# Part 1 General

# Section Includes

## Ultimate Sliding French Door G2 and frame complete with hardware, glazing, weather strip, insect screen, grilles-between-the glass, simulated divided lite, jamb extension, raised/flat panels, and standard or specified anchors, trim, attachments, and accessories.

# Construction Specification Institute (CSI) MasterFormat Numbers and Titles

## Section 01 33 00 – Submittal Procedures: Shop Drawings, Product Data, and Samples

1. Section 01 62 00 – Product Options
2. Section 01 25 15 – Product Substitution Procedures
3. Section 01 65 00 – Product Delivery Requirements
4. Section 01 66 00 – Product Storage and Handling Requirements
5. Section 01 71 00 – Examination and Preparation
6. Section 01 73 00 - Execution
7. Section 01 74 00 – Cleaning and Waste Management
8. Section 01 75 00 – Starting and Adjusting
9. Section 01 76 00 – Protecting Installed Construction
10. Section 06 22 00 – Millwork: Wood trim other than furnished by door and frame manufacturer
11. Section 07 92 00 – Joint Sealants: Sill sealant and perimeter caulking
12. Section 08 71 00 – Door Hardware: Hardware other than furnished by door and frame manufacturer
13. Section 09 90 00 – Paints and Coatings: Paint and stain other than factory applied finish
	1. **References**
14. ASTM, International:
15. E283: Standard Test Method for Determining Rate of Air Leakage through Exterior Windows, Skylights, Curtain Walls, and Doors Under Specified Pressure Differences Across the Specimen
16. E330: Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights, and Curtain Walls, and Doors by Uniform Static Air Pressure Difference
17. E547: Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors, and Curtain Walls by Cyclic Static Air Pressure Difference
18. E2190: Standard Specification for Insulating Glass Unit Performance and Evaluation
19. C1036: Standard Specification for Flat Glass
20. E2112: Standard Practice for Installation of Exterior Windows, Doors, and Skylights
21. North American Fenestration Standards (NAFS) - American Architectural Manufacturer’s Association/Window and Door Manufacturer’s Association/Canadian Standards Association (AAMA/WDMA/CSA 101/I.S.2/A440):
22. AAMA/WDMA/CSA 101/I.S.2/A440-11: NAFS - North American Fenestration, Standard/Specification for windows, doors, and skylights
23. AAMA/WDMA/CSA 101/I.S.2/A440-17: NAFS – North American Fenestration Standard/Specification for windows, doors, and skylights
24. Window and Door Manufacturers Association (WDMA)
25. WDMA I.S.4: Industry Standard for Water Repellant Preservative Treatment for Millwork
26. WDMA I.S.2 Hallmark Certification Program
27. Insulating Glass Certification Council (IGCC) and Fenestration Glazing Industry Alliance (FGIA) Glass Products Council (GPC)
28. Fenestration Glazing Industry Alliance (FGIA) – note: AAMA combined with IGMA and formed FGIA as of 08/01/2019
29. AAMA 2605: Voluntary Specification for High Performance Organic Coatings on Architectural Extrusions and Panels
30. National Fenestration Rating Council (NFRC):
31. NFRC 101: Procedure for Determining Fenestration Product Thermal Properties
32. NFRC 200: Procedure for Determining Solar Heat Gain Coefficients at Normal Incidence

# Submittals

## Shop Drawings: Submit shop drawings under provision of CSI MasterFormat Section 01 33 00.

## Product Data: Submit product data for certified options under provision of CSI MasterFormat Section 01 33 00. Product performance rating information may be provided via quote, performance rating summary (NFRC Data), or certified performance grade summary (WDMA Hallmark data).

## Samples:

1. Submit corner section under provision of CSI MasterFormat Section 01 33 00.
2. Specified performance and design requirements under provisions of CSI MasterFormat Section 01 33 00.

# Quality Assurance

## Requirements: consult local code for IBC [International Building Code] and IRC [International Residential Code] adoption year and pertinent revisions

# Delivery

## Comply with provisions of CSI MasterFormat Section 01 65 00

## Deliver in original packaging and protect from weather

# Storage and Handling

## Prime and seal wood surfaces, including to be concealed by wall construction, if more than thirty (30) days will expire between delivery and installation. Seal unfinished top and bottom edges of door panels if panels are stored at the job site more than one (1) week.

