fire.	х		
	b	Recognize recessed lights from above, knob and tube wiring, other wiring hazards to avoid. Open junction boxes and unsupported connections outside of boxes.			Х	
5.1		Set up				
	а	Confirm Crew leader has issued OK to proceed with job and no stop work conditions are present.	Prep and install requirements may change.	х		
5.2		Attic airseal and prep				
	а	Demonstrate ability to uncover wall tops and potential openings in specified area. Confirm all major details air sealed, ducts and duct insulation sealed, recessed lights and heat sources sealed, clearance maintained and fans vented out. See the Air Leakage Control Installer Certification Scheme Handbook.	Confirm all bypasses sealed. Check air seal basics.			х
	b	Select metal for clearance dam at chimney with width that will end up full height of insulation or taller; i.e. Add 1" bottom flange and 2" top fold to height of insulation.	Choose non- combustible dam material in width that will maintain			Х

#		Description of Task or Function	Reason	K	S	Α
			clearance full height after folds.			
	С	Demonstrate ability to fold metal in Z shape with top 2" in toward chimney and bottom 1" out for fastening, full height of insulation or taller.	Prevent filling clearance space with insulation.			Х

#		Description of Task or Function	Reason	K	S	Α
	d	Demonstrate ability to install metal clearance dam. Fasten down, fold in, and fasten lap.	Keep combustibles away from heat source. Maintain clearance required by code and listing of combustion vent.			X
	е	Demonstrate ability to provide soffit vent chute and wind block or pack under chute over outside top plate. Maintain 1" open between chute and roof deck (set prop to high slope 8:12 or greater for access).	Direct airflow from vent up along roof. Prevent wind wash at edges.			X
	f	Demonstrate ability to pack tight or stuff edge over top plate to roof in an area without soffit vents.	Stop wind and get most R-value at edge.			Х
	g	Demonstrate ability to apply R8 faced duct wrap with joints taped over un-insulated duct section that has been confirmed sealed.	Stop sweating on AC ducts in summer with vapor barrier (vb) facing and drips inside in winter with insulation. Half of attic duct losses are conduction.			X
	h	Show sample of clearance dam at attic access and border between floored and loose fill attic insulation to full depth of insulation and with wood, plywood or OSB.	Allow full insulation depth to dam. Prevent spills.		Х	
	i	Show insulation on access door or hatch, fastened; show R value as close to adjacent building section as practical.	No voids in insulation; Keep R value even.		Х	
5.3		Dense pack wall insulation skills				

#		Description of Task or Function	Reason	K	S	Α
	а	Demonstrate knowledge that crew leader directs setup of equipment to manufacturer's instructions and contractor's policies, checks power supply and machine operating pressure and all house preparations are complete, including blower door for cavity smoke test.	Follow regulations and firm's standard work process.		Х	
	b	Demonstrate knowledge of siding removal and replacement, lead safe protection for interior drilling or other wall access method is performed with minimum damage following all regulations, contractor's policies and scope of work, with access holes plugged after filling, including a basecoat patch at any gypsum openings and water resistive barrier repaired to restore original function where opened.	Protect property, workers and occupants.	X		
	С	In specified section of house wall or on prop, drill holes for insertion tube to access all cavities. Create step-by-step grid that creates access to 100% of surface with drill, probe and tube.	Dense pack air leakage reduction requires 100% of hidden cavities packed. Leave no hidden escape paths for air and no voids. Irregular and open framing is common.			X
	d	Choose location for first hole; likely to be away from corner framing at a height convenient for inserting tube. Test back and forward with probe, both ways side-to-side and open a hole just past the next stud and repeat to access all stud cavities over 1" wide, even if framing isn't irregular. Recheck with probe to confirm no missing spaces.	Check so no vertical cavities are missed. Existing wall framing is often irregular and each cavity must be confirmed. This tube is for basics; thin cavities and other methods are for later.			X
	е	Insert sidewall tube into first hole. Check that tube reaches full height up and down, repeat on each stud space and make openings needed to access the other side of each horizontal blocker. Drill an additional hole beyond each horizontal blocker if insert tube won't go all the way to the end of each cavity, until you are sure the whole section is open.	Check so fill is full height with no voids. Check length of tube inserted against distance to end of cavity.			Х

