

# The AARST Consortium on National Radon Standards



Shawn Price and Diane Swecker  
September 16, 22024

# ANSI's Consensus Process

- Open Participation
- Stakeholder Balance
- Standards Development
- Consensus Vote
- Public Comment and Appeals
- Final Standard Publication
- Maintenance of the Standard



# Consortium Balance

- Stakeholder/Interest Group representation on all oversight and working committees
- Balanced to prevent dominance

## **User-Consumer Interests**

• Educators • Non-regulated States • Public Health  
NGO • Inspection Professionals • Code Officials •  
Operation, Maintenance and Monitoring  
Professionals • Other

## **User- Measurement Practitioner Interests**

• Home Measurement Professionals • Large Building  
Measurement Professionals • Soil Gas Measurement  
Professionals • Laboratories • Other

## **User-General Interest**

• Related Trades that may include – Scientists -  
Environmental Consultants - Construction Trades -  
Home Builders and Commercial Builders

## **Government and Regulatory Interests**

• U.S. EPA • Regulated States • Private  
Proficiency Programs • HUD • FHFA • Other

## **User-Mitigation Practitioner Interests**

• Home Mitigation Professionals • Large Building  
Mitigation Professionals • Soil Gas Mitigation  
Professionals • Other

## **User-Manufacturers and Product Sales**

• Mitigation Products • Measurement Devices  
• Accessories • Other

# Standards Update Schedules



Standards are now planned for three-year review/update cycles.

Standing committees for each topic will be repopulated and each standard will be posted in whole for public review during the first year after publication.

# Consortium

- Secretariat: Gary Hodgden
- Developed Policies and Procedures
- Consolidated standards in one pdf




# ANSI/AARST National Consensus Standards



Indoor Environments™ 2024 - Radon and Vapor Intrusion Symposium

# Public Review and Public Access

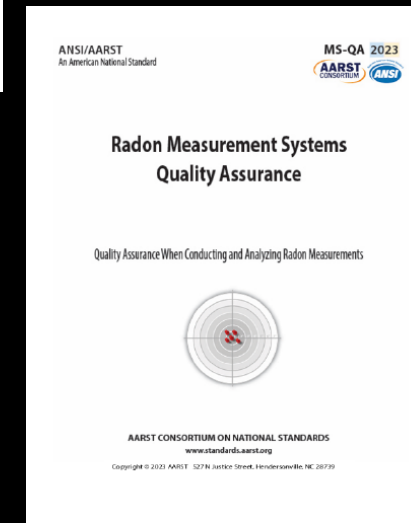


[Sign up for standards announcements](#)

## Public Review and Public Access

- [Request Committee Participation](#)
- [Process and Form for Submitting Public Comments](#)
- [Process and Form for Submitting Interpretation and Change Requests](#)
- [Reporting Procedural Concerns](#)
- [Meetings Calendar](#)
- [Consortium Policies and Procedures](#)

