Installation Guide

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Matted Paver System



STRAIGHT MAT

Straight Mat: With its straightforward, clean lines, the Straight Mat offers a contemporary paving solution that emphasizes functionality and sleek design. Suitable for areas requiring solid footing and high traffic endurance, such as driveways or garden paths, it provides a modern touch while ensuring practicality and ease of installation.



COBBLE MAT

Cobble Mat: Echoing the charm of old-world streets, the Cobble Mat combines the robustness of traditional cobblestone with modern flexibility. Perfect for driveways, patios, or walkways, it adds a timeless elegance to any outdoor space, inviting a sense of history and durability that stands the test of time.



TERRA SHELL MAT

Terra Shell Mat: Crafted for the nature enthusiast, the Terra Shell Mat features a unique, shell-like design that beautifully mimics the organic patterns found in natural landscapes. Ideal for creating pathways or accent areas that blend seamlessly with the outdoors, it brings a piece of the wilderness to your backyard.

About Us

Welcome to the world of effortless elegance and practical beauty with our range of innovative mat products. In this guide, we are excited to introduce you to our collection, which includes the Straight mat, Cobble Mat and Terra Shell Mat. Designed with both aesthetics and functionality in mind, our products promise to transform your outdoor spaces into areas of beauty and tranquility. Whether you're planning to create an inviting walkway, a serene patio, or decorative borders that blend seamlessly with nature, our mats provide the perfect solution. Beyond their visual appeal, these mats are engineered for ease of installation, making it possible for DIY enthusiasts and professionals alike to achieve stunning results without the need for specialized tools or extensive experience. Through simple, step-by-step instructions, we'll guide you through the entire process—from preparation to the finishing touches— empowering you to bring your outdoor visions to life with confidence and ease. Dive into the pages ahead to discover how our mats can enhance your environment, save you money, and leave a lasting impression on your home

Terra Shell Mat



Terra Shell Mat
(Slate Grey ONLY)
For Foot Traffic Only
Nominal dimensions:
12.25”x23.5”x1”

1.75sq.ft.per mat/
175 sq.ft.per pallet
100 units per pallet/
1,485 lbs. per pallet





QUICK INSTALL

EQUIPMENT AND PREP CHECKLIST

- Clear and level the ground.
- A screed board or rake to level the ground.
- Tamper to compact base layer.
- Snippers for cutting interconnecting mat



GROUND PREP

1. **Clear the Area:** Remove any debris, rocks, or vegetation.
2. **Level and Slope:** Ensure the ground is level. Incorporate a slight slope for water drainage if applicable (typically away from home or structure)
3. **Compact Base:** Use a tamper to compact the base layer for stability added stability if needed
4. **Final Leveling:** After compaction, recheck the leveling for any needed adjustments.



LAYING

1. **Starting Point:** Begin at a chosen origin point, preferably on the outer edge of your project working from one side to the other. If building with a preexisting structure begin from its edge
2. **Pattern Selection:** Decide on your laying pattern if desired. This can vary based on the mat type and the your projects aesthetic.
3. **Expansion:** Lay mats from the starting point outward, maintaining consistent spacing for uniform grout lines.



NOTE:MAINTAIN SPACING

1. **Customization:** If your design requires mats to fit specific shapes or sizes, use snippers to cut the mats to your desired dimensions. Mats can be cut in to strip to allow curving. This step is crucial for fitting mats around corners, curves, or going around obstacles in your landscaping project.
2. **Measurement and Marking:** Before cutting, measure and mark the areas on the mat where adjustments are needed to ensure accuracy and minimize waste. Removed stones can be saved and reused.



FILL

1. **Choose a Filling Medium:** We recommend polymeric sand or Eco Grout for optimal bonding between the mats although any natural joint fill will work.
2. Application is easy just sweep the chosen medium into the joints.
3. **Set and Compact:** Wet the area to assist in compaction.

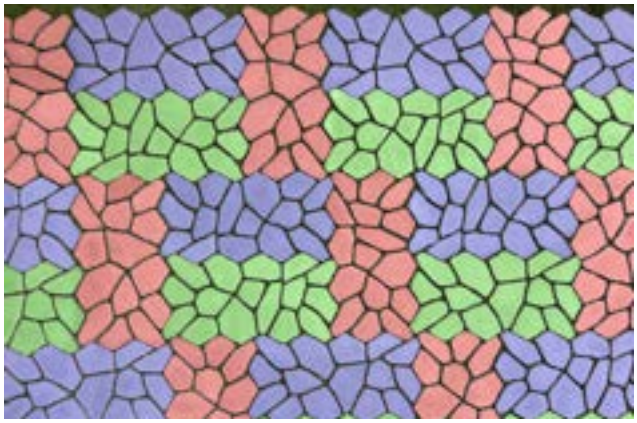
Follow specific manufacture directions if using polymeric sand or Eco Grout.