#		Description of Task or Function	Reason	K	S	Α
	f	Blow density test box and measure weight change Readjust blower settings and repeat until required density is met or exceeded in test box.	Confirm blower adjustment.			x
	g	Insert tube and completely pack one cavity.	Demonstrate proper installation.			Х
	h	Stop and check first cavity with smoke before proceeding to remainder, house at 75 Pa. Turn fan or blower door to 75 Pa house pressure. Smoke check in undisturbed material away from installation hole.	Smoke test shows cavity airflow until it is stopped. Confirm installation before proceeding.			Х
	i	Demonstrate airflow through adjacent empty cavity with smoke to show walls leak. Confirm conditions for the test are in place.	Candidate recognizes air movement through cavities before their work. Show target airflow.			X
	j	Pack three or more wall cavities full, with insertion tube to provide consistent pack in whole cavity (test fan off). Check all three cavities with smoke at 75 Pa at undisturbed holes.	Confirm complete fill.			Х
	k	Compare selected area completed with first bag blown to confirm installed density.	Confirm material use matches coverage requirement. Alerts you to blowout or incomplete fill.			Х
5.4		Dense pack floor insulation skills				
	а	Floored attic option: select small section of floor 3-4 cavities approximately 6 feet long and provide an additional bag for the test. Open floor cavities for dense pack demonstration under floor.	Open floor cavities to test to same density as wall			X
	b	Adjust machine to pack density test box to target weight with wall tube or 2" diameter hose. Blow density test box & measure weight change Readjust blower settings and repeat until required density is met or exceeded in test box	Confirm blower adjustment meets nominal density before installation			x

#		Description of Task or Function	Reason	K	S	Α
	С	Dense pack first cavity specified floor area with wall tube, alt: 1.5-1.75" diam. tube, or 2"diam hose.	Get feel for installation, get complete pack, and avoid clogs			Х
	d	Check first packed floor cavity opening with chemical smoke at 75 Pa. before blowing remainder. (adjust to get no visible smoke movement)	Confirm installation meets required density before proceeding			X
	е	Pack remaining 2-3 cavities in test section and check with smoke				Х
	f	Compare selected area completed with first bag blown to confirm installed density.	Confirm density installed as you go and at end of job. Alerts you to blowout or incomplete fill		Х	
5.5		Crawlspace				
	а	For crawlspace prep: confirm crew leader looked to confirm bypasses sealed or directs crew to seal remaining openings; drainage acceptable and no hazards or contaminants will stop work.	Okay to go. No "stop work" conditions.	X		
	b	Uncover and seal any remaining bypasses and duct leaks as per the Air Leakage Control Installer Certification Scheme Handbook.	Priority before insulation.	х		
	С	Lay 6-mil or thicker poly sheet over bare earth extending to all edges and fastening to wall where possible. Lap seams 12" and seal where accessible.	Ground cover first, before all sealing or insulation.		Х	
	d	Reduce wall ventilation to 1/1500 with operable vents.	Extra outdoor air increases summer crawlspace moisture in most areas.		Х	
5.6		Crawlspace wall seal and insulation combined				
	а	Ground cover in place, vents blocked.	Reduce surface area and leakage.		Х	
	b	Provide 2" rigid fiber glass board with Flame Spread 25 facer or 2" foam board rated for uncovered use over 4x4 section of crawlspace	Sealed barrier and insulation in one step.			X

#	Description of Task or Function	Reason	K	S	Α
	wall surface, notched to fit up to subfloor with				
	joints taped and perimeter sealed with foam.				

8. Granting

In order to receive ALC certification, the candidate must successfully complete both the oral (verbal) and practical (field) exams.

8.1 Notification of Exam Results and Certification

Once exam results have been processed the candidate will be able to log in to their <u>Candidate Account</u> to view exam results.

The BPI Certified Professional will be notified once BPI certification has been awarded. BPI Certified Professionals may log into their <u>Candidate Account</u> and retrieve a digital copy of their active certification(s) and ID Badge to use on their mobile device or print from a PDF.

The certificate will expire three (3) years from the date of initial certification.

The photo identification certification card contains, but is not limited to:

- name of the Certified Professional
- BPI ID number
- BPI's name and logo
- reference to a certification scheme (name of certification)
- date when certification expires

8.2 Time Limits for Completing Certification

BPI permits twelve (12) months to complete the certification process from the time a candidate takes the first exam. Candidates may challenge the ALC field exam up to six (6) times in a one-year period. The one-year period begins after the first unsuccessful attempt of the exam, after which time a candidate will have five (5) more attempts to successfully challenge the exam.

Candidates that do not successfully complete the ALC field exam and achieve certification within the one-year period, must wait for the one-year anniversary of the first unsuccessful attempt to challenge the exam again.

8.3 Extensions

BPI reserves the right to extend a Certified Professional's certification on a case-by-case basis. Certifications are not guaranteed to be extended; only under extenuating circumstances that BPI

deems warranted. If a certification is extended, any CEUs that were accumulated up to the point of the original expiration date will also be included in that extension.

8.4 Confidentiality of Information

BPI and BPI Test Centers shall adhere to all policies and procedures regarding candidate confidentiality and shall not release any information regarding any candidate or Certified Professional without obtaining prior written permission. BPI provides confidentiality clauses as part of the online registration process. These disclosure clauses are intended to assist BPI and the BPI Test Center to protect the candidate's or Certified Professional's information.

9. Certification Renewal

BPI Certified Professionals who hold the ALC Installer certification will be required to renew their certification every three (3) years.