## Up For Public Review





# ANSI / AARST Standards







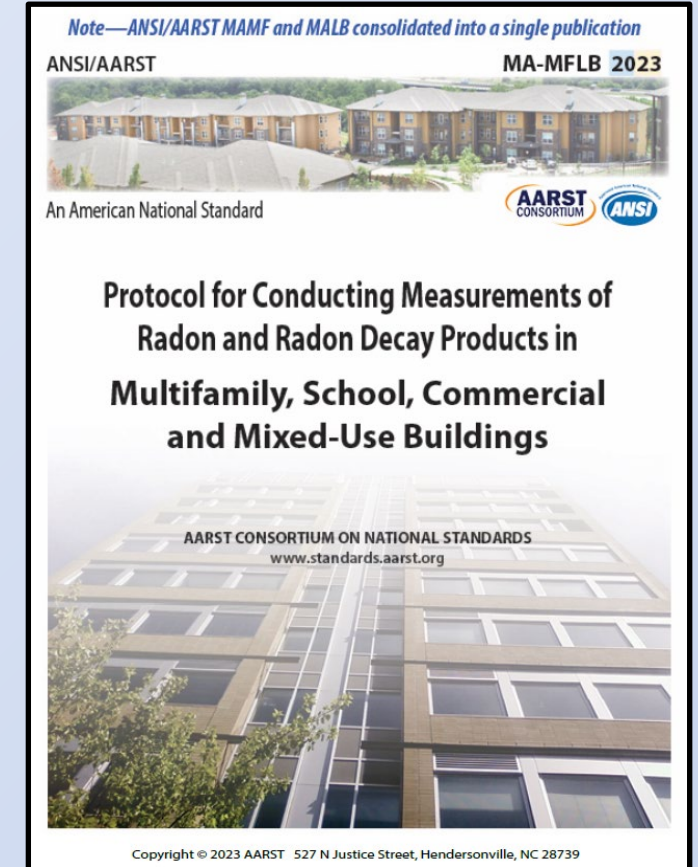
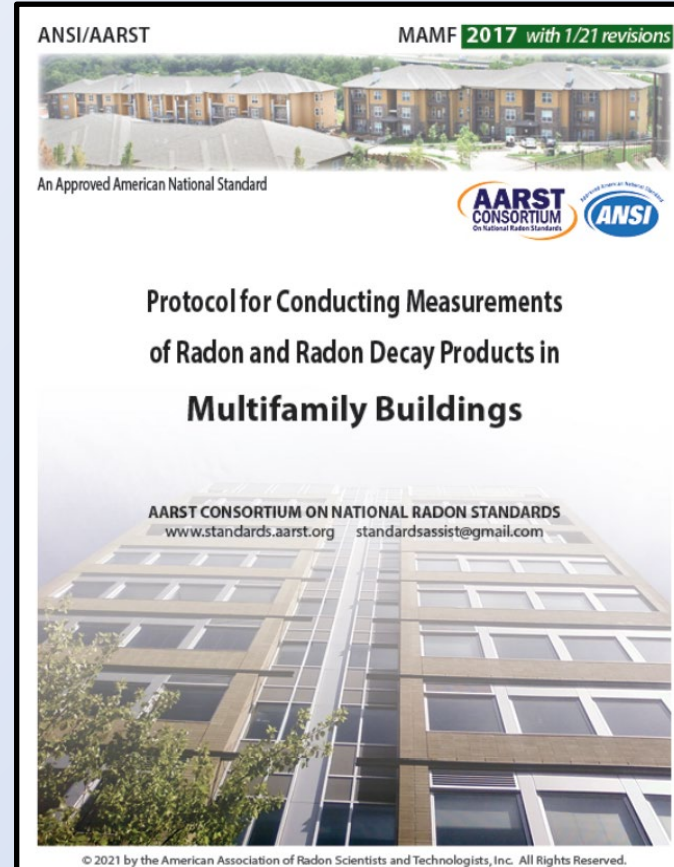
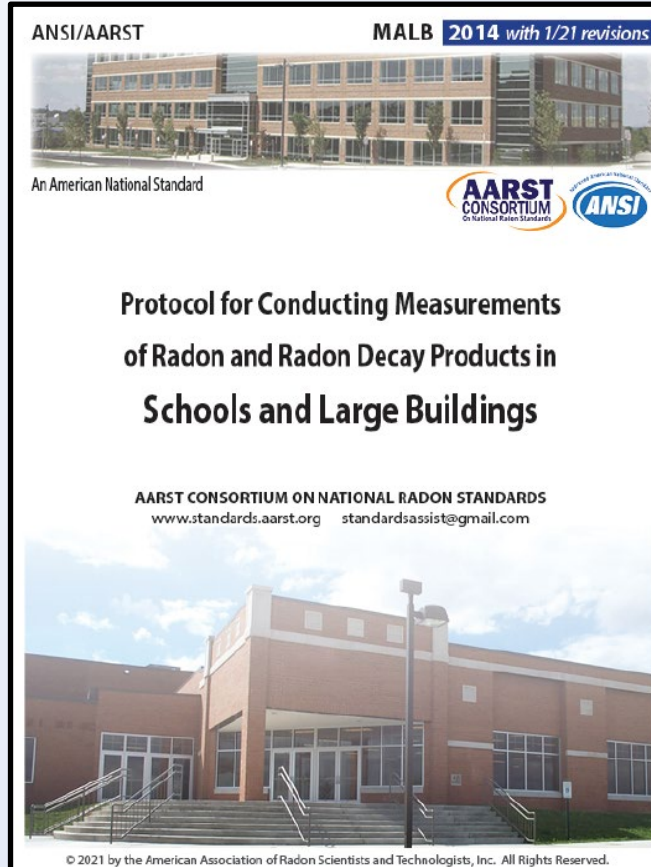
# Harmonization

