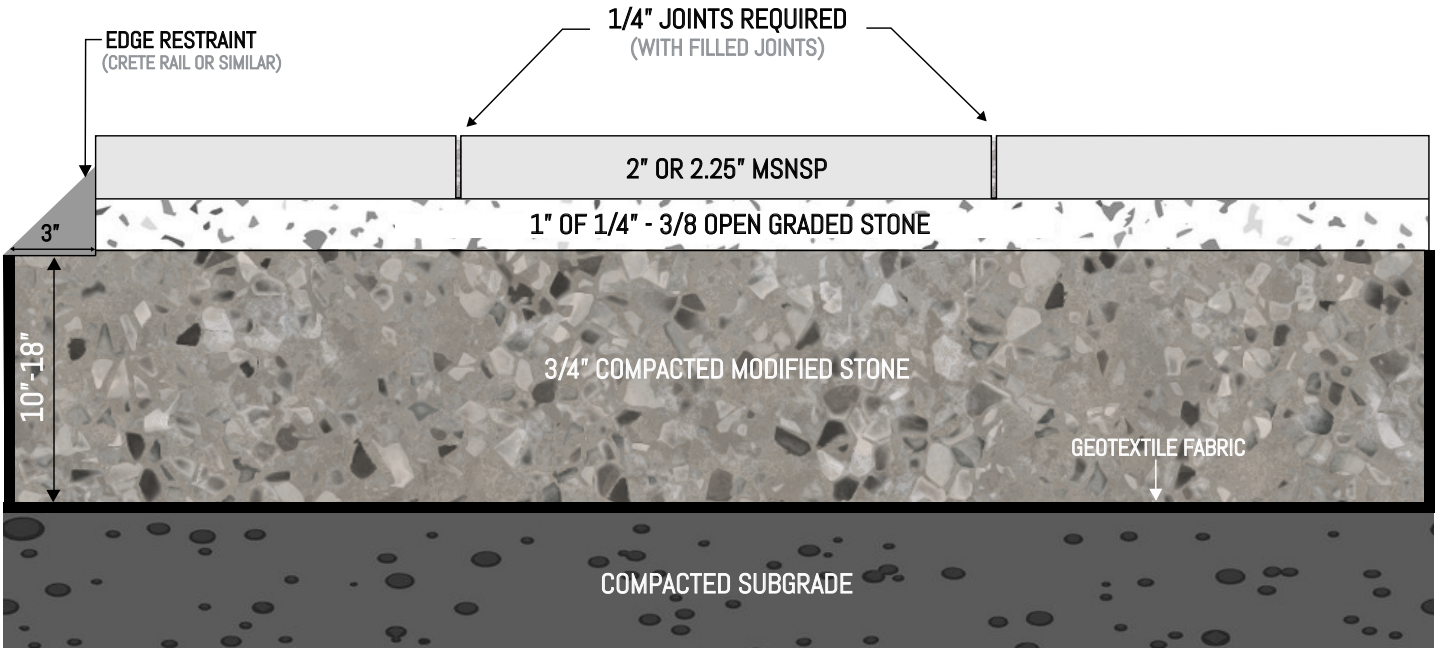
MARMIRO STONES®
BY TURAN BEKISOGLU

DRY LAID ON MODIFIED BASE 2"-2.25"

MSNSP – Marmiro Stones Natural Stone Pavers – Light Vehicular Application



STOP

- For unique job conditions, soil types and/or climate conditions additional engineering may be needed.
- Concrete sand and screenings hold moisture under Marmiro Stones Natural Stone Pavers (MSNSP) and can affect the integrity life of the stone. These are NOT recommended as a bedding layer.
- Tamping sandblasted marble & sandblasted travertine is not recommended. This will cause chipping along the edges of the stone.
- 2" & 2.25" MSNSP MUST be laid with at least a 1/4" joint using spacers for light vehicular applications.

BASE THICKNESS PER APPLICATION - RESIDENTIAL

Project Type	Soil Type	
	Sand and/or Gravel	Silts or Clay
Pedestrian	4"-6"	6" - 8"
Driveway - Light Vehicular	10" - 14"	12" - 18"

APPROVED MSNSP PRODUCT FOR THIS INSTALLATION METHOD

MATERIAL TYPE	RECOMMENDED	NOT RECOMMENDED
MARBLE	✓	
TRAVERTINE	✓	
GRANITE	✓	
BLUESTONE		X
BASALT	✓	

Excavation

1. Please be sure to call 811 or your local utility companies to ensure utility lines are marked correctly before any excavation has begun.
2. If lines are found, please take proper precautions to ensure utility lines will not be disturbed. This includes discussing sprinkler lines and heads with the customer.
3. Dig soils to depth between 13" - 21" maintaining a slope of 3/16" per foot to allow for proper drainage. This slope should mimic the slope of your final elevation.
4. Compact your sub grade maintaining the slope as mentioned above. Install woven geotextile encapsulating the entire excavated area including the vertical walls of the soil. See diagram.
5. Install 10"-18" of modified stone base compacting in 2"- 4" lifts using a vibratory plate compactor. It is strongly encouraged to make sure to apply water to the modified stone while compacting to ensure proper compaction is achieved. Compacting dry modified stone will not achieve proper compaction.

Installation

1. Final elevation of modified stone should be 3" - 3 1/4" below finished grade.
2. Place the 1/4"-3/8" clean stone (AASHTO #8, AASHTO #89, Rice Stone) for setting bed on top of modified base.
    - CONCRETE SAND IS NOT RECOMMENDED UNDER MSNSP.
    - SCREENINGS ARE NOT RECOMMENDED UNDER MSNSP.
3. Set your 1" metal screed rails at an acceptable working width.
4. A good practice would be to place screed rails parallel to a fixed finished grade edge.
5. Screeding the setting bed: Pull clean stone along the metal screed rails using an aluminum straight edge.
7. Remove screed rails, place setting bed material in the voids and use trowel to level with setting bed.
8. Based on the pattern and job site conditions choose your starting point that is most practical from staging of materials.
9. During installation of MSNSP it is best practice to use string lines or laser equipment to maintain square at the starting point.
10. MSNSP must be laid with a 1/4" joint using spacers maintaining straight lines using strings or lasers. If laid with tight joint, point loading and chipping will occur.
11. Due to variations in natural stone it is required to pull from multiple crates.
12. Perform all cutting using a diamond blade. Cutting wet can provide a smoother cut and may decrease chipping on MSNSP.
13. Edge restraint: Remove excess setting bed material outside of finished edge. Mix Crete-Rail™ in bucket. Apply with a trowel.
14. Sweep polymeric sand in joints. Follow manufacture's instructions on bag.
15. Antiqued Travertine application: use a vibratory plate compactor with rubber mat or vibratory roller.
16. Antiqued Marble application: use a vibratory plate compactor with rubber mat or vibratory roller.