The Terra Shell Mat is celebrated for its versatile design, able to be laid easily into any space without an intended pattern. Terra Shell Mat can also be laid in traditional patterns such as basket weave, herringbone, and running bond as seen below.

DIFFERENT PATTERNS TO TRY

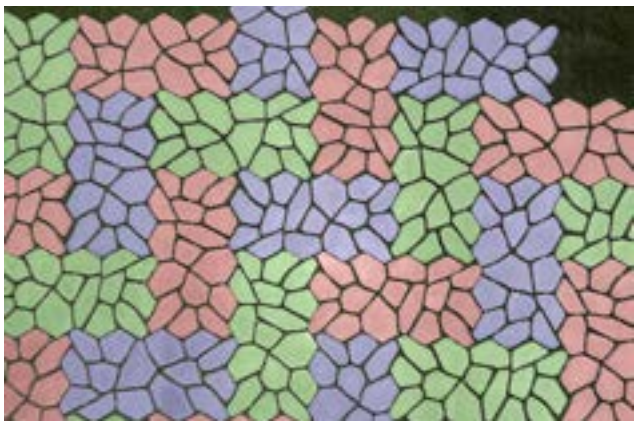
BASKET WEAVE



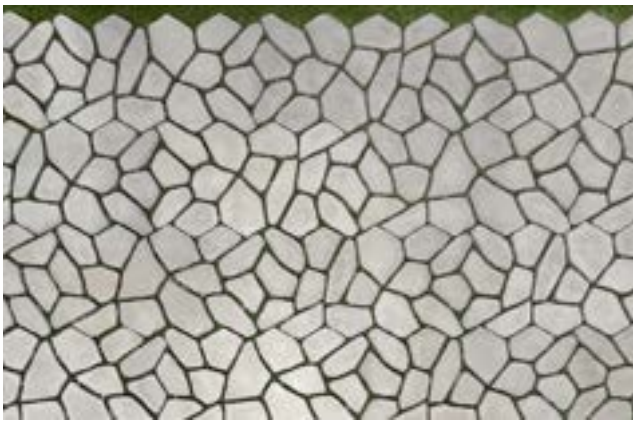


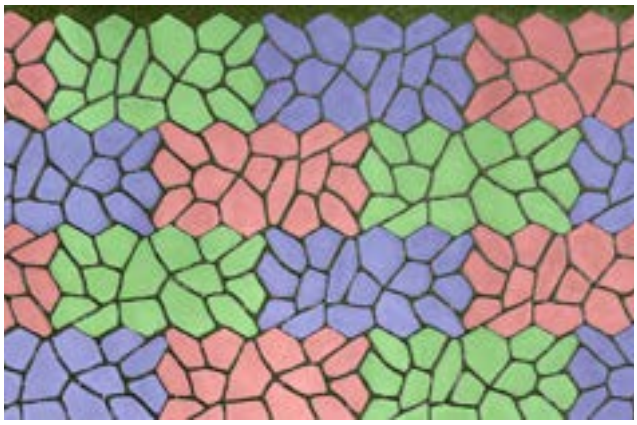
HERRINGBONE





RUNNING BOND





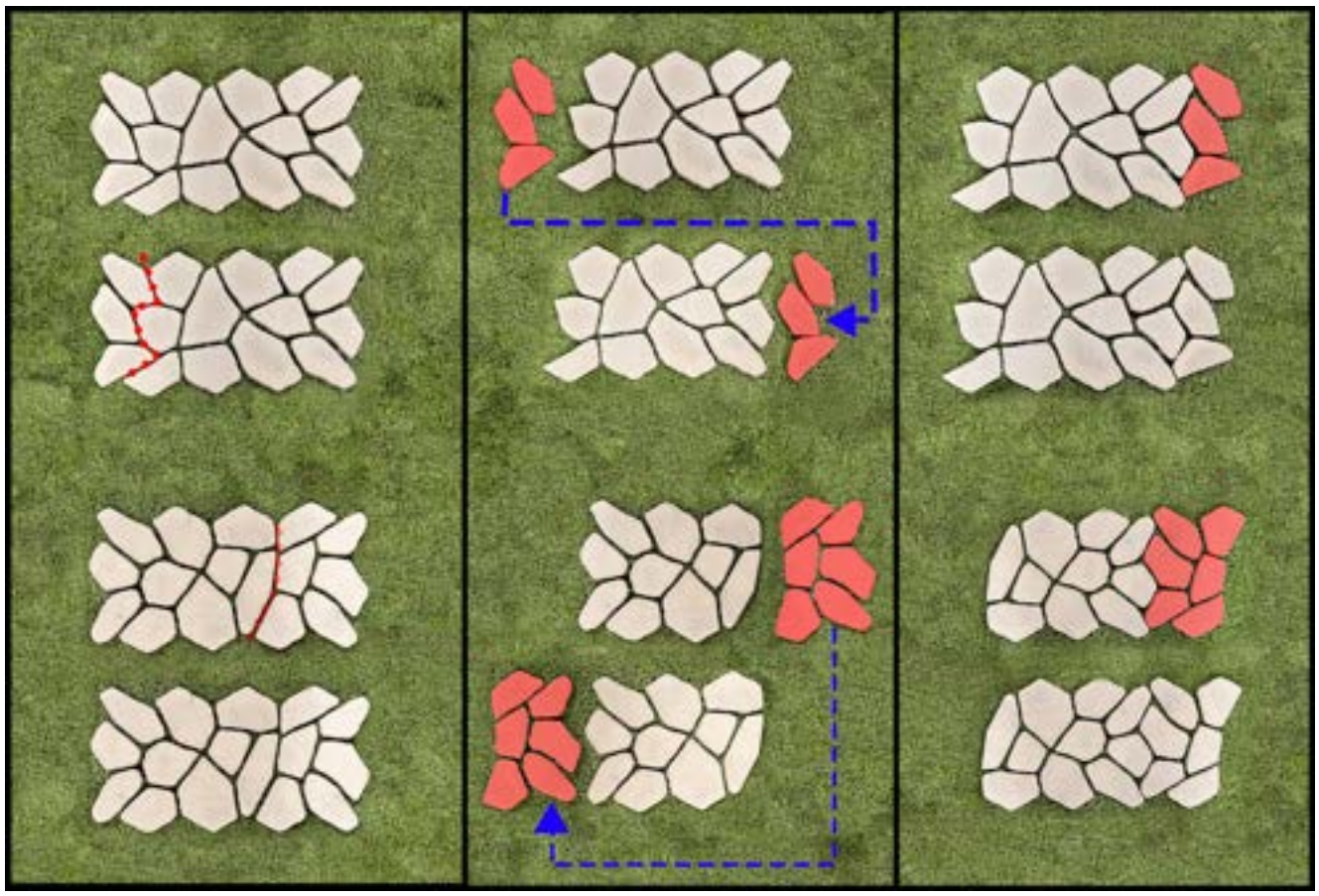
TERRA FOR IRREGULAR BORDERS

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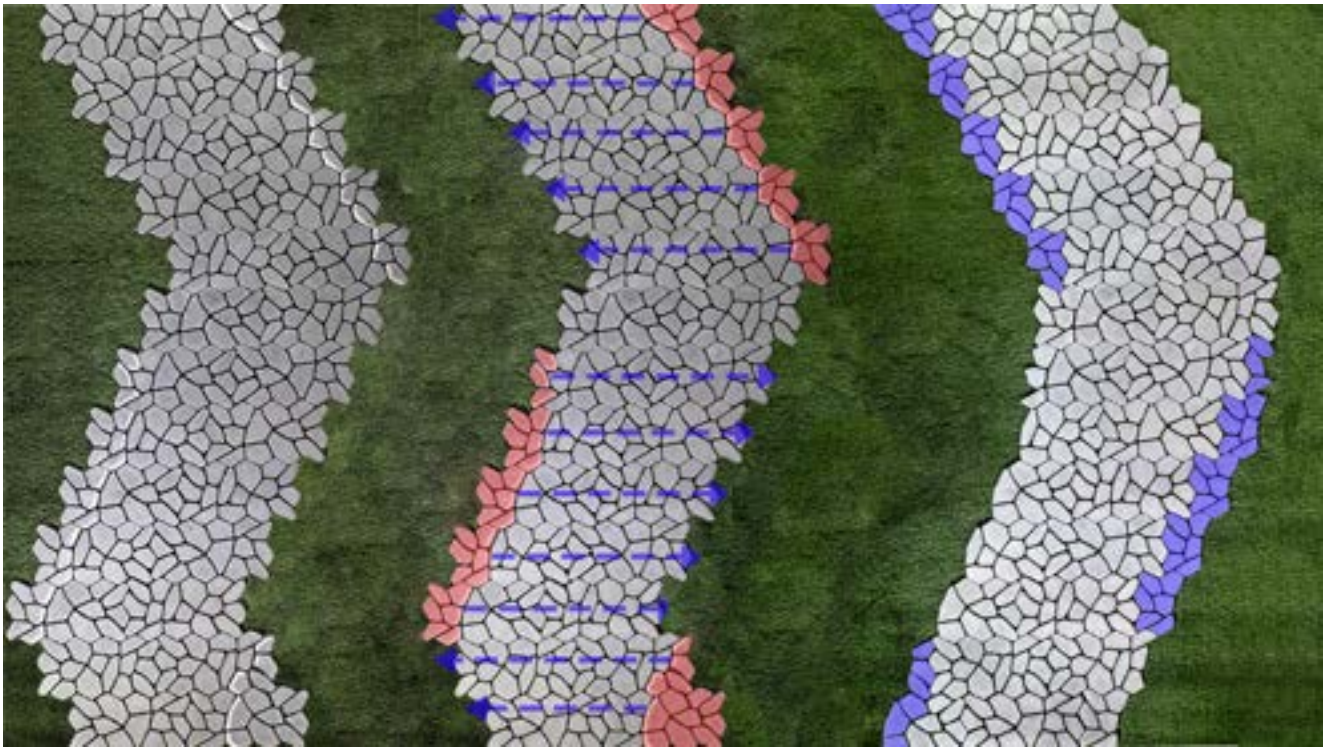