<div> <div> MAH 2023 Contents </div> <div>   </div> </div>		MAH 2023 Introduction	
<b>PROTOCOLS FOR ANYONE CONDUCTING A TEST</b>		<b>8.0 ADDITIONAL PROTOCOLS FOR PROFESSIONAL SERVICES</b>	
1.0 SCOPE AND PURPOSE		8.1 Qualified Measurement Services	11
1.1 Scope	1	8.2 Measurements for Home Sales	12
1.2 Limitations	1	8.3 Prior Notification	12
1.3 Applicability	1	8.4 Efforts to Verify Test Conditions	12
2.0 INTRODUCTION—BEFORE YOU TEST		8.5 Test Reports	13
2.1 Which Homes Should Be Tested?	1	8.5.1 Essential information	13
2.2 When to Test?	2	8.5.2 Measurement results	13
2.3 Testing Devices	2	8.5.3 Continuous monitors reports	13
2.4 Who Should Conduct the Test?	2	8.5.4 Reliability of measurements	14
2.5 Summary of Testing Procedures	3	8.5.5 Quality control of conditions	14
3.0 CHOOSING A TEST LOCATION		8.5.6 Mitigation system status	15
3.1 Choosing a Floor or Level	3	8.5.7 Opinions and interpretations	15
3.2 Choosing a Room	3	8.5.8 Recommended actions	15
3.3 Choosing a Location in a Room	4	—Reporting Elevated Results	15
4.0 TEST CONDITIONS REQUIRED		—Reporting Low Results	16
4-A Essential Requirements	5	—Additional advisories	16
4-B New Construction, Renovations and Repairs	5	8.5.9 Statement of Test Limitations	17
5.0 TESTING PROCEDURES AND OPTIONS		8.6 Maintaining Records	17
5.1 Detector Deployment Periods	6	9.0 RDP MEASUREMENT	
5.2 The Time-Sensitive Protocol	6	9.1 Professional Training Is Required	17
5.3 The Extended Testing Protocol	7	9.2 Units and Action Level	17
5.4 Shared Building Testing	7	9.3 Gas Measurement Also Required	17
6.0 CONDUCTING THE TEST		9.4 Reporting Requirements	17
6.1 Verify Required Test Conditions	8	10.0 DEFINITION OF TERMS .....	19
7.0 ACTIONS BASED ON TEST RESULTS		<b>NORMATIVE APPENDICES</b>	
7.1 Action Level Guidance	9	<b>Appx A: National Certification/Listing Programs</b>	
7.2 When Two Test Results Disagree	9	<b>EXHIBITS</b>	
7.3 Post-Mitigation Testing Protocol	11	1 Specific Items (Closed building)	24
		2 a Prior Notice of Inspection	25
		2 b Prior Notice (Spanish)	26
		3 Noninterference Agreement	27
		4 Sample Door Hanger Notice	28
		2 RDP—Test Conditions	29
		<b>MAH 2022 Consensus Body Committee</b>	
		<b>MAH COMPANION GUIDANCE</b>	
		A General Inspection Checklist for Mitigation Systems	CG 1
		B Descriptions of Devices and QA	CG 4
		C HVAC and Test Results	CG 5
		D Understanding RDP	CG 8