The certification renewal requirements for BPI certified ALC Professionals must be completed prior to the current certification expiration date. Certified Professionals will be allowed to start the certification renewal process six (6) months prior to expiration, and if successful, will have the next renewal date as three (3) years from the current certification expiration date. If certification renewal is completed more than six (6) months in advance, the expiration date will change to the date of last successful exam.

To be eligible for certification renewal, BPI certified ALC Installers:

- must successfully challenge the ALC field exam prior to the expiration date, OR
- complete and submit the application for certification renewal with applicable fees

BPI's certification renewal policy recognizes the work experience of BPI Certified Professionals. This policy eliminates field exam requirements in certain circumstances according to verified work experience. This policy will benefit those Certified Professionals who maintain continuous certification and remain active in-home performance roles. Please refer to the BPI Certification Renewal Policy found in the Recertification section for ALC on the BPI website for further details.

As part of the certification renewal process, BPI will review the Certified Professional's file for any open complaints. Should there be any open complaints at the time of expiration, BPI will not award certification renewal. The certification of the individual shall be withdrawn or revoked due to the Certified Professional's negligent refusal to follow the certification scheme requirements.

*Any attempt at recertification that is unsuccessful will end the current certification. (e.g. if an attempt at the ALC field exam for recertification is unsuccessful, that will end the current ALC certification immediately.)

10. Surveillance

Surveillance of the Certified Professional is established to ensure compliance to the policies and procedures for which the certification was granted. The certification of the individual may be withdrawn

or revoked due to Certified Professional's negligent refusal to follow the certification scheme requirements or failure to take appropriate corrective action as required by BPI.

11. File Review

The Certification Department will conduct a file review of Certified Professionals that have complaints filed against them. The review of the Certified Professional's file activities includes confirmation that any complaints against the Certified Professional have been resolved.

12. Corrective / Preventative Action

The corrective / preventative action shall include one of the following and is determined on a case by case basis at the discretion of BPI:

Level One: A corrective action will be given when the infraction is considered minor in nature. A written warning shall be sent to the Certified Professional about the nature of the infraction along with the required corrective action. The written warning shall become part of the Certified Professional's record.

Level Two: A corrective action will be given when the infraction is considered major in nature and requires proof. A written warning is sent to the Certified Professional about the infraction. The Certified Professional is required to submit documented proof that the infraction has been corrected. The written warning and response will become part of the Certified Professional's record.

13. Withdrawal of Certification

Should the BPI certified Air Leakage Control Installer not maintain certification by not being able to fulfill the obligation of the certification due to illness, disability, change of profession, etc., the certification will be withdrawn at the request of the Certified Professional. BPI must be notified immediately if a Certified Professional may not be able to, or is no longer able to, fulfill the requirements of the certification.

BPI reserves the right, on a case by case basis, to withdraw a person's BPI Certification(s) at its discretion. Reasons for withdrawal of a BPI Certification include, but are not limited to:

- Failure to meet certification renewal criteria as outlined in Section 10
- Failure to take steps to submit the requested information of a corrective action as outlined in Section 13
- Failure to follow the BPI Air Leakage Control Installer Code of Ethics and/or Code of Conduct
- Failure to follow BPI Standards that align with the certification's JTA's, when applicable

In the event the BPI Air Leakage Control Installer certification is withdrawn; the BPI Manager of Client Relations will review the Certified Professional's record and send confirmation of the withdrawal within thirty (30) days and provide a written statement in regard to steps that must be taken if the candidate requests the certification be reinstated.

Use of the BPI logo or brand and representation of being BPI certified must cease immediately if a certification is withdrawn, revoked, or expired.

14. Appeal Procedure

Individuals who wish to file an appeal of a decision on certification, against the results of an ALC exam, or regarding the suspension of the ALC certification, must do so in writing.

Please Note: If a candidate chooses to challenge the exam that they are appealing, prior to the notification of a final decision on their appeal, the results of the appeal will be null and void, regardless of the outcome. The original score of the appealed exam will stand.

Appeal Process for Exam Review

To contest the results of an ALC exam, the candidate must follow the procedures, below:

- 1. A request for review must be made within thirty (30) days from the date of the exam. The request for review may be made in the following manner:
 - a. Submit the Exam Grade Appeal Form via the <u>BPI website</u>:
 Go to <u>www.bpi.org</u> and hover over **About Us** at the top of the page, select **Contact Us**.
 Enter your information and choose **Exam Grade Appeal** from the **Category** dropdown box.
 - b. Send a letter via registered mail to: Building Performance Institute, Inc. Attn: Appeals
 63 Putnam Street, Suite 202
 Saratoga Springs, NY 12866
 - c. Send an email to Appeals@bpi.org
- 2. The request for review must specifically state the reasons why the candidate believes the initial decision should be modified or overturned and provide information on the issue; or include a specific reference where required procedures were not followed.
- 3. The review will be carried out by the Quality Assurance (QA) Department. Review results will be forwarded to the Director, who will provide the decision to the candidate, via email, within thirty (30) days of receiving the request for appeal.

