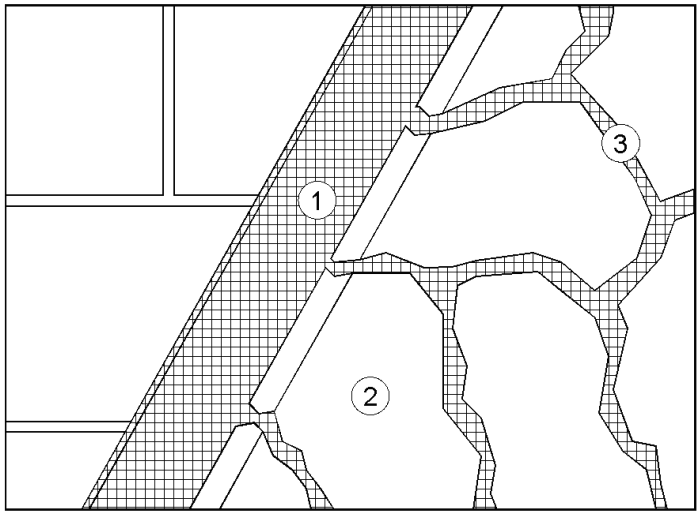
Installation of Balconi Natural Thin Stone Veneer

Preparing the Backup Surface for Mortar Application

Concrete/Concrete Block/Cement Stucco

MASONRY OR CONCRETE:



In sequence: (1) mortar applied directly to untreated masonry, concrete or stucco, (2) Robinson Rock, (3) mortar joint.

1a.Concrete/Concrete Block/Stucco needs to be clean and in its original, untreated condition. If the surface has been treated, light sandblasting or water blasting can be used to restore the wall to a smooth, clean surface. Remove all form-release agents, dust, etc., that may inhibit the mortar bond.

1b. Alternately, you can securely attach metal lath to the wall every 6” on center and apply a scratch coat of mortar 1/2"-3/4" thick. Use a toothed scraper, notched trowel or small piece of lath to lightly rake horizontal grooves in the scratch coat. Allow the scratch coat to cure for a minimum of 24 hours.

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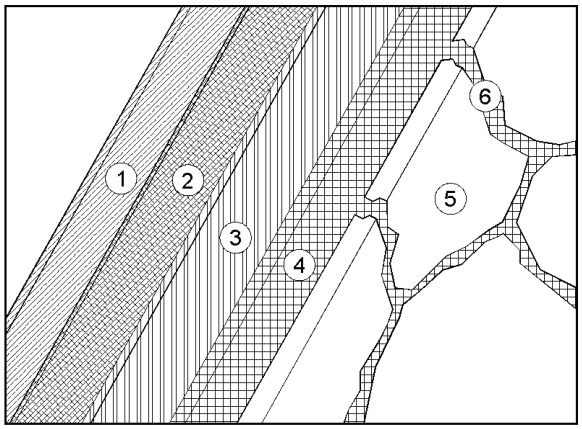
WOOD FRAME:



In sequence: (1) sheathing, (2) weather-resistant barrier, (3) galvanized metal lath, (4) mortar, (5) Robinson Rock, (6) mortar joint.

1. Apply sheathing over the studs. This sheathing can be exterior OSB, plywood, exterior grade drywall, wallboard or cement board.

2. Staple the building paper to the sheathing. Attach the building paper in horizontal strips. Start at the bottom and overlap 2" (like shingles). Overlap the vertical joints by at least 6". If using flashing or support brackets (anchors), install them before proceeding to the next step.

3. Screw, staple or nail the metal lath to the studs with a maximum horizontal spacing of 16"o.c. Overlap the metal lath at least 1" for horizontal and vertical joints. At corners, overlap the vertical joints at least 16" around the corner to avoid corner cracking. Use barbed galvanized nails at 6"o.c. vertically for exterior work or steel wire furring nails at 4"o.c. for interior work. Minimum nail penetration is 1" into the studs. For steel studs, the lath must be anchored with corrosion resistant screws that have a minimum shank diameter of 0.190".