- Consistent document flow
- Less duplication
- Ease of use & maintenance

<b>MA-MFLB</b>						<b>6 CONDUCTING THE TEST</b>	
<b>Table of Contents</b>							
<b>1 SCOPE AND PURPOSE</b>							
1.1 Scope	1			6.1 Quality Control – Test Conditions	18		
1.2 Applicability	1			6.2 Quality Control – Valid Tests	20		
<b>2 BEFORE YOU TEST</b>				6.3 Quality Control – Devices	22		
2.1 Which Buildings?	2			6.4 Test Site Documentation	22		
2.2 When to Test?	2			6.5 Submitting Detectors to a Laboratory	22		
2.3 Test Devices	2			<b>7 ACTIONS BASED ON TEST RESULTS</b>			
2.4 Who Should Conduct the Testing?	3			7.1 Action Level Guidance	23		
2.5 Summary of Procedures	4			7.2 When Two Test Results Disagree	23		
2.6 Client Communications	5			7.3 Post-Mitigation Testing Protocol	24		
2.7 Assemble Building Information	6			<b>8 TEST REPORTS</b>			
2.8 Test Device Quality Control	6			8.1 Conventions	26		
2.9 Coordinate Notifications	8			8.2 Summary Reports	26		
<b>3 TEST LOCATIONS</b>				Table 8-A Low Concentrations	29		
3.1 Ground-Contact Locations	9			Table 8-B Elevated Concentrations	30		
3.2 Upper Floors	9			8.3 Summary Report Attachments	32		
3.3 Locations Not to Test	9			8.4 Additional Test-Data	33		
3.4 Large Rooms or Open Plan Design	10			8.5 Other Reporting and Disclosures	34		
3.5 Multi-zone HVAC Systems	10			8.6 Retention of Records	35		
3.6 Inaccessible Ground-Contact Locations	10			<b>9 DEFINITION OF TERMS</b>	35		
3.7 Choosing A Room	10			<b>INFORMATIVE EXHIBITS</b>			
3.8 Choosing A Location Within A Room	10			1 Sample Form—Authorizations	41		
Table 3.8 Test Locations Within A Room	11			2 Sample Form—Client Commitments	42		
<b>4 TEST CONDITIONS REQUIRED</b>				3 Sample Notice—General Occupant Notice	43		
4.1 Closed-building condition requirements	12			4 Sample Notice—Public Notice Poster	44		
Table 4-A Essential Requirements	12			5 Sample Instructions—Building Staff	45		
4.2 HVAC Ventilation	12			6 HVAC Group Descriptions	46		
4.3 Upper Floor Rooms and Dwellings	12			7 Sample—Floor Plan Diagram	49		
Table 4-B Construction, Renovations, Repairs	13			8 Sample—Door Hanger Notice/Placards	50		
Table 4-C Additional Clarification	13			<b>NORMATIVE REFERENCES</b>			
<b>5 TESTING PROCEDURES AND OPTIONS</b>				A Reporting Building Operating Conditions	A-1		
5.1 Detector Deployment Periods	14			B Evaluation of Occupied Versus Unoccupied Concentrations	B-1		
5.2 Evaluation of Occupied / Unoccupied	14			C Elevated Concentrations in Upper Floors	C-1		
5.3 Time-Sensitive Testing Option	15			D National Certification/Listing Programs	D-1		
5.4 Extended Testing Option	16			<b>CONSENSUS BODY MEMBERS</b>			
5.5 Testing A Single Room or Dwelling	17			<b>COMPANION GUIDANCE</b>			
5.6 New Construction	17			CG-1 Introduction to Radon	1		
5.7 Post-mitigation Testing Protocols	17			CG-2 Guidance to Building Managers	3		
				CG-3 Descriptions of Test Devices	7		
				CG-4 Chain of Custody	8		
				CG-5 Calculating Average Conditions	9		