Appeal Process for Suspension of Certification

For a review of suspension or withdrawal of certification, the Certified Professional must follow the procedures, on the next page:

- 1. A request for review must be made within thirty (30) days from the date of the suspension or withdrawal of certification. The request for review may be made in the following manner:
 - a. Submit the Complaint Form via the <u>BPI website</u>:
 Go to <u>www.bpi.org</u> and hover over **About Us** at the top of the page, select **Contact Us**.
 Enter your information and choose **Complaint Form** from the **Category** dropdown box.
 - b. Send a letter via registered mail to:

Building Performance Institute, Inc. Attn: Appeals 63 Putnam Street, Suite 202 Saratoga Springs, NY 12866

- c. Send an email to Appeals@bpi.org
- 2. The request for review must specifically state the reasons why the Certified Professional believes the initial decision should be modified or overturned and provide new information on the issue; or include a specific reference where required procedures were not followed.
- 3. The review will be carried out by the Quality Assurance (QA) Department. Review results will be forwarded to the Director, who will provide the decision to the candidate, via email, within thirty (30) days of receiving the request for appeal.

15. Complaints

BPI recognizes that there are two main types of complaints that may be brought to its attention:

- Complaints regarding BPI and/or its related vendor organizations (administrative, testing, test center, proctor, etc.)
- Complaints regarding BPI Certified Professionals or organizations with BPI Certified Professionals on staff

Complaints Process

To file a complaint, the individual must follow the procedures, below:

- 1. A complaint must be made within thirty (30) days from the date that the situation occurred. The request for review may be made in the following manner:
 - a. Submit the Complaint Form via the <u>BPI website</u>:
 Go to <u>www.bpi.org</u> and hover over **About Us** at the top of the page, select **Contact Us**.
 Enter your information and choose **Complaint Form** from the **Category** dropdown box.
 - b. Send a letter via registered mail to: Building Performance Institute, Inc. Attn: Complaints
 63 Putnam Street, Suite 202 Saratoga Springs, NY 12866
 - c. Send an email to Complaints@bpi.org
- 2. The request for review must provide specific details for the complaint and any type of documented information that pertains to the situation.
- 3. The review will be carried out on a case by case basis by the Quality Assurance (QA)

 Department. Review results will be forwarded to the Director, who will provide the decision to
 the complainant, via email, within thirty to forty (30 40) days of receiving the complaint.

16. Comments

Submit any comments regarding the certification exams or processes to Certification@bpi.org.

Appendix A - Code of Conduct

By obtaining the Air Leakage Control Installer Certification, you are agreeing to the terms and conditions of BPI's Code of Conduct.

Code of Conduct

Certification may be denied, suspended, or revoked, if an individual is not in compliance with this Code of Conduct. Grounds for disciplinary action include (but are not limited to):

- An irregular event in connection with an exam, including (but not limited to) copying exam materials, causing a disruption in the testing area, and failure to abide by reasonable test administration rules;
- 2. Taking the exam for any purpose other than that of becoming certified in the technical area referenced in the title of the exam;
- 3. Disclosing, publishing, reproducing, summarizing, paraphrasing, or transmitting any portion of the exam in any form or by any means, verbal, written, electronic or mechanical, without the prior expressed written permission;
- 4. Providing fraudulent or misleading information;
- 5. Failure to pay fees when due;
- 6. Unauthorized possession or misuse of certifications;
- 7. Misrepresentation of certification status;
- 8. Failure to provide requested information in a timely manner;
- 9. Impairment of professional performance because of habitual use of alcohol, drugs, or other substance, or any physical or mental condition;
- 10. Gross or repeated negligence or malpractice in professional work;
- 11. Failure to maintain a current professional credential as required by the jurisdiction in which the individual practices (this may include a license, certificate, or registration);
- 12. The conviction of, plea of guilty to, or plea to a felony or misdemeanor related to public safety or the building industry;
- 13. Disciplinary action by a licensing board related to a building industry; and
- 14. Other failure to maintain continuous compliance with the certification standards, policies, and procedures related to your certification.

Disciplinary Actions

The following disciplinary actions may be taken as a result of non-compliance with this Code of Conduct:

- Denial or suspension of eligibility;
- Denial of certification;
- Revocation of certification;
- Non-renewal of certification;
- Suspension of certification;
- Reprimand; or
- Other corrective action.

Appendix B - BPI Certification Agreement

BPI Certification Agreement

ALC applicants will be required to accept BPI's Candidate Certification Agreement before beginning your exam. Make sure to read and be familiar with this agreement before you take your exam.

BY SIGNING YOU ARE AGREEING TO THE TERMS AND CONDITIONS OF THIS CANDIDATE CERTIFICATION AGREEMENT. CANDIDATE OR CERTIFIED INDIVIDUAL MAY TAKE THE EXAM ONLY IF CANDIDATE OR CERTIFIED INDIVIDUAL AGREES TO THE TERMS AND CONDITIONS OF THIS AGREEMENT. IF CANDIDATE OR CERTIFIED INDIVIDUAL DOES NOT AGREE TO THE TERMS AND CONDITIONS, CANDIDATE OR CERTIFIED INDIVIDUAL SHALL SELECT "NO, I DO NOT AGREE" BELOW AND WILL NOT BE ALLOWED TO TAKE THE EXAM.