GLIDING TERRA

To Glide Terra Shell Mat for repositioning, start by snipping the mat at any connection point (indicated by the red line in the example). Once the pieces are separated, glide the removed pieces to the opposite side. These pieces will fit back into the mat, ensuring a seamless transition and maintaining the integrity of the design. This technique allows for easy adjustments and alignment during installation.



GLIDE TO CREATE CURVED PATHS WITH TERRA SHELL



MAKING A CURVED PATH

Start by marking the curve on your path using a material that can easily be erased; here, chalk is used as shown in the left image. Once your curve is outlined, begin to cut away the marked pieces. Next, slide the cut away pieces (highlighted in red) across to the opposite side of your path (indicated by the blue arrows). The relocated pieces are highlighted in blue in the image below.

TERRA MAT ADVANCED

CUTTING TERRA FOR BORDERS AND CORNERS



CENTERLINE CUT

When cutting the Terra Shell Mat to create a border, it is recommended to start with a centerline cut. First, measure the mat at its widest point using a straight edge on each side. Typically, the average width of a mat is 12.5 inches, resulting in an average centerline of 6.25 inches from the outer edge. This method ensures your cuts are centered and symmetrical, enhancing the aesthetic alignment of your border installation.

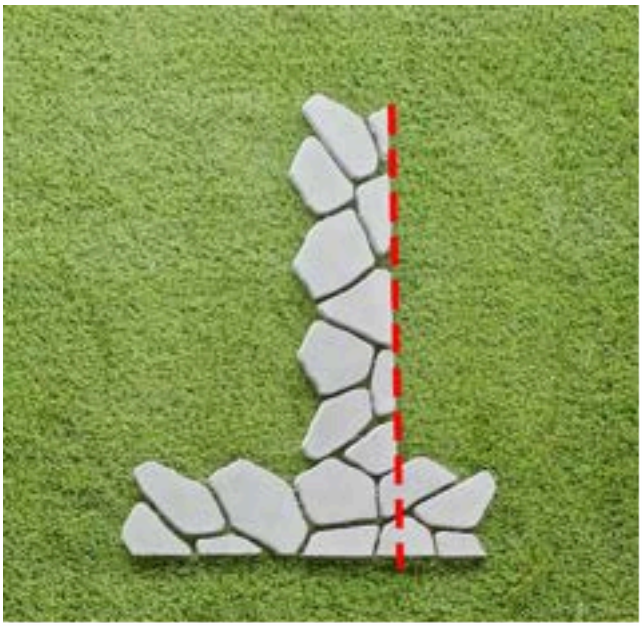


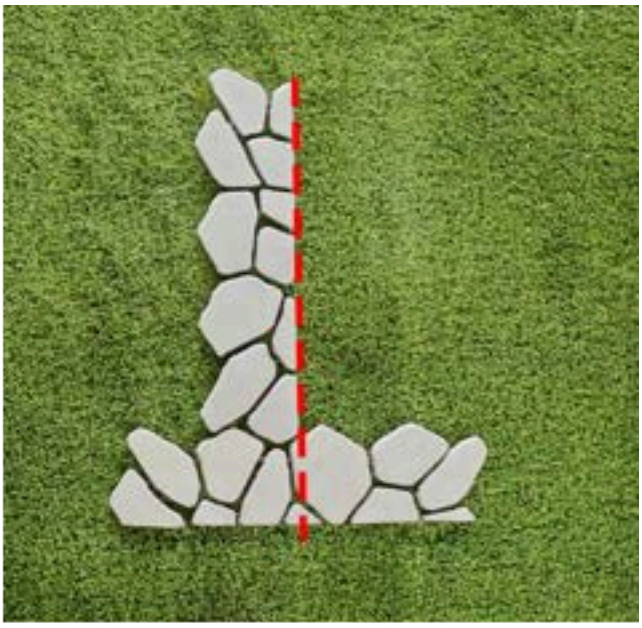
CREATING A BORDER

For creating a border cut one piece in half. Place the two halves together with the iregular edges on the inside.



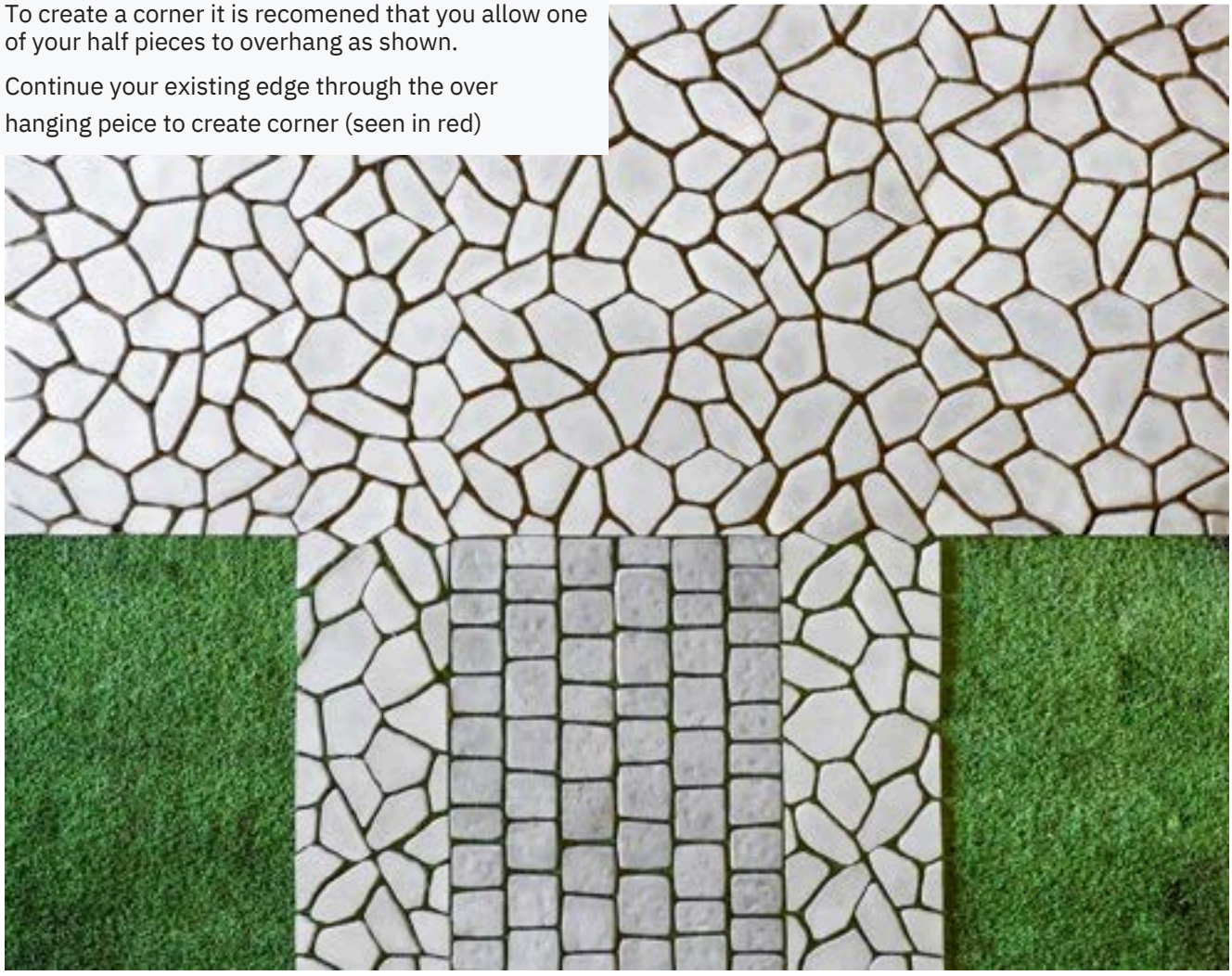
CUTTING CORNER PIECE





To create a corner it is recomened that you allow one of your half pieces to overhang as shown.

