SPECIFICATIONS
STONESKIRT SKIRTING WITH VERTICAL I-BEAM REINFORCING

PART 1: GENERAL

1.01 Section Includes

A. Product description and definitions.

B. Constructing leveling pad for skirting wall units.

C. Installing modular concrete skirting units.

1.02 Applicable Standards for Specifications

American Society for Testing and Material (ASTM)

ASTM: C-90-90	Hollow Load-bearing Masonry Units
ASTM: C-140-75	Sampling and Testing Concrete Masonry Units
ASTM: C-145-85	Solid Load-Bearing Concrete Masonry Units

American Society for Testing and Materials (ASTM)

ASTM: A-525	Standard Specification for Zinc-Colored Sheet
ASTM: A-36	Standard Specification for Structural Steel

American Society for Testing and Materials (ASTM)

ASTM D-782	Specific Gravity
ASTM D-2240	Hardness, Shore “D”
ASTM D-638	Tensile Strength, PSI
ASTM D-638	Tensile Modulus
ASTM D-790	Flexural Strength, PSI
ASTM D-790	Flexural Modulus, PSI
ASTM D-256	Izod Impact FT-LBS/IN (1/8”)

American Society for Testing and Materials (ASTM)

ASTM B-221	Aluminum Alloy Extrusion Bars
ASTM B-136	Stain Resistance of Anodic Coating on Aluminum

American Society for Testing and Materials (ASTM)

ASTM D 638	Test Method for Tensile Properties of Plastic
ASTM D 1248	Specification for Polyethylene Plastic Molding and Extrusion Materials
ASTM D 1785	Specification for Poly Vinyl Chloride (PVC) Plastic Pipe. Schedules 20, 40, 80, 120.

American Society for Testing and Materials (ASTM)

ASTM D 698

1.03 Delivery, Storage and Handling

A. Stoneskirt skirting unit

1. Contractor shall check the units upon delivery to ensure proper materials have been received.

2. Contractor shall prevent excessive mud, wet cement, epoxy, and like materials from coming in contact with and affixing to the units.

3. Contractor shall protect the units from damage (i.e. cracks, chips, and spalls.) Damaged units shall be evaluated for usage in the wall according to ASTM: C-90-75 (1981 Rev.) and ASTM: C-145-75 (1981 Rev.)

B. PVC Material

1. Contractor shall check the I-Beam and Sill Gasket upon delivery to ensure the proper materials have been received.

2. PVC materials shall be stored at temperatures not to exceed 110 degrees Fahrenheit.

C. Galvanized or Painted Steel and Aluminum Material

1. Contractor shall check proper quantities have been received.

2. Contractor shall check for bent, warping, or scratching of the I-Beam or face of material.

PART 2: Products

2.01 Definitions

A. Stoneskirt Modular Unit – a concrete skirting wall unit, as manufactured by a licensed Stoneskirt Wall producer, machined from Portland cement, water, and aggregates.

B. Sill Block – a concrete sill sloped at 8 degrees to shed moisture to the outside of the wall.

C. Brackets

1. L Bracket – a bracket designed to attach skirting to the underside of the homes. The L Bracket is installed on below home sets and provides auto adjust for 2” Freeze/Thaw bearing movement beneath the home.

2. Sill Bracket – Bracket designed for usage with skirting with sill block set. The bracket attaches to the side of home attaching to Stoneskirt sill I-Beam Bracket allows auto adjust to movement of skirting independent of the home wall.

3. Swivel Bracket – Bracket with capabilities to install on underside and outside wall of home. Bracket allows vertical auto adjust. Bracket generally used for U shaped fascia.

D. I-Beam

1. PVC I-Beam – Interlocks to the vertical side of Stoneskirt unit. I-Beam creates vertical stiffness in skirting wall.

2. Aluminum I-Beam – Interlocks to the vertical side of Stoneskirt unit. Provides vertical stiffness in skirting wall. Aluminum I-Beam provides superior stiffness in tall skirting walls. Reference Stoneskirt manual for maximum height instructions.

E. Sill Gasket – a PVC Gasket is used to seal the opening between home wall and concrete sill. Gasket provides two compressible members entering down between the wall and attaching the gasket into position. Compressible members utilize traction ridges to secure gasket.

F. Base Angle Iron – Angle iron is a hot roll angle 2x2x1/8 A36 steel. Angle is generally manufactured in 20 foot lengths at a weight of approximately 1.65 pounds per foot.

G. Vents – Vents have three options: Free Flow, Manual Damper, and Automatic Vents. The three have net free area 72 square inches. 1/8-inch aluminum screen.

H. Foundation Base Fill – aggregate that is placed underneath the modular concrete units. The aggregate will be crushed, free draining stone.

I. Geogrid – Polyester fiber, polyethylene expanded, or a polypropylene woven material used as soil reinforcement component and is used in conjunction with the Modular Units. The Geogrid is a structural component formed by a network of connected apertures of sufficient size to allow interaction with the soil.