## Store door panels flat on a level surface in a clean and dry storage area above ground to protect from weather under provision of CSI MasterFormat Section 01660

## Condition doors to local average humidity before hanging

# Warranty

Complete and current warranty information is available at marvin.com/warranty. The following summary is subject to the terms, condition, limitations and exclusions set forth in the Marvin Windows and Door Limited Warranty and Products in Coastal Environments Limited Warranty Supplement:

## Clear insulating glass with stainless steel spacers is warranted against seal failure caused by manufacturing defects and resulting in visible obstruction through the glass for twenty (20) years from the original date of purchase. Glass is warranted against stress cracks caused by manufacturing defects from ten (10) years from the original date of purchase.

## Standard exterior aluminum cladding finish is warranted against manufacturing defects resulting in chalk, fade, and loss of adhesion (peel) per the American Architectural Manufacturer’s Association (AAMA) Specification 2605-11 Section 8.4 and 8.9 for twenty (20) years from the original date of purchase.

## Factory-applied interior finish is warranted to be free from finish defects for a period of five (5) years from the original date of purchase.

## Hardware and other non-glass components are warranted to be free from manufacturing defects for ten (10) years from the original date of purchase.

# Part 2 Products

# Manufactured Units

## Description: Factory-assembled Ultimate Sliding French Door G2 and/or related stationary units as manufactured by Marvin Windows and Doors, Ripley, Tennessee.

# Frame Description

## Interior primary surfaces are finger-jointed pine standard with options of Mixed Grain Douglas Fir, Vertical Grain Douglas Fir, White Oak, Cherry, or Mahogany. Secondary surfaces may be finger-jointed. Option for secondary surfaces to not show finger-joints.

1. Kiln-dried to moisture content no greater than twelve (12) percent at time of fabrication
2. Water repellant, preservative treated in accordance with WDMA I.S.4

## Frame exterior aluminum clad with 0.050” (1.3mm) thick extruded aluminum

## Frame width: 4 9/16” (116mm) for 1 3/4" panels; 6 9/16” (167mm) for 2 1/4" panels

## Frame thickness: 1 1/16” (27mm)

## Fiberglass reinforced Ultrex sill.

1. Height is 1.890” (48mm), and width is 5.656” (144mm) for 4 9/16” and 7.656” (194mm) for 6 9/16”.
2. Accommodates secure attachment of roller track to allow operation of sliding panel, as well as the optional sliding screen.
3. Sills
	1. Standard: Performance Sill
		1. Fiberglass reinforced pultruded sill with water shed and weep system
		2. Color: Ebony
	2. Optional: Accessibility Sill
		1. Fiberglass reinforced pultruded sill with water shed and weep system
		2. Reduced resistance to air and water infiltration, relative to Standard Performance Sill
		3. Reduces standard CN height by ½"
		4. Color: Ebony
		5. Not ADA compliant as delivered.

# Panel Description

## Interior primary surfaces are finger-jointed pine standard with options of Mixed Grain Douglas Fir, Vertical Grain Douglas Fir, White Oak, Cherry, or Mahogany. Secondary surfaces may be finger-jointed. Option for secondary surfaces to not show finger-joints. Core material will be LVL or stave-core construction.

1. Kiln-dried to moisture content no greater than twelve (12) percent at time of fabrication.
2. Water repellant, preservative treated in accordance with WDMA I.S.4.

## Sash exterior aluminum clad with 0.055” (1.4mm) thick extruded aluminum

## Panel thickness: 1 ¾” (44mm) or 2 ¼” (57mm)

## Top rail and stile width: 4 3/4” (121mm)

## Bottom rail height: 8 1/8” (206mm), Optional 4 3/4” (121mm)

## All rails and stiles utilize LVL or finger-joint, edge-glued core material. Intermediate rail is solid face laminate.

## Panel corners glued and fastened with 5/8 inch x 4 inch (16mm by 102mm) fluted hardwood dowels. No visible fasteners.

## Interior Glazing Profile: Ogee, Optional: Square

## Exterior Glazing Profile: Simulated Putty.

# Glazing

## Select quality complying with ASTM C 1036; Shall comply with 16 CFR 1201 Safety Standard for Architectural Glazing Materials

