

SECTION 09770
SPECIAL WALL SURFACES

PART 1 GENERAL

1.1 SECTION INCLUDES

1. Pre-manufactured panel system including mounting hardware and specified accessories.

1.2 RELATED SECTIONS

1. Section 06100 - Rough Carpentry; furring, blocking, and other carpentry work that is not exposed to view.
2. Section 06402 - Interior Architectural Woodwork; for interior woodwork other than wall systems not included in this section.
3. Section 09260 - Gypsum Board Assemblies; for metal support systems not included in this section.

1.3 REFERENCES

1. American Society for Testing and Materials (ASTM) E84 - Standard Test Method for Surface Burning Characteristics of Building Materials.
 - a) Class 1/A - Flame Spread 0-25, Smoke Developed 450 or less.
 - b) Class 2/B - Flame Spread 26-75, Smoke Developed 450 or less.
2. Architectural Woodwork Institute (AWI) Quality Standards.
3. National Electrical Manufacturer's Association (NEMA)

1.4 SUBMITTALS

1. Submit under provisions of Section 01300.
2. Product Data: Manufacturer's Safety Data Sheets (MSDS) on each product to be used, including:
 - a) Preparation instructions and recommendations.
 - b) Storage and handling requirements and recommendations.
 - c) Installation methods.
3. Shop Drawings: Shop drawings in sufficient detail to show fabrication, installation, anchorage, and interface of the work of this Section with adjacent work.

4. Selection Samples: For each finish product specified, one complete set of color samples representing manufacturer's standard range of available colors and patterns.

1.5 QUALITY ASSURANCE

1. Manufacturer Qualifications:
 - a) Firm experienced in successful production of wall systems similar to that indicated for the Project, with sufficient production capacity to produce required units without causing delay in the work.
 - b) Provide certificate signed by panel manufacturer certifying that products comply with specified requirements.
2. Installer Qualifications: Demonstrate successful experience in installing architectural woodwork similar in type and quality to those required for this project.

1.6 DELIVERY, STORAGE, AND HANDLING

1. Do not deliver wall system until painting, wet work, grinding, and similar operations that could damage, soil, or deteriorate wall system have been completed in installation areas as specified by AWI 1700-G-3.
2. If panels are stored prior to installation, store them flat in completely enclosed areas, out of the weather. If panels must be stored in other than installation areas, store only in areas where environmental conditions comply with manufacturers recommendations. Do not expose panels to continuous direct sunlight, nor to extremes in temperature and humidity. Store products in manufacturer's packaging until ready for installation.
3. Store and dispose of solvent-based materials, and materials used with solvent-based materials, in accordance with requirements of local authorities having jurisdiction.

1.7 PROJECT CONDITIONS

1. Do not deliver or install wall system until building is enclosed, wet work is complete and HVAC system is operating and will maintain temperature and relative humidity at occupancy levels during the remainder of the construction period as specified by AWI 1700-G-3.
2. Do not install wall system until normal lighting conditions exist. Normal lighting conditions are described as those in place when the project is finished. This includes, but not limited to, design lighting (wall washers, spotlights and flood lights, and similar fixtures) and natural lighting.
3. Wall, ceilings, floors, and openings must be level, plumb, straight, in-line and square as specified by AWI 1700-G-3.
4. Sub wall must be flat and dry and conform to ML/SFA 540 Specifications. Vertical alignment (plumbness) of wall shall be within 1/960th (1/8" in 10 ft.) of the span. Horizontal alignment (levelness) of the walls shall be within 1/960th (1/8" in 10ft.) of their respective heights. Squareness of walls shall not be more than 1/8" out of square within the length of the wall. All corners, window mullions, a door frames must be plumb and level.

- 5- Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results, both during installation and subsequent occupancy. Do not install products under environmental conditions outside manufacturer's absolute limits. Panels shall be conditioned in the environment in which they will be installed for a minimum of 48 hours prior to installation. The recommended environment is 60° to 80° F and 50% to 60% relative humidity.
6. Manufacturer warrants any product it has manufactured and sold against defects in materials or workmanship for a period of one year from the date of original purchase and acceptance for use. This warranty extends to products assembled / installed and used in the manner intended and does not cover damage or failure caused by misuse, abuse or accidents, exposure to extreme temperature, improper installation, improper maintenance, and exposure to water or excessive humidity or excessive moisture.