Continue your existing edge through the over hanging peice to create corner (seen in red)



Cobble Mat





Cobble Mat (Slate Grey ONLY)

For Foot Traffic Only

Nominal dimensions: 11.75”x23.5”x1”

1.75sq.ft.per mat/

175 sq.ft.per pallet

100 units per pallet/

1,485 lbs. per pallet

The Cobble Mat is perfect for constructing borders, patios, walkways and more. The mat’s unique construction allows it to articulate, accommodating natural ground contours and simplifying the installation process. Its robust composition ensures longevity and stands up well to foot traffic. Additionally, the Cobble Mat can be easily cut to fit custom shapes, enabling creative layouts and seamless integration with existing landscaping features.



QUICK INSTALL

EQUIPMENT AND PREP CHECKLIST

- Clear and level the ground.
- A screed board or rake to level the ground.
- Tamper to compact base layer.
- Snippers for cutting interconnecting mat



GROUND PREP

1. **Clear the Area:** Remove any debris, rocks, or vegetation.
2. **Level and Slope:** Ensure the ground is level. Incorporate a slight slope for water drainage if applicable (typically away from home or structure)
3. **Compact Base:** Use a tamper to compact the base layer for stability added stability if needed
4. **Final Leveling:** After compaction, recheck the leveling for any needed adjustments.



LAYING

1. **Starting Point:** Begin at a chosen origin point, preferably on the outer edge of your project working from one side to the other. If building with a preexisting structure begin from its edge
2. **Pattern Selection:** Decide on your laying pattern if desired. This can vary based on the mat type and the your projects aesthetic.
3. **Expansion:** Lay mats from the starting point outward, maintaining consistent spacing for uniform grout lines.



NOTE:MAINTAIN SPACING

1. **Customization:** If your design requires mats to fit specific shapes or sizes, use snippers to cut the mats to your desired dimensions. Mats can be cut in to strip to allow curving. This step is crucial for fitting mats around corners, curves, or going around obstacles in your landscaping project.
2. **Measurement and Marking:** Before cutting, measure and mark the areas on the mat where adjustments are needed to ensure accuracy and minimize waste. Removed stones can be saved and reused.



FILL

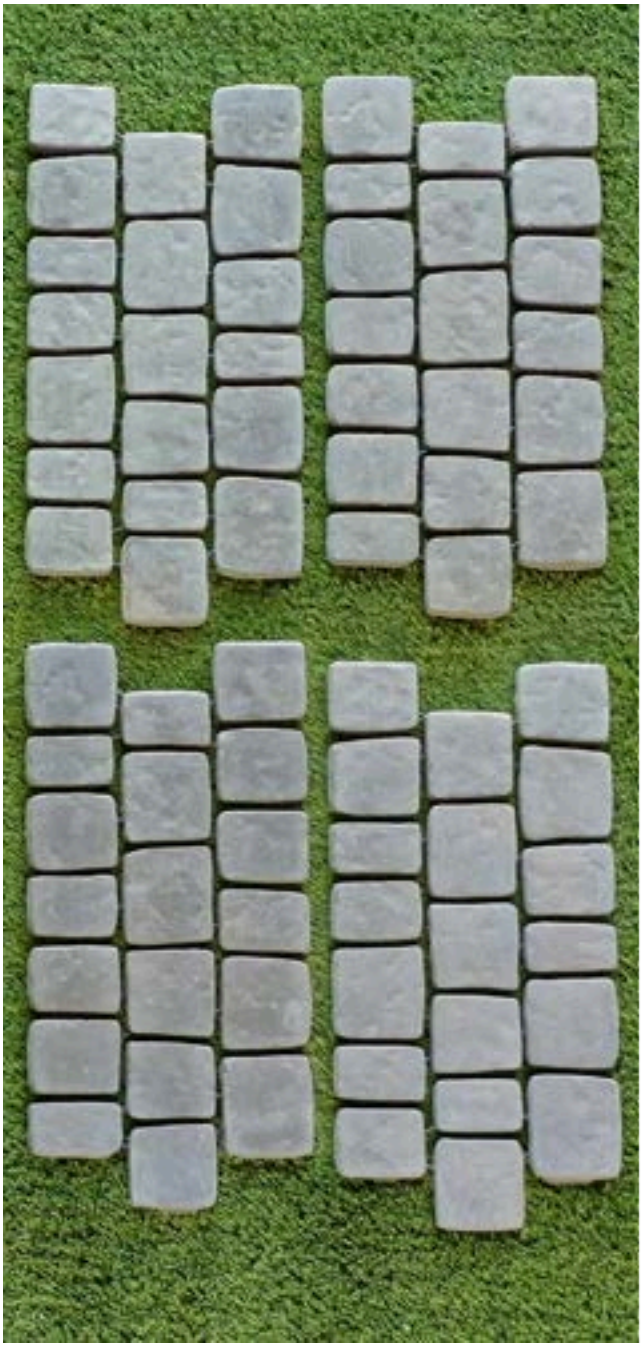
1. **Choose a Filling Medium:** We recommend polymeric sand or Eco Grout for optimal bonding between the mats although any natural joint fill will work.
2. Application is easy just sweep the chosen medium into the joints.
3. **Set and Compact:** Wet the area to assist in compaction.