BPI and Candidate or certified individual hereby agree that the terms and conditions of the Agreement shall govern Candidate or certified individual's participation in BPI's Certification Exam and BPI's Certification.

1. CERTIFICATION

- a. The Candidate or certified individual must:
 - meet the prerequisites
 - pay the applicable exam fees;
 - accept the terms and conditions of this Agreement before completing the Exam;
 - pass the exam(s)
 - keep contact information up to date
- b. Modification to Certification Requirements. BPI's Director level staff may expand or reduce the title or scope of the desired certification or withdraw the certification.
- c. Termination. Candidate or certified individual may terminate this Agreement at any time upon written notice to BPI. The Certification or certified individual is valid for a period of three (3) years after the date of passing the last qualifying exam. If the candidate or certified individual chooses to terminate this agreement prior to the expiration date of their certification, the certification, including all related material, must be surrendered and will be void. Upon termination of this Agreement and after the expiration of the Certification, all rights related to the Candidate's Certification, including all rights to use the Certification and the Logo, will immediately terminate.
- 2. COMPLIANCE WITH TESTING REGULATIONS

Candidate or certified individual agrees to comply with all testing regulations required by BPI and/or its Test Centers and testing centers.

- d. No Cheating. Candidate or certified individual agrees that all answers submitted in completing the Exam and are entirely their own. Candidate or certified individual will neither: (i) provide nor accept improper assistance; nor (ii) use unauthorized materials in attempting to satisfy Certification Requirements.
- e. No Misconduct. Candidate or certified individual agrees not to (i) falsify his or her identity or impersonate another individual; (ii) forge the Certification, Exam score reports, identification cards or any other Exam records; (iii) engage in fraudulent conduct or misrepresent him or herself as Certified when he or she has not successfully met the applicable Certification Requirements; (iv) misuse or disclose username and/or password or any other Certification identities; and/or (v) engage in any other misconduct that could be considered by BPI, in its sole discretion, as compromising the integrity, security or confidentiality of the Exam or the Certification.
- f. No Disclosure. Candidate or certified individual understands and agrees that the Exam is BPI's confidential and proprietary information. Candidate or certified individual agrees to maintain the confidentiality of the Exam and not disclose, whether verbally, in writing or in any media, the contents of the Exam or any part of the Certification. Further, Candidate or certified individual agrees not to request any other individual to disclose the Exam or any part thereof to the Candidate or certified individual.

g. No Misuse of the Exam. Candidate or certified individual agrees not to copy, publish, offer to sell, sell, publicly perform or display, distribute in any way or otherwise transfer, modify, make derivative works thereof, reverse engineer, decompile, disassemble or translate the Exam or part thereof.

3. BPI ACTION FOR NON-COMPLIANCE

h. Candidate or certified individual understands and agrees that, if for any reason and at its sole discretion, BPI believes the Candidate or certified individual violated the terms of this agreement or the criteria against which the competence of a person is evaluated in accordance with the scheme of the certification. BPI has the right to deny Candidate or certified individual any further participation in the Exam, cancel a passed Exam result, remove the Candidate or certified individual's certified status and any other rights previously conferred on the Candidate by BPI, and to permanently bar Candidate or certified individual from any further participation in BPI's Certification.

4. WITHDRAWAL OF CERTIFICATION

i. Should the certified individual not maintain or not continue to prove their competence for this certification to the satisfaction of BPI, the certification will be withdrawn. In the event the certification is withdrawn, the BPI certification operations manager will review the certified individual's record and provide a written statement in regards to steps that will be taken in order for the certification to be reinstated.

Reasons for withdrawal of an individual's certification by BPI include, but are not limited to:

- Failure of the multiple choice test instrument.
- Failure of field evaluation.
- Verification of a complaint by building owner or the owner's representative for failure to meet installation requirements and then not correcting the deficiency.
- Failure to take steps to correct improper practices.
- j. If the certified individual may not be able or is no longer able to fulfill the requirements of the certification the certified individual must notify BPI immediately and surrender all certification documents, such as BPI ID Card and BPI Certificate to BPI, and cease using any logo or marketing materials.

5. REPRESENTATIONS AND WARRANTIES

- k. By the Candidate or certified individual. Candidate or certified individual represents and warrants that: (i) Candidate or certified individual will refrain from any conduct that may harm the goodwill and reputation of BPI or its products and (ii) Candidate or certified individual shall not make any representation, warranty or promise on behalf of or binding upon BPI and (iii) Candidate or certified individual shall not make claims regarding certification outside of the intended scope of the appropriate certification.
- Candidate or certified individual agrees to not use the certificate in a manner that is misleading or unwarranted.