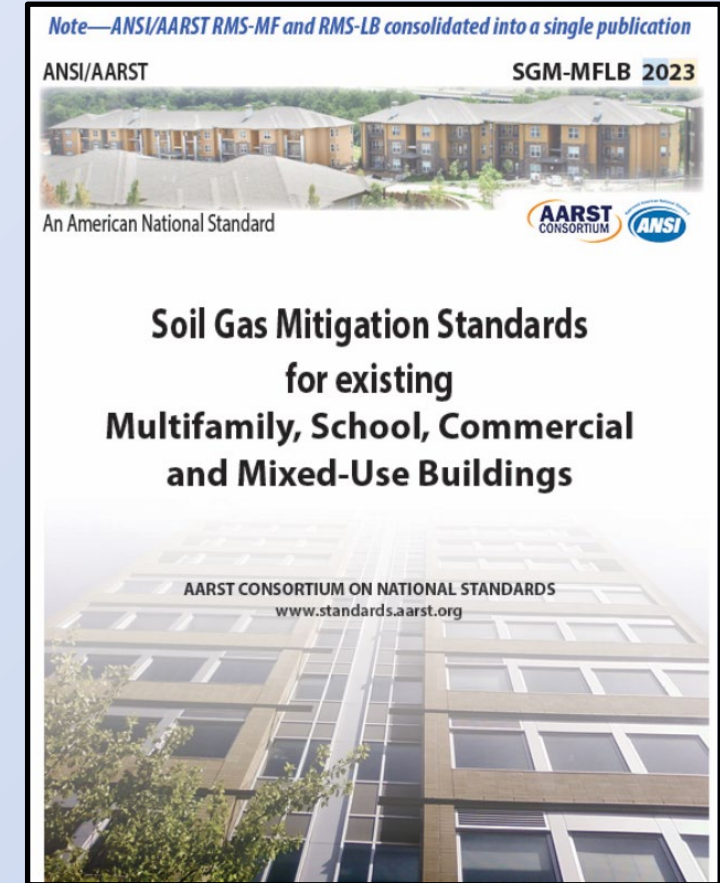
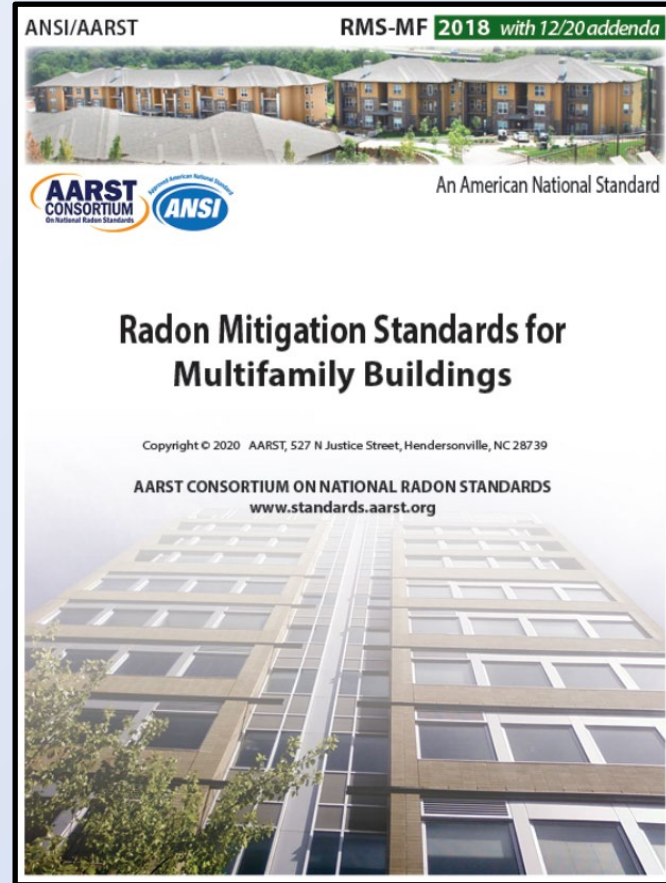
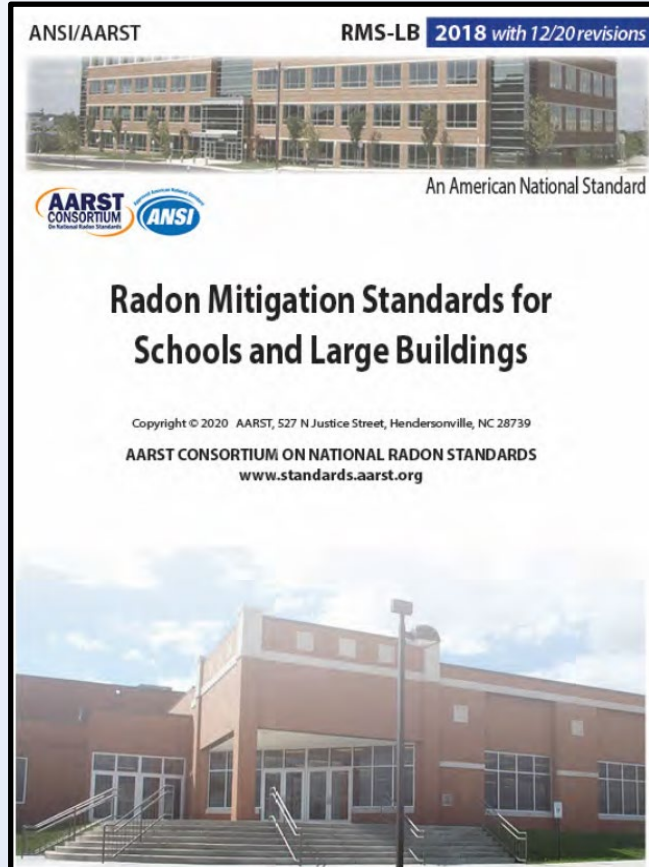
# MEAS Consolidation



