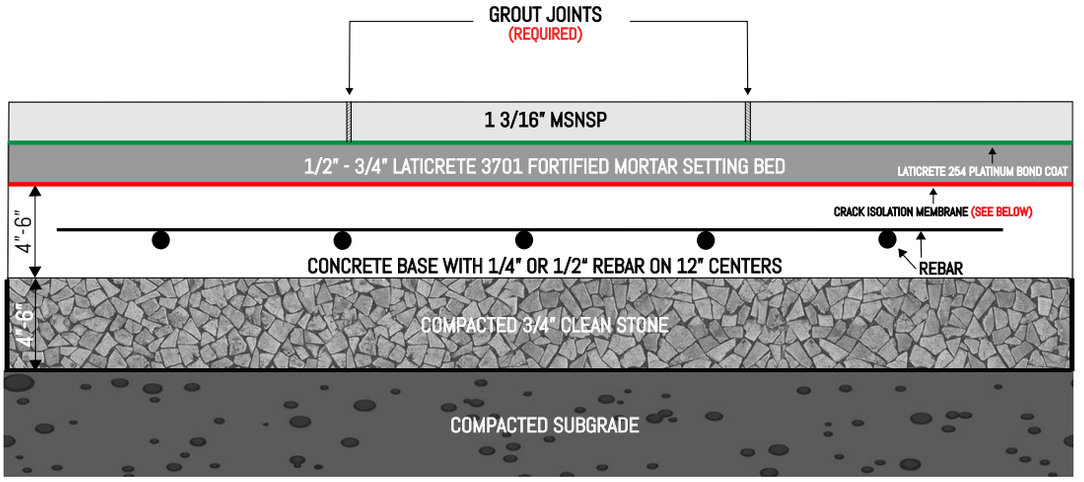
WET LAID: 1 3/16"

MSNSP – Marmiro Stones Natural Stone Pavers – Pedestrian



WARNING

Installation of material is sign of acceptance.
No returns on open crates, custom orders, & products with custom packaging.
For unique job conditions, soil types and concrete slab reinforcement additional engineering may be needed.
Concrete sand or any additives mixed with sand and screenings hold moisture under Marmiro Stones® Natural Stone Pavers (MSNSP) and can affect the integrity of the stone. They are prohibited from being used as a bedding layer.
Tamping sandblasted marble is not recommended. This will cause chipping along the edges of the stone.

BEST PRACTICES

1. Perform all cutting using a diamond blade. Cutting wet can provide a smoother cut and may decrease chipping on MSNSP.
2. ONLY use a white non-marking mallet to set the stones.
3. During installation of MSNSP, it is best practice to use string lines or laser equipment to maintain square at the starting point.

1) SITE PREPARATION & EXCAVATION

a. Call Before You Dig

- Always contact 811 or your local utility locating service to mark underground utilities before any excavation. Include discussions with the client about irrigation lines, drainage, and sprinkler heads.
- Dig soils to depth between 10.5” - 12.5” maintaining a slope of 3/16” per foot to allow for proper drainage. This slope should mimic the slope of your final elevation.

b. Excavation & Slope

- Excavate to a depth of 10.5”–12.5”, accounting for all layers, and maintaining a consistent slope of 3/16” per foot away from structures for effective drainage. This slope must be consistent from sub grade to final grade.

c. Sub Grade Preparation

- Compact native sub grade soil using a vibratory plate compactor to achieve a uniform, stable base.
- Maintain slope throughout compaction.
- Install a woven geotextile fabric, fully encapsulating the excavated area, including vertical sidewalls, to stabilize soil and prevent sub-base migration.

d. Sub Base Installation

- Place and compact a minimum of 4” of ASTM #57 stone (3/4" clean angular stone) as the sub-base layer.

e. Concrete Slab (Bonded or Unbonded Systems)

- Pour a 3500-PSI concrete slab, reinforced with ½” rebar on 12” centers.
- For heavy-duty applications, a minimum thickness of 6” is recommended; for pedestrian applications, 4” may be sufficient.
- Finish the concrete with a slope matching final grade: 3/16” per foot minimum.
- Control joints may be needed every 8'-12' in a 4" slab and in areas that may be at risk of cracking. Depth of control joints should be 25% of the thickness of the slab.

f. Apply Laticrete Hydroban® in two coats on top of the concrete slab to be used as a crack isolation membrane.

