







# **Air Tightness Testing for Different Building Types**

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New Construction Building Types	Single Family Detached	Single Family Attached	Multi-family – stacked units (low-rise and high-rise)	Small Commercial (≤5,000 sf)	Large Commercial (>5,000 sf)	Commercial / Residential Mixed Use
						
Examples	Houses that are free of any shared walls and stand alone	Duplex, triplex, townhomes. Each unit has its own foundation and roof	Apartments or condos ( low-rise projects built under the IRC, high-rise projects built under the IBC)	Small office buildings, offices adjacent to unconditioned space	Large multi-story office buildings, large multi-use buildings	Retail on street level, MF stacked units above
Test Required	Residential Air Tightness Test	Residential Air Tightness Test	Multifamily Unit Air Tightness Test	Small Commercial Building Alternative Air Barrier Test	Large Commercial Building Air Leakage Test	Large or Small Commercial Building Air Leakage Test & MF Unit Air Tightness Test
2012 Amended Code Reference	IECC R402.4.1 IRC N1102.4.1.2	IECC R402.4.1 IRC N1102.4.1.2	IECC R402.4.1 (effective 8/1/2014)	IECC C402.4	IECC C402.4	IECC C402.4 and IECC R402.4.1
Minimum Tester Qualifications	RESNET Rater, BPI Building Analyst	RESNET Rater, BPI Building Analyst	RESNET Rater, BPI MF Auditor or Building Analyst, LEED-H MF Auditor	RESNET Rater, BPI Building Analyst	Approved Large Commercial Building Air Leakage Testing Agency	RESNET Rater, BPI MF Auditor or Building Analyst, LEED-H MF Auditor
Compliance Metric (Leakage not to exceed)	3 ACH50	3 ACH50	0.30 CFM50/SF unit enclosure surface area	3 ACH50	0.25 CFM75/SF building envelope surface area	3ACH50 for small commercial space. 0.25 CFM75/SF for large commercial. 0.30 CFM50/sf for MF units above
Test Submittal Requirements (to Building Dept. for C.O.)	See Protocol for information to be included in report	See Protocol for information to be included in report	See Protocol for information to be included in report	See Protocol for information to be included in report	Certification of Compliance, Building Air Leakage Test Results	See Commercial and MF Protocols for information to be included in report
Compliance Protocol	CFC Building Code	CFC Building Code	CFC Building Code	CFC Alternative	CFC Building Air	CFC Building Code

# Single Family Detached



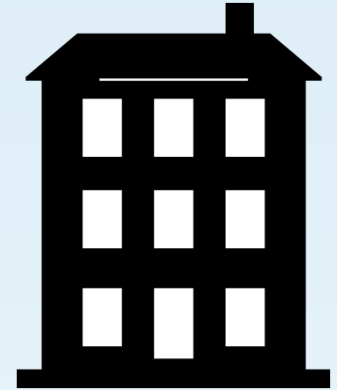
Examples	Houses with attached or detached garages
Test	Residential Air Tightness Test
Tester Qualifications	RESNET Rater, BPI Building Analyst
Metric	3 ACH at 50 Pascals

# Single Family Attached



Examples	Duplex, Triplex, Townhomes – unit has its own foundation and roof
Test	Residential Air Tightness Test
Tester Qualifications	RESNET Rater, BPI Building Analyst
Metric	3 ACH at 50 Pascals

# Stacked Multi-Family



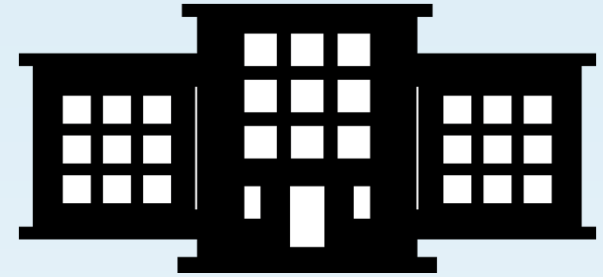
Examples	Apartments, condos – low-rise (IRC) or high-rise (IBC)
Test	CFC Multi-family Unit Air Tightness Test
Tester Qualifications	RESNET Rater, BPI MF Auditor or Building Analyst, LEED-H MF Auditor
Metric	0.30 CFM50/SF of unit enclosure surface area

# Small Commercial



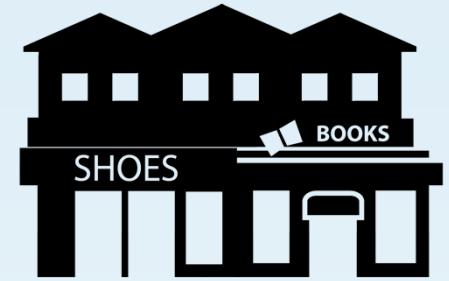
Size	Less than or equal to 5,000 square feet
Examples	Small office/business buildings, offices adjacent to unconditioned space
Test	Small Commercial Building Test
Tester Qualifications	RESNET Rater, BPI Building Analyst, CFC-approved Large Commercial Testing Agency
Metric	3 ACH at 50 Pascals

# Large Commercial



Size	Greater than 5,000 square feet
Examples	Large multi-story office buildings, large multi-use buildings
Test	CFC Large Commercial Building Air Leakage Test
Tester Qualifications	CFC-approved Large Commercial Testing Agency
Metric	0.25 CFM75/SF of building envelope surface area

# Mixed Use



Examples	Retail on street level, MF stacked units above
Test	Large or Small Commercial Building Test below & Multi-family Unit Air Tightness Test above
Tester Qualifications	RESNET Rater, BPI MF Auditor or Building Analyst, LEED-H MF Auditor
Metric	3ACH50 for small commercial space. 0.25 CFM75/SF for large commercial. 0.30 CFM50/sf for MF units above



# Questions?

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