PART 2 PRODUCTS

2.1 MANUFACTURERS

1. Acceptable Manufacturer: UNILIN Group – Clicwall, as provided by Panel Specialists, Inc.; 3115 Range Rd., Temple, TX 76504. ASD. Toll Free Tel: (800) 947-9422. Tel: (254) 774-9800. Fax: (254) 598-3222. Email: psiwalls@panelspec.com. Web: <http://www.panelspec.com>.
2. Substitutions: Not permitted.

(optional):
3. Requests for substitutions will be considered in accordance with the provisions of Section 01600.

2.2 PANEL SYSTEMS

1. Provide prefinished decorative panels where shown on the drawings, as specified herein, and as needed for a complete and proper installation.
2. Comply with applicable requirements of "Architectural Woodwork Quality Standards" in the production and installation of the wall panel system as published by the Architectural Woodwork Institute (AWI) unless otherwise indicated.
3. Clicwall Modular Wall Cladding as manufactured by Unilin Group and provided by Panel Specialists Inc. A progressive panel system with no exposed divider molding reveal between the vertical edge of the panels.
 - a) Panel Thickness: 3/8 inches (10 mm).
 - b) Panel Height: 9'-0" (108 inches/2785 mm).
 - c) Panel Width: 24-5/16 inches (618mm).
 - d) Panel Finish: Refer to Room Finish Schedule and drawings.
 - e) Main Laminated Panel Fire Rating: (Select one)
 - a) Fire Rating: ASTM E84, Class A. (Clicwall FR)
 - b) Fire Rating: ASTM E84, Class B. (Clicwall)
 - f) Molding: All moldings to be .062" thick (at structural areas) 6063 alloy aluminum with T5 temper.
 - a) 1/2" Wide Edge Trims & 1" Corners (Choose)
 1. #304A 1/2" Edge Trim Molding (2-piece)
 2. #103-90 1" Rounded 90° Outside Corner

3. #103-135 135° Outside Corner
 4. #304-90 End Cap for top and bottom of 90° outside corner
 5. #304-135 End Cap for top and bottom of 135° outside corner
- b) 3/8" Wide Edge Trims and 3/8" Wide Stepped corners (Choose)
1. #604 3/8" Edge Trim molding
 2. #604A 3/8" Edge Trim molding (2-piece)
 3. #603-90 3/8" Stepped 90° Outside Corner
 4. #603-135 3/8" Stepped 135° Outside Corner
 5. #604-90 End Cap for top and bottom of 90° Outside Corner
- g) Finishes:
- a) Panel Face: (enter finish descriptions here)
 1. Finish #1: _____
 2. Finish #2: _____
 3. Finish #3: _____
 - b) Panel Face Pattern Direction:
 1. Vertical
 - c) Aluminum Molding Finish: (select one or enter custom color choice)
 1. Clear Anodized
 2. Black
 3. Custom Color: _____

2.3 MATERIALS (Choose panel surfaces required)

1. Durable Decorative Melamine surface
 - a) Durable Melamine top layer and a balancing melamine back layer in a range of 86 colors and decors, both stock and non-stock offerings.
2. Panel core is 10 mm PEFC certified MDF.
3. Every Clicwall panel has a "tongue" on one side and a "groove" on the opposite, 9'-0" side. This allows the panels to be "clicked" together. The Unilin patented "Uniclic" system ensures a virtually seamless connection between panels. The top and bottom edges of the panels are square. The bottom edge can be hidden behind a rubber base treatment or captured in a J-Mold perimeter trim. The top can be left uncovered or also captured in a J-Mold perimeter trim. Inside corners typically use a similar J-Mold trim. Outside corners are covered with a corresponding trim.

PART 3 EXECUTION

3.1 EXAMINATION

1. Do not begin installation until substrates have been properly prepared according to AWI 1700-G-3.
2. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

3.2 FIELD DIMENSIONS

1. Where wall system is indicated to be fitted to other constructions, check actual dimensions of other constructions by accurate field measurements before manufacturing wall system; show recorded measurements on final shop drawings. Coordinate manufacturing schedule with construction progress to avoid delay of work.