6. INDEMNIFICATION

m. Candidate or certified individual agrees to indemnify, defend and hold BPI harmless against any losses, liabilities, damages, claims and expenses (including attorneys' fees and court costs) arising out of any claims or suits, whatever their nature and however arising, in whole or in part, which may be brought or made against BPI, or its Test Centers, officers, employees or assigns, in connection with: (i) any personal injury, property damage or other claims which are caused, directly or indirectly by any negligent act, omission, illegal or willful misconduct by the Candidate or certified individual, (ii) Candidate or certified individual's use or misuse of the Certification and/or the Logo; (iv) Candidate or certified individual's use or misuse of BPI' confidential information; and/or (v) Candidate or certified individual's breach of any obligations or warranties under this Agreement.

7. LIMITATION OF LIABILITY

n. Damages. BPI shall not be liable for any indirect, incidental, special, punitive, or consequential damages or any loss of profits, revenue, or data. BPI's liability for direct damages, whether in contract, tort or otherwise, shall be limited to the fees paid to BPI under this Agreement.

8. CONFIDENTIALITY UNDERTAKING

- o. By signing this Agreement, Candidate or certified individual agrees to all terms and conditions herein
- p. Candidate agrees (i) to hold Confidential Information in confidence and take all reasonable precautions to protect it, (ii) not to, directly or indirectly, use Confidential Information at any time during the certification procedure, the performance of the Exam and thereafter, and (iii) not to, directly or indirectly, disclose, publish, reproduce or transmit any Confidential Information completely or in part to any third party, in any form, including but not limited to verbal, written, electronic or any other means for any purpose without the prior express written permission of BPI.

q. BPI retains all rights, title and interest in and to all information, content and data contained in the Exam and all copyrights, patent rights, trademark rights and other proprietary rights thereto provided by BPI under the certification procedure and Exam.

Upon any breach by the Candidate or certified individual of the confidentiality undertaking in the Candidate Certification Agreement, BPI may automatically and without notice withdraw Candidate's Certification. Further, BPI is entitled to pursuing any other available remedy for unauthorized disclosure or for breach of the confidentiality undertaking in said Agreement.

Appendix C - Candidates with Special Testing Accommodations

Candidates with Special Testing Accommodations

The Americans with Disabilities (ADA) Act provides comprehensive civil rights protection for qualified individuals with disabilities. An individual with a disability is a person who: (1) has a physical impairment or a mental impairment that substantially limits a major life activity, (2) has a record of such impairment, or (3) is regarded as having such an impairment.

The ADA does not specifically name all of the impairments that are covered. If you have a disability, you have the right to inquire and receive information about testing accommodations.

"Testing Accommodation" means an adjustment to or modification of the standard testing conditions that eases the impact of the applicant's disability on the exam process without altering the nature of the exam.

As an applicant claiming a disability that requires testing accommodations, the applicant must properly complete the Special Testing Accommodation form. The burden of proof is on the applicant to establish the existence of a disability protected the Americans with Disabilities Act, as well as to establish the need for testing accommodations. Each application is evaluated on a case by case basis.

Qualified individuals with disabilities are required to request accommodations every time they plan to take the exam. It is in the candidate's best interests to provide recent and appropriate documentation, which clearly defines the extent and impact of the impairment(s) upon current levels of academic and physical functioning.

- Request for accommodations and appropriate supporting documentation, which when completed, should provide evidence of a substantial limitation to physical or academic functioning.
- Clinical evaluations and examinations of the candidate that have resulted in a diagnosis of a physical or
 mental impairment must have been performed by a licensed/certified or otherwise qualified professional
 with credentials appropriate to diagnose a candidate's disability consistent with the provisions of the ADA.
 Details about the professional's area of specialization and professional credentials must be provided.
- Documentation must be submitted on official letterhead from a licensed or qualified professional who
 examined the candidate and diagnosed a physical or mental impairment. Depending on the disability and
 written evaluation, documentation may include a letter from a physician or a detailed report.
- Document must be no more than 3 years old.
- Documentation for all disabilities should describe the extent of the disability and recommended accommodations.

A diagnosis of Attention Deficit Disorder (ADD) or Attention Deficit Hyperactivity Disorder (ADHD) must be supported by a current (administered within the past three years) comprehensive evaluation and relevant neuropsychological or psychoeducational assessment batteries. The report must include documented information that the patient meets criteria for long standing history, impairment, and pervasiveness. The report must include specific diagnosis of ADHD based on the DSM-IV diagnostic criteria.

- Candidate Application for Special Testing Accommodations, or go to www.bpi.org
- Provider Application for Special Testing Accommodations, or go to www.bpi.org
- Clinical evaluation on official letterhead (letter or detailed report)

Please submit the forms at least thirty (30) days prior to your scheduled exam.

Once these forms have been reviewed the applicant will receive notification from BPI. If approved, you must bring the approval notice with you to the BPI Test Center.

