



AAMA/WDMA TB-23-02

Update to Bulletin No. 18-01, Equivalency of Editions of NAFS

An FGIA/WDMA Technical Bulletin

Bulletin Date: April 24, 2023

Pertinent Joint AAMA/WDMA/CSA Specification(s):

AAMA/ WDMA/CSA 101/I.S.2/A440-11, NAFS, North American Fenestration Standard / Specification for windows, doors, and skylights

AAMA/ WDMA/CSA 101/I.S.2/A440-17, NAFS, North American Fenestration Standard / Specification for windows, doors, and skylights

AAMA/ WDMA/CSA 101/I.S.2/A440-22, NAFS, North American Fenestration Standard / Specification for windows, doors, and skylights

Note: This bulletin is issued by FGIA and WDMA, two of the sponsors of the FGIA/WDMA/CSA 101/I.S.2/A440-22 North American Fenestration Standard/Specification for windows, door and skylights (NAFS), and is provided as guidance only. The NAFS standards contain the complete requirements that must be met for full compliance with the respective edition of each standard.

In 2018, AAMA and WDMA issued an equivalency memo outlining the comparison of the testing and specification differences between the 2008, 2011 and 2017 editions of the North American Fenestration Standard/Specification for window, doors and skylights. This is an addendum to the previous Bulletin (18-01) and builds upon the previous declaration of equivalency between various editions of the NAFS Document.

FGIA and WDMA have determined that with exceptions noted below, the requirements of NAFS-22 are equivalent to the requirements of NAFS-11 and NAFS-17.

FGIA and WDMA recommend that except for the instances specifically identified here, any products which are deemed compliant with NAFS-22 through certification by an ANSI-accredited certification agency or by the approving entity may also be considered compliant to NAFS-11 and/or NAFS-17, subject to approval, based on equivalency established in this document, by the ANSI-accredited certification agency or by the approving entity. Further, FGIA and WDMA agree that except for the instances specifically identified in this bulletin, any products which are deemed compliant with NAFS-22 through certification by the ANSI-accredited certification agency or by the approving entity may be considered as having met NAFS-11 and/or NAFS-17 without the need to list these older editions, subject to approval of equivalency by the ANSI-accredited certification agency or by the approving entity. Likewise, any products that are deemed compliant to, NAFS-11 and/or NAFS-17 by the ANSI-accredited certification agency may also be considered compliant to NAFS-22 except as noted in the following.

The AAMA Gold Label and WDMA Hallmark Certification Programs require that any certified product specifically labeled as complying with NAFS-22 or an earlier edition, must have submitted complete testing and compliance documentation to those standards in accordance with program procedures, and must then be specifically authorized by the program to label to those standards. AAMA and WDMA reserve the right to grant or rescind extension of equivalency to any specific certified product.

NAFS-22, Clause 4.1.2 Compliance, specifies that “...no entity shall claim partial compliance with the applicable requirements of this Standard/Specification.” Accordingly, this bulletin shall not be used to allow the issuance of test reports claiming conformance to NAFS-22 or any other previous version of NAFS, without clear demonstration that the test specimen met all requirements of the version of NAFS under which it is evaluated.

The following is the list of ten (10) instances when general equivalency noted previously needs to be considered by users of this document:

1. Folding Door Systems (FLD) and Top-Turn Reversible Windows (TTR) rated under NAFS-17 or NAFS-22 cannot claim compliance to NAFS-11, unless identified as a Specialty Product.
2. US/Canadian air infiltration and exfiltration rates have changed for gateway size tested fenestration products in the CW and AW Performance Classes. In certain cases, products rated under NAFS-17 or NAFS-22 cannot claim compliance with NAFS-11, unless testing of the products shows conformance with the air infiltration/exfiltration requirements of NAFS-11.
3. Operating force requirements have changed. In certain cases, products rated under NAFS-22 cannot claim compliance with previous editions, unless testing shows conformance with the previous editions.
4. Side-hinged doors, dual-action side-hinged doors and exterior folding doors applying the exclusion of locking/latching hardware from water testing when rated under NAFS-17 or NAFS-22 cannot claim compliance to NAFS-11.
5. Products complying with NAFS-17 or NAFS-22 that also claim compliance to NAFS-11 are permitted to use ASTM E1300-16 or later editions for glass strength and selection.
6. Due to changes in requirements for minimum test sizes in NAFS-22, Performance Class R products, Performance Class LC products and Performance Class AW dual-action windows may not achieve the same performance grade (PG).
7. Sliding door products tested to the Limited Water (LW) designation in NAFS-22 cannot claim compliance to previous editions.
8. Dual-action side-hinged, folding and side-hinged door products tested to the Limited Water (LW) designation in NAFS-17 or NAFS-22 cannot claim compliance to NAFS-11.
9. Provisions for fasteners, reinforcing members and setting blocks were changed from requirements to recommended design guidance in NAFS-22 and therefore may not be equivalent with previous editions.
10. Products tested under NAFS-22 cannot claim compliance to previous editions of NAFS unless the following testing is performed, when applicable, in accordance with the following Clauses found in NAFS-11 or NAFS-17:
 - a. Clause 7.3.5.3 Vertical concentrated load, for windows
 - b. Clause 7.3.5.5 Hold-open arm/stay bar test
 - c. Clause 9.3.6.2 Thermoplastic corner weld test
 - d. Clause 9.3.6.4.3 Sash/leaf concentrated load test on latch rails
 - e. Clause 9.3.6.5.3 Stabilizing arm loads test
 - f. Clause 9.3.6.5.5 Awning, hopper, projected hardware load test