Harmonization of text: same sentences for same identical requirements

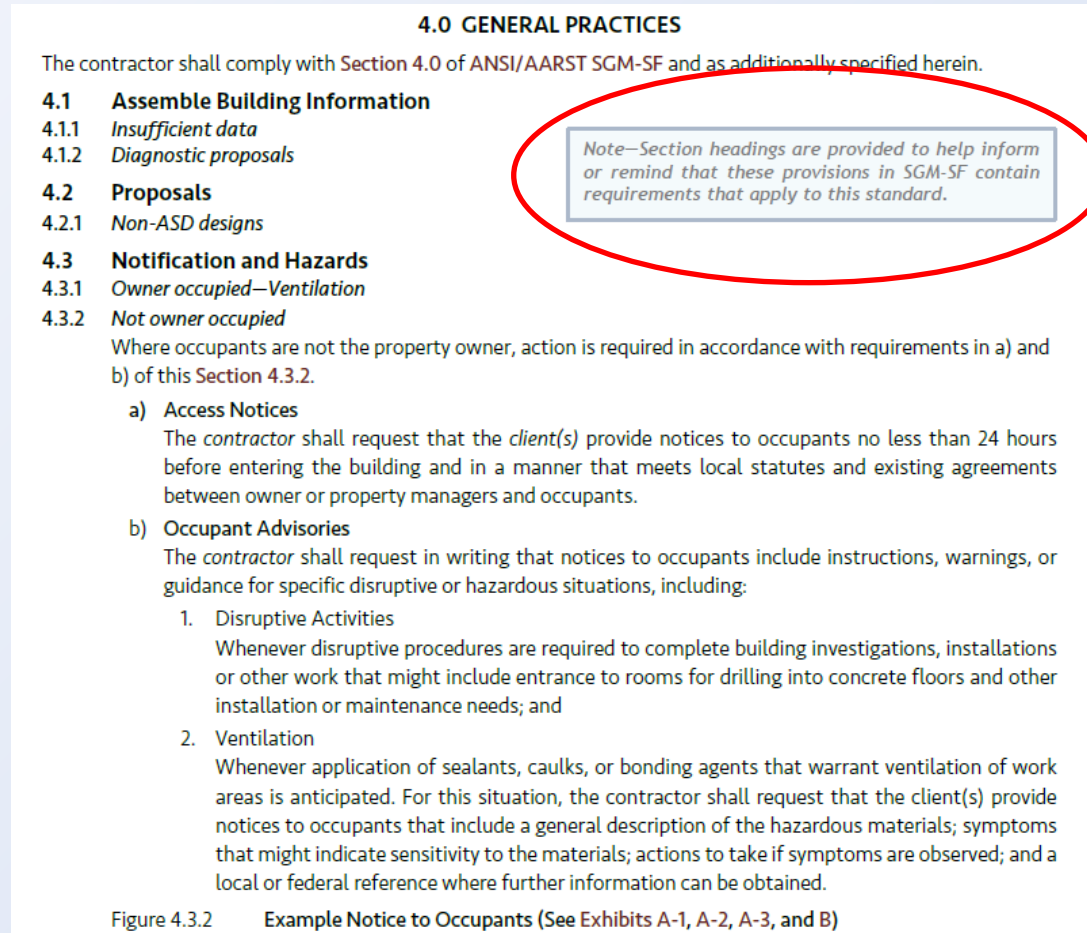


# MIT Consolidation



Harmonization of text: same sentences for same identical requirements

# SGM-MFLB Cross-References to SGM-SF

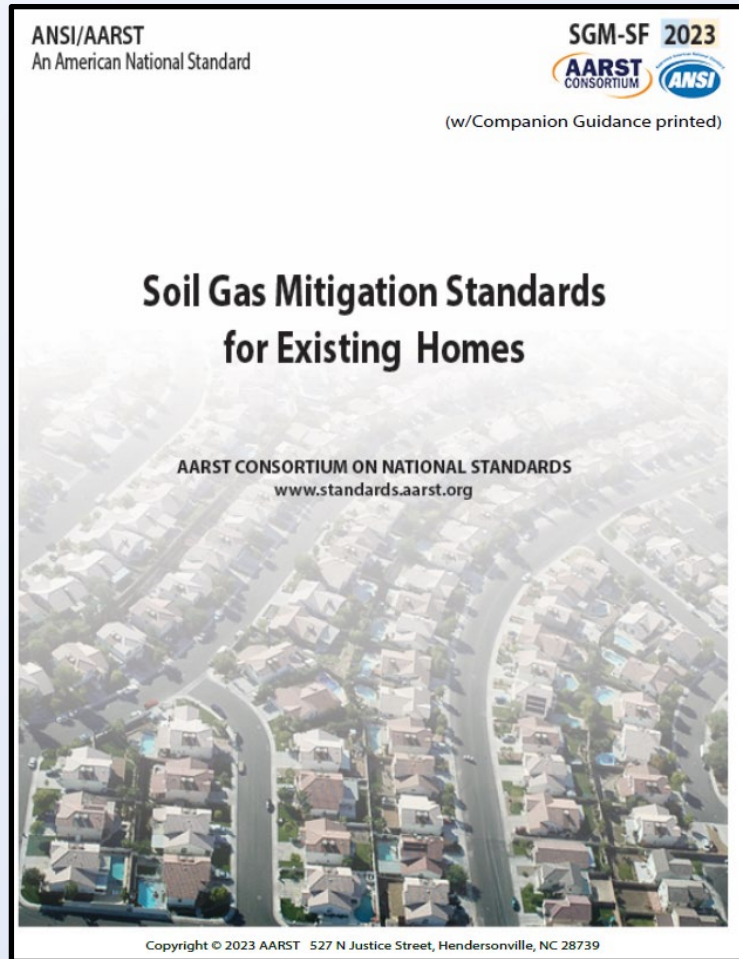


## Why the cross-references?

- Harmonization so that people didn't wondering if identical requirements were somehow different in the other document.
- Limit maintenance during
- Reduce page count in SGM-MFLB