Appendix D – Language Barrier Testing Accommodations

Language Barrier Testing Accommodations

If you have difficulty in comprehending the language of the exam, you have the right to inquire in advance of testing whether any accommodations may be available to you. BPI shall allow the candidate, at his or her expense, to have an interpreter present at either online or field exam, provided that the interpreter is a bona fide interpreter that is engaged in that profession and that is pre-approved by BPI.

BPI Standard Testing Accommodations for candidates with a language barrier.

Online Exams:

Exam times will be doubled.

Field Exams:

Exam times will be doubled.

• Candidate Application for Language Barrier Testing Accommodations, or go to www.bpi.org

Please submit the form at least thirty (30) days prior to your scheduled exam.

Once the form has been reviewed, the applicant will receive notification from BPI. If approved, you must bring the approval notice with you to the BPI Test Center.

Appendix E – BPI Parental or Guardian Consent and Waiver of Liability Form for Candidates Under the Age of 18



See Reverse for Waiver and Release of Liability, Assumption of Risk Agreement and Parental Consent and Indemnity Agreement

By initialing here, I (or parent/guardian if under 18 years of age) understand this is a two-sided document which contains important information on the reverse of this form and requires my signature on the final page _____ (Initial here).

BY SIGNING, YOU ARE AGREEING TO THE TERMS AND CONDITIONS OF THIS WAIVER AND RELEASE OF LIABILITY.

CANDIDATE MAY TAKE THE EXAM ONLY IF CANDIDATE AND PARENT/GUARDIAN AGREES TO THE TERMS AND CONDITIONS OF THIS AGREEMENT. IF CANDIDATE AND PARENT/GUARDIAN DO NOT AGREE TO THE TERMS AND CONDITIONS, CANDIDATE SHALL SELECT "NO, I DO NOT AGREE" BELOW AND WILL NOT BE ALLOWED TO TAKE THE EXAM.

Dear Parent or Guardian:

We appreciate your child's interest in learning building science and preparing for employment in the residential energy efficiency industry. BPI Professionals perform diagnostics, repairs, and install improvements on homes that translate into energy savings, improved comfort, and more durable homes. While every precaution is taken to ensure a safe exam experience for candidates, existing homes do present certain dangers. BPI and the BPI Test Center delivering this exam rely on mature, responsible professional proctors to deliver exams, however there are certain hazards inherent in the exam process. Accordingly, it is our policy to require the execution of this Consent Waiver of Liability Form by a parent or guardian of candidates under the age of 18. Please be aware that the laws of your state may prohibit persons under the age of 21 from obtaining employment in certain construction related fields.

Please acknowledge your consent and agree	ment to the following by si	gning below:	
I am the parent and/or legal guardian of		, who is	_ years old,
	full name of candidate	age	•
and he/she has my permission to participate	in the BPI exam process.		

On behalf of said minor, I hereby release BPI, the BPI Test Center, their officers, agents, employees, volunteers, owner(s), administrators, directors, officers, trainers, and employees from and against any liability, damages, expenses, or injury including medical expenses and/or property damage cause or sustained by said minor or third parties while engaging in or as a result of the exam process. I further agree to personally indemnify BPI, the BPI Test Center, their officers, agents, employees, volunteers, owner(s), administrators, directors, officers, trainers, and employees from and against any liability, damages, expenses, illness, or injury including medical expenses and/or property damage cause or sustained by said minor or third parties while engaging in or as a result of the exam process.

Waiver and Release, Assumption of Risk and Parental Consent and Indemnity Agreement

In consideration of my being allowed to participate in BPI exam activities, I agree:

- 1. I understand the nature of BPI exam activities for the certification for which I have applied, and I am aware of my training, experience, and capabilities, and believe I am qualified to participate in such activity.
- 2. I further acknowledge that I am aware the activities will be conducted in facilities that may contain unsafe or potentially hazardous conditions, including but not limited to:
 - Electric and combustion appliances, including ducting, venting, wiring, and other conditions, and components which may be in unsafe condition
 - Mold, lead paint, asbestos, and other hazardous or toxic chemicals
 - Improperly installed or faulty electrical wiring

- · Structures which may be in unsafe condition
- Dangerous combustion gases, including carbon monoxide, and dangerously hot or combustible materials, which may be in unsafe condition
- 3. I understand that I will be required to use electrical or battery-powered equipment and tools.
- 4. I understand I may be required to climb on or walk in, on, or around walls, floors, yards, attics, and cellars of buildings that may be in unsafe condition.
- 5. I further agree and warrant that if I believe conditions to be unsafe, I will immediately discontinue participation in the activity.
- 6. I understand the exam will be videotaped for quality assurance purposes, but may not be reviewed by the candidate, parent, or trainer.