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Category/ Topic	AAMA/WDMA/CSA 101/I.S.2/A440-11	AAMA/WDMA/CSA 101/I.S.2/A440-17	AAMA/WDMA/CSA 101/I.S.2/A440-22
Format	Organized by product type, Performance Class, materials and components	Added Clause Labels and direct link to commentaries	NAFS-17 Clauses 4 through 9 and Clause 12 reorganized as NAFS-22 Clauses 4 through 8 NAFS-17 Clauses 10 and 11 reorganized as NAFS-22 Clause 9 In all Clauses, non-mandatory explanatory Figures remain as commentary Short form specifications have been removed
Definitions	Unchanged	Unchanged	Definitions Clause references the FGIA Glossary, with the exception of certain specialized mullion-related terminology
Performance Grade Tables	Unchanged	Gateway and Optional performance grade tables combined including combination of US and Canadian water resistance test pressure in same table with note for US cap value	Performance Grade tables abridged and simplified, where feasible
Product Type Designation	Added POW, SSP (-CSD, -JSD, -SGE, -SGI, -FWE, -FWI, -HWE, -HWI, -VWE, -VWI). SKG-PG30: Size tested 1200 × 1200 mm (~48 × 48 in)	Added FLD, LWFLD, TTR and TASSP also X suffix to SHD's, DASHD's and FLD's	See Limited Water (LW) Testing in this table Added clarification for SSPs
Folding door assembly qualification	NA	Types A through E	Added Type F
Alternative minimum test sizes	Unchanged	Unchanged	Removed alternative minimum test size requirements for Performance Class R products Added alternative minimum test sizes for Performance Class LC products

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US operating force	Unchanged	Operating force for US and Canada has been combined and include initiating force criteria. Force to maintain motion unchanged	Operating force tables combined to include all product types and Performance Classes A single requirement identifies the maximum “force to initiate” and “force in motion” Added commentary addressing accessibility
Canadian operating force	Unchanged		
US air leakage	Unchanged	Fully harmonized for CW and AW including air exfiltration requirements, R and LC remain unchanged	All Performance Classes fully harmonized for the US and Canada, necessitating a relaxation of certain AW Performance Class requirements
Canadian air leakage	Unchanged		
Limited Water (LW) Testing	Unchanged	Added LW for FLD	Added LW for SD. Clarified test duration by Performance Class
Door Hardware Water Testing Exclusion	Unchanged	Added exclusion for water penetration through the locking/latching hardware for SHD, also applicable to DASHD and FLD	Added designator information and commentary regarding limited water (LW) and hardware excluded (X) for certain door product types.
Uniform Load Structural Test	Unchanged	Unchanged	Added clarification of damage and operability after application of 150% of ASD design load
Glass Strength Standard – basis of glass selection	ASTM E 1300-09a - use weakest glass for testing	ASTM E 1300-16 - use weakest glass for testing	Unchanged
Materials referenced	Unchanged	Removed wood fiber and ABS Added lead testing and general category designated other	Unchanged
Auxiliary and Component Testing	Unchanged	Unchanged	Certain prescriptive or redundant auxiliary and component tests removed, including load on latch rails, vertical concentrated load (windows), hold-open and stabilizing arm loads, sash blocked operation test, and the thermoplastic corner weld test
Material and Component Requirements	Unchanged	Unchanged	Partitioned into separate Clauses for “Requirements without alternative,” “Requirements with alternative” and “Design guidance”

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Mullion definitions and illustrations	New ratings and designations	Added combination mullions and reinforcing mullions of combination assemblies rated per option 2 AAMA 450	Clause 5 “Mullions” references the updated edition of AAMA 450 and performance, testing and analysis requirements were aligned
Gateway Performance Requirements Table	Errata corrected	Errata corrected	Gateway Performance Table split into separate tables for gateway test size, air-water-structural requirements and auxiliary testing, which are included in applicable Clauses Gateway size for AW Performance Class dual-action windows reduced from 1500 mm x 2500 mm (~59 in. x 98 in.) to 1200 mm x 1800 mm (~47 in. x 71 in.)

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