## Glazing Method: Tempered Insulating Glass (altitude adjusted)

## Interior and Exterior Glazing Profile: Square

## Dual-pane thickness: 15/16”; Tri-pane thickness: 1 1/4".

## Glass fill: Air with capillary tubes, Argon

## Glass Type: Clear, Bronze, Gray, Reflective Bronze, Tempered, Obscure, Laminated,

## Glazing Option: Low E2, Low E3, Low E1, Low E2/ERS, Low E3/ERS

## Glazing Seal: Black Silicone bedding

# Finish

## Exterior: Aluminum Clad. Fluoropolymer modified acrylic topcoat over a primer. Meets AAMA 2605 requirements.

1. Aluminum clad color options: Bahama Brown, Bronze, Cadet Gray, Cascade Blue, Cashmere, Clay, Coconut Cream, Ebony, Evergreen, Gunmetal, Hampton Sage, Pebble Gray, Sierra White, Stone White, Suede, Wineberry, Bright Silver (pearlescent), Copper (pearlescent), Liberty Bronze (pearlescent)
2. Custom colors: Contact your Marvin representative.

## Interior Finish Options:

1. Prime: Factory-applied water-borne acrylic primer. Meets WDMA-TM 11 requirements.
2. Painted Interior Finish. Available on Pine product only. Available in White or Designer Black. Meets WDMA TM-14 requirements.
3. Factory-applied water-borne acrylic enamel clear coat. Applied in two separate coats with light sanding between coats. Available on Pine, Mahogany, Vertical Grain Douglas Fir, Mixed Grain Douglas Fir, Cherry, or White Oak. Meets WDMA TM-14 requirements.
4. Factory-applied water-borne stain. Stain applied over a wood (stain) conditioner. A water-borne acrylic enamel clear coat applied in two separate coats, with light sanding coats, applied over the stain. Available on Pine, Mahogany, Vertical Grain Douglas Fir, Mixed Grain Douglas Fir, Cherry, or White Oak. Colors available: Wheat, Honey, Hazelnut, Leather, Cabernet, or Espresso. Meets WDMA TM-14 requirements.

# Hardware

## Handle Set Options

1. Harp G2 Handle
	1. Available in half handle sets
	2. Keyed (default), Non-Keyed (optional)
	3. Finishes: Satin Taupe (default)
		1. Optional Powder Coat finishes: Matte Black, Dark Bronze, or White
		2. Optional Metal finishes: Antique Brass, Polished Chrome, Oil-Rubbed Bronze, Satin Chrome
		3. Optional PVD finishes: Brass PVD, Oil-Rubbed Bronze PVD, Satin Nickel PVD
2. Vertical Pull
	1. Available in half handle sets
	2. Keyed (default), Non-Keyed (optional)
	3. Finishes:
		1. Optional Powder Coat finishes: Matte Black, Dark Bronze
		2. Optional PVD finishes: Oil-Rubbed Bronze PVD, Satin Nickel PVD
3. Exterior Flush Handle
	1. Exterior half only, Requires Harp or Vertical Pull interior
	2. Non-Keyed
	3. Finishes:
		1. Optional Powder Coat finishes: Matt Black, Dark Bronze.
		2. Optional PVD finishes: Oil-Rubbed Bronze PVD, Satin Nickel PVD.
4. Gallery Collection
5. Powder Coat finishes: Satin Taupe (default)
	1. Optional Powder Coat finishes: Matte Black, White, or Dark Bronze

## Rollers:

1. Two stainless steel ball bearing roller assemblies per operating panel.

## Locking System:

1. Stainless steel, Multi-point (2-point) lock. Uses a 1.691” (43mm) backset lock.

#  Lock Status Sensor (Optional)

## Lock Status Sensor

1. Unit is factory-prepared for an integrated lock status sensor system. Contact sensor mounted inside the boundaries of the operating panel. Refer to Lock Status Sensor Installation Instructions.
2. Lock Status Sensor wireless only.
	1. Only wireless option available. Requires purchase of secondary transmitter for operation. Marvin will prep for this option.
3. The actuator (keyed or thumb turn) is integrated into the locking hardware system.

# Weather Strip

## Interlock weather strip between sliding panel and meeting stile on stationary panel

## Side jamb to have two sets of bulb weather strip maintaining contact with door panels

## Continuous slip coat weather strip along sill, head jamb, and meeting stiles

## Color: Black

# Jamb Extension

## Factory applied up to 3” (76mm), for other wall thickness indicated or required (shipped loose)

## Finish: Matches interior frame finish

# Insect Screen

## Ultimate Sliding Screen: extruded aluminum sliding top hung screen with roller bar. Top rollers adjustable up to ¼” (6mm). Replaceable bottom guide. Frame to have edge mounted wool pile bug strip.