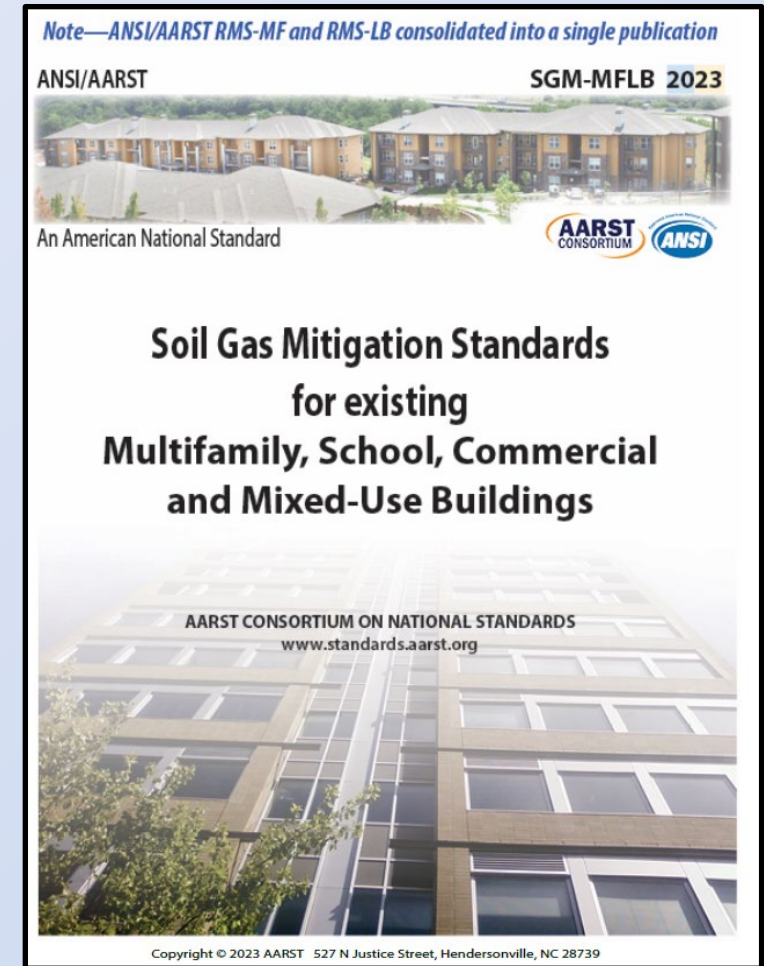


# Coming Soon



## Single PDF

- One download
- Bookmarked for quick reference






# Technical Bulletins

- New releases will trigger technical bulletins to allow readers to easily identify content changes
- Currently available for MA-MFLB 2023 & SGM-MFLB 2023
- Planned for additional standards

MA-MFLB 2023  
Protocol for Conducting Measurements of Radon and Radon Decay Products in  
Multifamily, School, Commercial and Mixed-Use Buildings



**Introduction to Radon**

**1.0 SCOPE**

**1.1 Scope and Purpose**  
This standard of practice specifies procedures and minimum requirements when measuring radon concentrations in shared structures, or portions of shared structures, used for residential, non-residential or mixed-use purposes to determine if radon mitigation is necessary to protect current and future occupants. These protocols address low-rise and high-rise structures and procedures for testing whole buildings but also for testing only one or several individual rooms or dwellings within a shared building.

**1.1.1 Multifamily and other residential occupancies**  
The protocols in this standard of practice address residential occupancies that include:  
a) Buildings having more than one attached dwelling or other occupied unit under the same ownership or designated maintenance or management authority;  
b) Buildings or structures, or a portion thereof that are used, for example, as apartment houses, dormitories, military congregate residences, fraternities and sororities, non-transient boarding houses, hotels, convents, monasteries, motels, and live/work units; and  
c) Multifamily structures that can include those with shared ownership or maintenance such as co-op units, townhouses, condominiums or vacation timeshare properties.  
~~d) in multifamily structures, whether conducted for non-real estate purposes or when associated with a real estate transaction.~~

**1.1.2 Schools, commercial buildings and other non-residential occupancies <sup>5</sup>**  
The protocols in this standard of practice also address non-residential occupancies that include:  