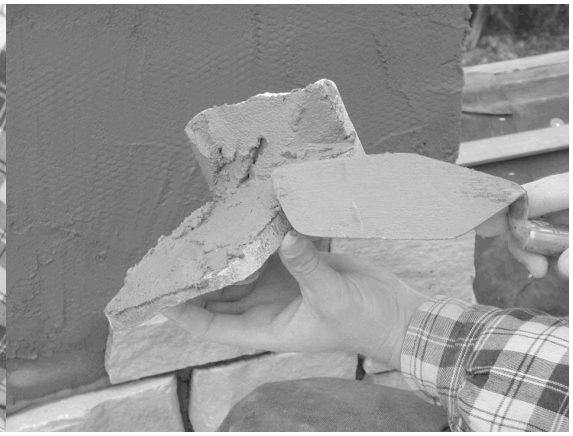
4. Apply a scratch coat of mortar that is 3/8" to 1/2" thick over and embedding into the metal lath. Use a toothed scraper, notched trowel or small piece of lath to lightly rake horizontal grooves in the scratch coat. Allow the scratch coat to cure for a minimum of 24 hours.

Mortar Application and Stone Placement

Starting Point

You can start laying stones at the top or the bottom of the wall. Working from the top down may keep mortar droppings from staining stones below, but make sure the mortar is strong enough to hold the suspended stone in place.

If beginning from the bottom, use a straight-edge and start 4" above soil or 2" above concrete to keep moisture from being absorbed from the ground. If your wall requires corner pieces, place these stones first. After your corner pieces are in place you can continue with the field stones.



Mortar Application

At the beginning of the workday, sponge or hose down the entire surface of the wall. This keeps the moisture from the wet mortar from being absorbed by the wall. Remoisten your work area with a fog spray or wet brush every hour. You want your work area to be damp, but not wet. Using a trowel, apply mortar 3/8" to 3/4" thick to your work area. Push the mortar layer directly onto the backup wall (for concrete/concrete block/stucco) or into the scratch coat (for open studs) with firm pressure on the trowel. Keep your work area limited to 10 square feet, so the mortar on the wall will not set before you can place the stones.

Joint Width

Proper joint width depends on the type of stone being used and the desired appearance. For wide joints, more mortar may need to be placed on the back of the stone. For thin joints, less mortar should to be used. Be aware that increasing the amount of mortar on the back of the stone unit increases the possibility of mortar droppings on the stones below it. This also adds extra weight, which may cause the stones to be too heavy and fall off the wall. Make sure to keep your joints uniform in width. If your joints are greater than 1/2" in width, shrinkage cracks may develop within the joint.

Workmanship is a Key to Success

Installation of adhered natural stone veneer is relatively straightforward, but requires an experienced tradesman with a keen eye to fit the stones in an attractive pattern.

Important workmanship issues to consider include:

• Complete mortar bedding at the back of the stone is essential. Even small voids can collect water over time, leading to premature failure.
• Mortar joints need to be full and well-tooled, without voids or cracks that may let water into the wall.
• Mortar joint width should be fairly uniform. Very wide joints are likely to develop shrinkage cracks. Narrow joints are difficult to fill properly.
• The bond pattern should be "comfortable" – avoid the use of occasional large or very small stones. The final product should have the appearance of load-bearing masonry,

Cutting and Trimming Stones

When placing a stone, try to find one that looks like a good fit with its neighbor. Some of these stones will still need to be trimmed to fit neatly and maintain uniform joint widths. To cut the stone, use a handheld grinder with a diamond cutting wheel or a chisel and hammer. If you prefer a rougher cut, score the back of the stone with the grinder and then use the hammer to break the unwanted pieces off. After the stone has been cut and trimmed, use a sponge or brush to assure that all grinding residue and dust have been removed.

Grouting and Finishing Joints

After the stone is in place and has set for 24 hours, come back and fill the joints using a pointing tool or grout bag. The final joint finish helps the wall resist moisture penetration. Tool the joint using a concave joint tool to compress and smooth the joints for maximum water resistance. Rough cut or raked joints will not be as water resistant as tooled joints. Brush away any crumbles or mortar tags after tooling the joint. We do not recommend installing stone veneer with open joints outside in climates with freeze/thaw weather cycles. Dry stack installation can be used for interior installations or warm climates where it does not freeze.

Clean up at the End of the Day

At the end of the workday, gently brush mortar smears off the stone. Do not use aggressive high pressure cleaning methods to clean the wall. They might loosen the stone. Balconi Natural Thin Stone is resistant to many chemicals, but some types of cleaners can damage the stone. Talk to your stone supplier to get specific recommendations for cleaning your stone.