2.02 Modular concrete Skirting Units

A. Exterior dimension may vary. Standard units are required to have a minimum of .88 square feet to a maximum of 1.3 square feet of face area for each standard unit and a minimum of 2.25” thickness.

B. The Modular concrete wall units will conform to the following aesthetic requirements:

    1. Color – color should be specified by the Owner or Designer

    2. Face Surface – fractured rock face with a scored design – STRI pattern with a scored design

C. Modular concrete skirting units shall conform to the requirements of ASTM C-90 – Standard Specifications for load bearing concrete masonry units.

D. Modular concrete skirting and sill units shall conform to the structural and unit measurements tolerances in accordance with the following Stoneskirt specification.

    1. Compressive strength minimum of 3000 PSI

    2. Absorption minimum of 6%

    3. Unit height of variance of plus or minus 1/16 inch

E. Sill units will be attached using an adhesive meeting the manufacturers specifications.

2.03 Base Pad Material

A. The base pad material will consist of either a compacted crushed stone foundation base fill, a minimum of 4” in depth, or a concrete leveling pad as determined by the manufactured home setting requirement.

2.04 Foundation Base Fill

A. Unit drainage and unit fill shall consist of clean, well drained, 1” minus crushed stone or gravel. The sieve analysis will be in accordance with ASTM D-422. The tested gradation should be as follows:

Sieve Size	Percent Passing
1 Inch	100
¾ Inch	75-100
No. 4	0-10
No. 50	0

2.05 Water, Sewer, Electrical, and Miscellaneous Utility Trenching

A. Trenches excavated under the home and the Stoneskirt wall shall be backfilled. The backfill shall be placed in a maximum of 6-inch layers and compacted to a minimum of 95% standard proctor density.

PART 3 EXECUTION

3.01 Examination

A. The area and conditions where the skirting wall is to be constructed needs to be examined and documented. If conditions exist that seem detrimental to the construction, design or lifetime performance of the skirting wall after installation, the General Contractor or owner should be notified.

3.02 Excavation

A. The Installer shall excavate to the lines and grades that allow installation on stable soil with a 4” foundation base fill pad. The grade level will be at a measurement from the manufactured home that provides a 2” gap between the top of the skirting wall and the home on under home sets. Sets for sill applications need to take into consideration the finished height of the skirting on the exterior of the wall.

3.03 Base Leveling Pad

A. The Base Leveling Pad needs to be constructed on undisturbed or properly prepared soil, per ASTM D-698, foundation soils. The leveling pad needs to be constructed in a manner that allows full contact of wall units with foundation.

B. Aggregate Leveling Pad shall be compacted to a minimum of 95% standard proctor density per ASTM D-698.

C. Leveling pad shall be prepared to insure full contact to the base surface of the Stoneskirt concrete pads ar angle iron.

3.04 Modular Unit Installation

A. Angle Iron is placed directly on the leveling pad. Sand can be used for final leveling at a maximum depth of ¼ of an inch. Block alignment and levels, parallel and perpendicular to the manufactured home, should be checked to ensure all units are in full alignment with the home wall. Wall units must also be inline horizontally, or side to side, with adjacent units.

B. The I-Beam is installed on each completed unit column – the units shall be positively interlocked by a PVC or Aluminum I-Beam inserted into the vertical side of the block.

C. On completion of each unit column, the wall to skirting bracket is attached to the home creating an auto adjusting connection between the home and skirting. Consult the Stoneskirt bracket bulletin for recommended bracket for specific applications with installation instructions.

D. For corner applications, please consult the manufacturers specifications.

3.05 Geogrid Lateral Base Anchor

A. Geogrid will be placed under the base angle iron. It extends outward from the wall a distance in accordance with design recommendations that will prevent inward sliding of the base of the wall due to external soil pressure. The Geogrid will wrap upwardly around the angle iron and extend 3" beyond the angle and on top of the outward extending geogrid. Stoneskirt units will be placed on the angle with the Geogrid compressed between the angle iron and the Stoneskirt unit.

B. The backfill soils will be placed, spread, and compacted in a manner that minimizes the development of slack and damage in the installed Geogrid.

C. The backfill will be compacted to 95% proctor density per ASTM D698.

3.06 Sill Installation

A. Sill units shall be adhered to underlying Stoneskirt units with the Alliance SSA adhesive or an all-weather adhesive recommended by the manufacturer. Sill will need to be cut for corner applications.

B. Sill gasket shall be installed using Alliance SSA adhesive to adhere Gasket to concrete sill. The gasket shall be installed to move freely on the home siding.

3.07 Field Quality Control

A. The Owner or General Contractor should inspect or enlist the assistance of a qualified third party to provide quality assurance, services during constructions and/or a final inspections for the skirting project. The presents of this third party does not alleviate the installer from fault.