2) SETTING BED & PAVER INSTALLATION

a. Elevation Allowance
- Ensure the finished concrete surface sits 2-1/4" below finished grade to accommodate setting bed and stone thickness

3) SETTING BED MATERIAL

a. Final elevation of concrete base should be 2" below finished grade.

b. Surface Preparation
- All surfaces should be between 40°F (4°C) and 90°F (32°C) and structurally sound, clean and free of all dirt, oil, grease, laitance, paint, concrete sealers, or curing compounds. Dry, dusty concrete slabs or masonry should be dampened and excess water swept off. Installation may be made on a damp surface.

c. Mortar Setting Bed (Minimum ½" – 1" Maximum)
- Laticrete® 3701 Fortified Mortar
  (1) Use approximately 4.8-5.0 qts (4.5-4.7 L) of water for 25 lbs. (11.3 kg) of powder. To mix smaller quantities, use 3.7 parts powder to 1 part water.
  (2) Allow mortar to slake for 5 minutes. Remix without adding any more water or powder. During use, stir occasionally to keep mix fluffy. Do not temper with water.
  (3) Due to the fiber-reinforced formula, back buttering the stone is recommened but not required.
- **Bonded Mortar Bed Recommended**
  ◦ Before placing mortar, apply a slurry bond coat made from Laticrete® 254 Platinum White. While the slurry bond coat is wet, spread the mortar and compact well. If placing tile immediately, apply a slurry bond coat, made from 254 Platinum White in the mortar. While the slurry bond coat is wet and sticky, place the stone and beat in well.

  Note: The only alternative morter to be used is white type S.

d. Expansion and Control Joints
- Where expansion and control joints are present, they shall extend through the mortar and tile work from all expansion and control joints in the substrate. Do not cover expansion joints with mortar and stone.
- All expansion and control joints to be filled with Laticrete® Latasil or appropriate joint sealant.
- Based on the pattern and job site conditions, choose your starting point that is most practical from staging of materials.
- Be sure to remove excess bedding mortar along exposed edges before ending the day.

4) STONE INSTALLATION

- MSNSP must be installed with at least 1/8" to 1/4" joint using spacers depending on the pattern while maintaining straight lines.
- Due to variations in natural stone, it is required to pull from multiple crates

5) FINISHING

- Grouting the joints is required for all wet laid applications.
  ◦ Grout installation can be done after a minimum of 24 hours curing time at 70°F.
  ◦ Laticrete® PERMACOLOR® Grout (1/8"- 1/4" Joint)
  (1) Use approximately 2.4–2 .6 quarts (2.3 L–2.5 L) of clean potable water for 25 lbs. (11.3 kg) of PERMACOLOR® grout. Place water in a clean five-gallon mix bucket and add grout powder. Mix with a slow speed drill mixer (300 rpm) for one minute.
  (2) Clean tile surface with a damp sponge. Spread with a sharp, firm rubber grout float or wall float for narrow wall joints. To remove excess grout, hold the float at a 90° angle and pull it at a 45° angle diagonally across the joints to avoid pulling out the material.
  *Note - If the grout begins to stiffen during installation, remix with drill mixer for 10–15 seconds. Do not add more water.
  (3) Begin initial cleaning by lightly wiping down entire area to be cleaned with a damp sponge. Wash with a damp sponge (not wet). Work diagonally toward the joints. Allow to dry three hours at 70°F (warmer days will have a faster dry time). For second cleaning, use a damp sponge or dry cloth to remove remaining grout haze.