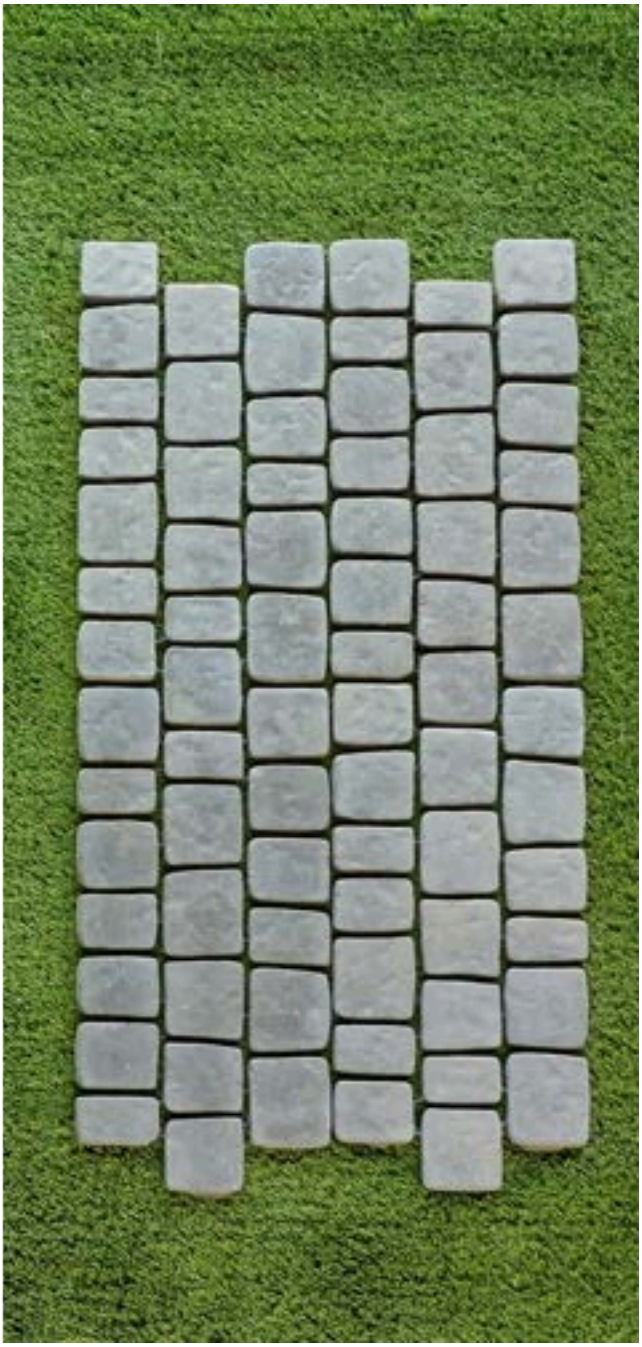
Follow specific manufacture directions if using polymeric sand or Eco Grout.

ADDTIONAL TIPS

TIPS AND TRICKS

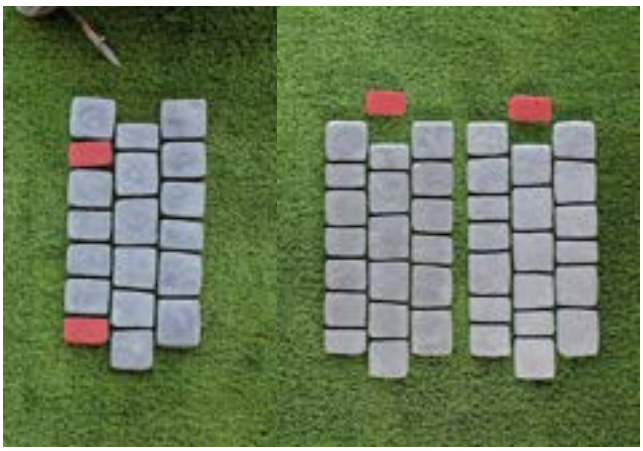
- Periodically step back and review your work from a distance to ensure lines and patterns are aligning as desired.
- Mats can be laid over grass to allow for natural growth through the joints if left unfilled, or to prevent digging while maintaining permeability.
- All mats can be stained in various colors to match any landscape design, offering further customization





SNIPPING COBBLE MATS FOR FLAT ENDS

If you need to achieve a flat end with the Cobble Mat instead of a inter lock you will start by cutting the small blocks away from the mat.