7. I fully understand that:

- a. Exam activities involve risks and dangers of **serious bodily injury, including permanent disability, paralysis, and death** ("Risk").
- b. These risk and dangers may be caused by me or the actions or inactions of others participating in the activity, the condition in which the activity takes place, or the *negligence of the "releasees" named below*.
- c. There may be other risk and social and economic losses either known to me or not readily foreseeable at this time; and *I fully accept and assume all such risks and all responsibility for losses, cost, and damages* incurred as a result of my participation in these activities.

I HEREBY RELEASE, DISCHARGE, COVENANT NOT TO SUE, AND AGREE TO INDEMNIFY AND SAVE HOLD HARMLESS BPI, THE BPI TEST CENTER, THEIR OFFICERS, AGENTS, EMPLOYEES, VOLUNTEERS, OWNER(S), ADMINISTRATORS, DIRECTORS, OFFICERS, TRAINERS, AND EMPLOYEES (EACH CONSIDERED ONE OF THE "RELEASEES" HEREIN) FROM ALL LIABILITY, CLAIMS, DEMANDS, LOSSES, OR DAMAGES ON MY ACCOUNT CAUSED OR ALLEGED TO BE CAUSED IN WHOLE OR IN PART BY CANDIDATE, BY THE NEGLIGENCE OF THE "RELEASEES" OR OTHERWISE, INCLUDING NEGLIGENT RESCUE OPERATIONS, AND FURTHER AGREE THAT IF, DESPITE THIS RELEASE, I, OR ANYONE ON MY BEHALF MAKES A CLAIM AGAINST ANY OF THE "RELEASEES" NAMED ABOVE, I WILL INDEMNIFY, SAVE AND HOLD HARMLESS EACH OF THE RELEASEES FROM ANY LITIGATION EXPENSES, ATTORNEY FEES, LOSS OF LIABILITY, DAMAGE OR COST THAT MAY INCUR AS THE RESULT OF ANY SUCH CLAIM.

Consent and Release of Parent or Guardian

I am the parent or guardian of the child applying to take the BPI exam for certification. My child is fit for participation in these exam activities, and I consent to my child's participation. I have read and understand the application and this waiver and release. In consideration of allowing my child to participate, I consent to it and agree that its terms shall likewise bind me, my child, my heirs, legal representative, and assignees. I hereby release and shall defend, indemnify and hold harmless the releasees from every claim and any liability that I or my child may allege against the releasees (including reasonable attorney's fees or cost) as a direct or indirect result of injury to me or my child because of my child's participation in the event, whether caused by the negligence of the releasees or others. I promise not to sue releasees on my behalf or on behalf of my child regarding any claims arising from my child's participation in any BPI exam activities.

pehalf of my child regarding any claims arising from my cl	hild's participation in any BPI exam activities.
I agree and accept the terms and conditions of thiI do not agree (you will not be permitted to take th	
***CAUT Read above carefully before signing. This document releaseek legal counse	eases all liability of the releasees, and you may wish to
Printed Name of Candidate for BPI Certification	Signature of Participant or Parent/Guardian
Date	Date

Terms and Definitions

Appeal – Request by applicant, candidate or certified person for reconsideration of any adverse decision made by the certification body related to her/his desired certification status.

Candidate – Applicant who has fulfilled specified prerequisites, allowing his/her participation in the certification process.

Certified Professional – An individual who successfully passes the BPI written and field exam requirements for certification.

Certification Process – All activities by which a certification body establishes that a person fulfills specified competence requirements, including application, evaluation, decision on certification, surveillance and recertification, use of certificates and logos/marks.

Certification Scheme – Specific certification requirements related to specified categories of persons to which the same particular standards and rules, and the same procedures apply.

Certification System – Set of procedures and resources for carrying out the certification process as per a certification scheme, leading to the issue of a certificate of competence, including maintenance.

Competence – Demonstrated ability to apply knowledge and/or skills and, where relevant, demonstrated personal attributes, as defined in the certification scheme.

Complaint – Conformity assessment request, other than an appeal, by any organization or individual to a certification body, for corrective action relating to the activities of that body or to those of any of its customers.

Evaluation – Process that assesses a person's fulfillment of the requirements of the scheme, leading to a decision on certification.

Exam – Mechanism that is part of the evaluation, which measures a candidate's competence by one or more means such as written, oral, practical and observational.

Essential Learnings – Comprehensive list of ALC functions and tasks as determined by a job task analysis.

Proctor – Person with relevant technical and personal qualifications, competent to conduct and/or score an exam; an individual approved to administer BPI certification exams.

Qualification – Demonstration of personal attributes, education, training and/or work experience.

Quality Assurance – The observation techniques and activities used externally by an organization to evaluate the effectiveness of their quality management system and to provide feedback that may result in quality improvements.

Recertification – Process of confirming conformity with current certification requirements.

Scheme Committee – Group of people chosen by the certification body to provide input, recommendations, guidance and review of a certification scheme.

Surveillance – Periodic monitoring during the period of certification of a certified person's performance to ensure continued compliance with the certification scheme

Test Center – An organization with a legal agreement between itself and BPI; authorized to give BPI certification exams.