2. Where field measurements cannot be made without delaying the work, guarantee dimensions and proceed with manufacture of wall system without field measurements coordinate other construction to ensure that actual dimensions correspond to guaranteed dimensions.

3.3 PREPARATION

1. Clicwall must be stored flat to avoid warping or cupping. Panels must be acclimated to ambient temperature and humidity conditions in accordance with manufacturer's specifications prior to installation. Refer to the Clicwall installation guide (www.unilinpanels.com) for proper, handling, storage, and acclimation procedures.
2. Clean surfaces thoroughly prior to installation.
3. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

3.4 INSTALLATION

1. Install in accordance with manufacturer's instructions.
2. When interior paneling is on an exterior wall or in a wet area, provide a barrier sheet of plastic film between the outside wall and the panels to prevent condensation affecting the stability of the panels.
3. Field cutting of all wall systems should be accomplished using carbide tools. All face penetrations and cutouts should have a minimal 1/8-inch (3 mm) radius in corners according to NEMA Standards Publication LD 3-2005.
4. The Clicwall panels can be attached the building substructure in 4 possible manners.
 - a. Panels may be attached with counter sunk screws.
 - b. Panels may be attached with Masonry Anchors over CMU substrates.
 - c. Panels may receive an "S" bead of panel mastic on the back of the panel when installed over gypsum board or CMU substrates.
 - d. Panels may be attached to wood, gypsum board or wood slats with construction staples.
 - e. A 1mm contraction joint per running meter must be provided underneath, on top and on the sides, with a minimum joint of 6mm. An extra expansion joint should be provided every 8 meters (24 – 26 feet) for this purpose.

6. PROTECTION

- a. Protect installed products until completion of the project.
- b. Touch-up, repair or replace damaged products before Substantial Completion.

ADDITIONAL TECHNICAL INFORMATION

	Reference	Value
Fire resistance/Acoustic		
Fire Rating Clicwall and Clicwall Paint	ASTM E84	Class B
Fire Rating Clicwall FR	ASTM E84	Class A
Acoustic (dB – 48)	ISO 17025:2500	$R_w (C-4; C_{tr} -11) = 52$ dB
Sheet		
EN13986		
Bending strength (N/mm ²)	EN310	22
Modulus of elasticity (N/mm ²)	EN310	2500
Tensile strength (N/mm ²)	EN319	0,6
Swelling after 24 hrs. (%)	EN317	17
Formaldehyde content (mg/100g dry)	EN120	(E1) ≤ 8
Water vapour permeability (μ)	EN13986 (Table 9)	12 (wet) / 20 (dry)
Sound insulation (dB)	EN13986 (Chp 5.10)	$R = 13 * \lg(ma) + 14$
Sound absorption (Coefficient)	EN13986 (Table 10)	0,10 (250-500Hz)/0,20 (1000-2000Hz)
Thermal conductivity (λ)	EN13986 (Table 11)	0.1
Biological durability (Rating)	EN335-3	Class 1
Pentachlorophenol (PCP) content (ppm)	EN13986 (Chp 5.18)	< 5
MDF		
EN622-2		
<i>Fibreboard (MDF) - Requirements</i>		
<i>EN622-2</i>		
Tolerance on the mean density (%)	EN323	± 7
Density (kg/m ³)	EN323	760
Moisture content (%)	EN323	6 ± 2
Melamine sheets internal use		
<i>Melamine sheets - Requirements</i>		
<i>EN14323</i>		
Thickness tolerance compared with normal value (mm)	EN14323	± 0.2
Thickness tolerance (mm)	EN14323	$t_{max} - t_{min} \leq 0,6$
Length tolerance (mm)	EN14323	± 1
Width tolerance (mm)	EN14323	± 0.5
Flatness (mm/Lm)	EN14323	≤ 2
Damage: short edges (mm)	EN14323	< 3
Damage: tongue & groove (mm)	EN14323	0
Surface blemishes (points) (mm)	EN14323	≤ 2
Surface blemishes (lines) (mm/m ³)	EN14323	≤ 20
Scratch resistance (N)	EN14323	≥ 1.5
Stain resistance (Rating)	EN14323	≥ 3
Crack resistance (Rating)	EN14323	≥ 3

END OF SECTION