1. Sliding screen for XO, OX, OOX, XOO, OXO, OXXO operation
2. Screen mesh: Standard is Marvin Bright ViewTM. Optional Charcoal Aluminum Wire, Black Aluminum Wire, Bright Bronze Aluminum Wire, Bright Aluminum Wire
3. Colors: Bahama Brown, Bronze, Cadet Gray, Cascade Blue, Cashmere, Clay, Coconut Cream, Ebony, Evergreen, Gunmetal, Hampton Sage, Pebble Gray, Sierra White, Stone White, Suede, Wineberry, Bright Silver (pearlescent), Copper (pearlescent), Liberty Bronze (pearlescent)

#  Simulated Divided Lites (SDL)

## 5/8” (16mm) wide, 7/8” (22mm) wide, 1 1/8” (29mm) wide, 1 15/16” (49mm) with or w/out internal spacer bar

## 4 3/4” (121mm) wide simulated stile for Transoms only

## Muntins: Pine, Mixed Grain Douglas Fir, White Oak, Cherry, Mahogany, Vertical Grain Douglas Fir

## Muntins adhere to glass with double-coated acrylic foam tape

## Glazing Profiles:

1. Standard: Ogee interior with simulated putty exterior
2. Optional: Square interior with simulated putty exterior

## Pattern: Rectangular, Cottage, Custom lite layout

## Finish: Match panel finish

#  Grilles-Between-the–Glass (GBG)

## 23/32” contoured aluminum bar

1. Exterior colors: The exterior GBG color is designed to best match the Marvin Aluminum Clad color when used with Low E glass. The use of different types of glazing may alter the exterior GBG color appearance.
2. Interior Color: White is the default. Optional colors: Bronze, Pebble Gray, Sierra White, Ebony (only available with Ebony exterior).

## Optional flat aluminum spacer bar. Contact your Marvin representative.

## Pattern: Rectangular, Cottage, Custom lite layout

#  Accessories and Trim

## Installation and Hardware Accessories:

1. Optional: Factory-applied Aluminum or Vinyl nailing fin
2. Optional: Structural Brackets

## Aluminum Extrusions:

1. Profile: Brick mould casing, flat casing, stucco brick mould, stucco flat casing, frame expander, jamb extender, mullion cover, mullion expander - as indicated on drawings
2. Finish: Match exterior frame finish

**Part 3 Execution**

* 1. **Examination**

## Verification of Condition: Before installation, verify openings are plumb, square and of proper dimensions as required in Section 01 71 00. Report frame defects or unsuitable conditions to the General contractor before proceeding.

## Acceptance of Condition: Beginning on installation confirms acceptance of existing conditions.

* 1. **Installation**

## Comply with Section 01 73 00.

## Assemble and install window/door unit(s) according to manufacturer’s instruction and reviewed shop drawing.

## Install sealant and related backing materials at perimeter of unit or assembly in accordance with Section 07 92 00 Joint Sealants. Do not use expansive foam sealant.

## Install accessory items as required.

## Use finish nails to apply wood trim and mouldings.

* 1. **Field Quality Control**
1. Remove visible labels and adhesive residue according to manufacturer’s instruction.

## Unless otherwise specified, air leakage resistance tests shall be conducted at a uniform static pressure of 75 Pa (~1.57 psf). The maximum allowable rate of air leakage shall not exceed 2.3 L/sm2 (~0.45 cfm/ft2).

## Unless otherwise specified, water penetration resistance testing shall be conducted per AAMA 502 and ASTM E1105 at 2/3 of the fenestration products design pressure (DP) rating using “Procedure B” – cyclic static air pressure difference.  Water penetration shall be defined in accordance with the test method(s) applied.

* 1. **Cleaning**

## Newly installed fenestration products shall be field tested in accordance with AAMA 502 and ASTM E1105.

## Leave windows and glass in a clean condition. Final cleaning as required in Section 01 74 00.

* 1. **Protecting Installed Construction**

## Comply with Section 07 76 00.

## Protecting windows from damage by chemicals, solvents, paint, or other construction operations that may cause damage.

End of Section