a) Educational occupancies including for religious and educational purposes through the 12th grade and day care facilities (Group E);  
b) Business occupancies including for offices, training and educational facilities to include universities, professional services or service-type transactions (Group B);  
c) Assembly occupancies including for civic, social or religious functions (Group A);  
d) Factory occupancies including for fabrication or manufacturing, repair or processing (Group F);  
e) High-hazard occupancies (Group H);  
f) Institutional occupancies including those where people are cared for or live in a supervised environment such as under restraint or security, detained in a penal institution, or for medical, surgical, psychiatric, nursing and custodial care or for childcare facility purposes (Group I); and  
g) Mercantile occupancies including for the display and sale of merchandise, goods, wares or merchandise incidental to such purposes and accessible to the public (Group M).

<sup>5</sup> As point of reference, see the International Building Code (IBC) as published by the International Code Council.

ANSI/AARST MA-MFLB 2023 1 Conducting Measurements of Radon in Multifamily School, Commercial and Mix-Use Buildings

**Commented [GH1]:** Moved to companion guidance

**Commented [GH2]:** The scope statements have changed to consolidate practices for both residential, schools, commercial and mixed-use buildings.

# Policies & Procedure Updates

- ANSI audits
- ANSI *Essential Requirements* updates
- Improvements to appeals processes
- Code of Conduct
  - Committee member behavior
  - Disclosure when a person is being paid by a third party to influence the outcome of voting.

# 2024 and beyond

- 2024 committees almost complete! A few specialized positions are still being recruited.
- Multiple committees are already working on improvements.
- Public comment period of the 2023 almost complete. Many good comments have been received.
- Thank you to everyone who volunteered and for those who took the time to read and submit comments!

# Thank you!

<https://standards.aarst.org>

[standards@aarst.org](mailto:standards@aarst.org)



IEA Administrative Office  
527 N Justice Street  
Hendersonville, NC 28739  
(828) 348-0185