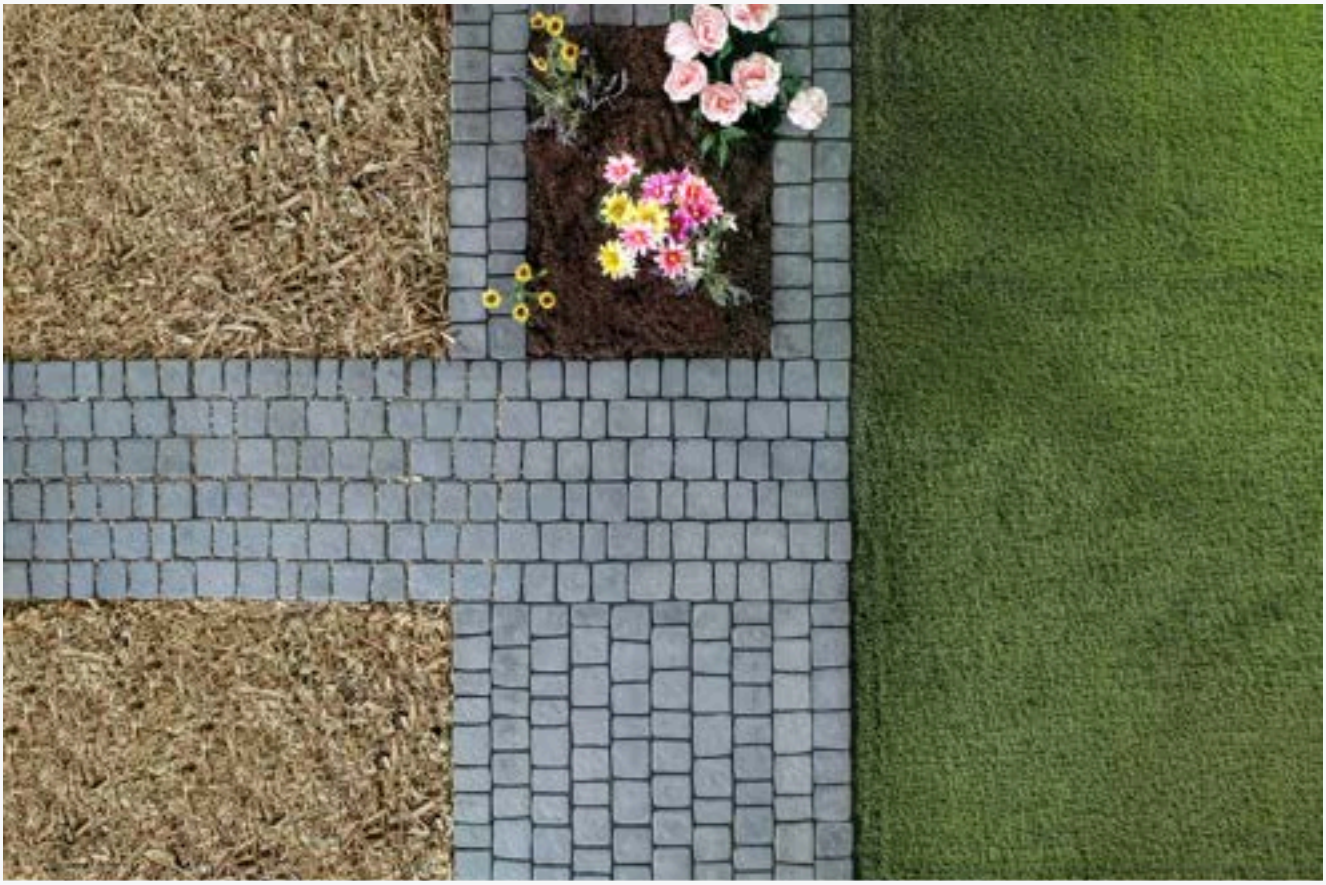
The small blocks that where removed can be inserted to create flat edges on your other cobblestone mat.

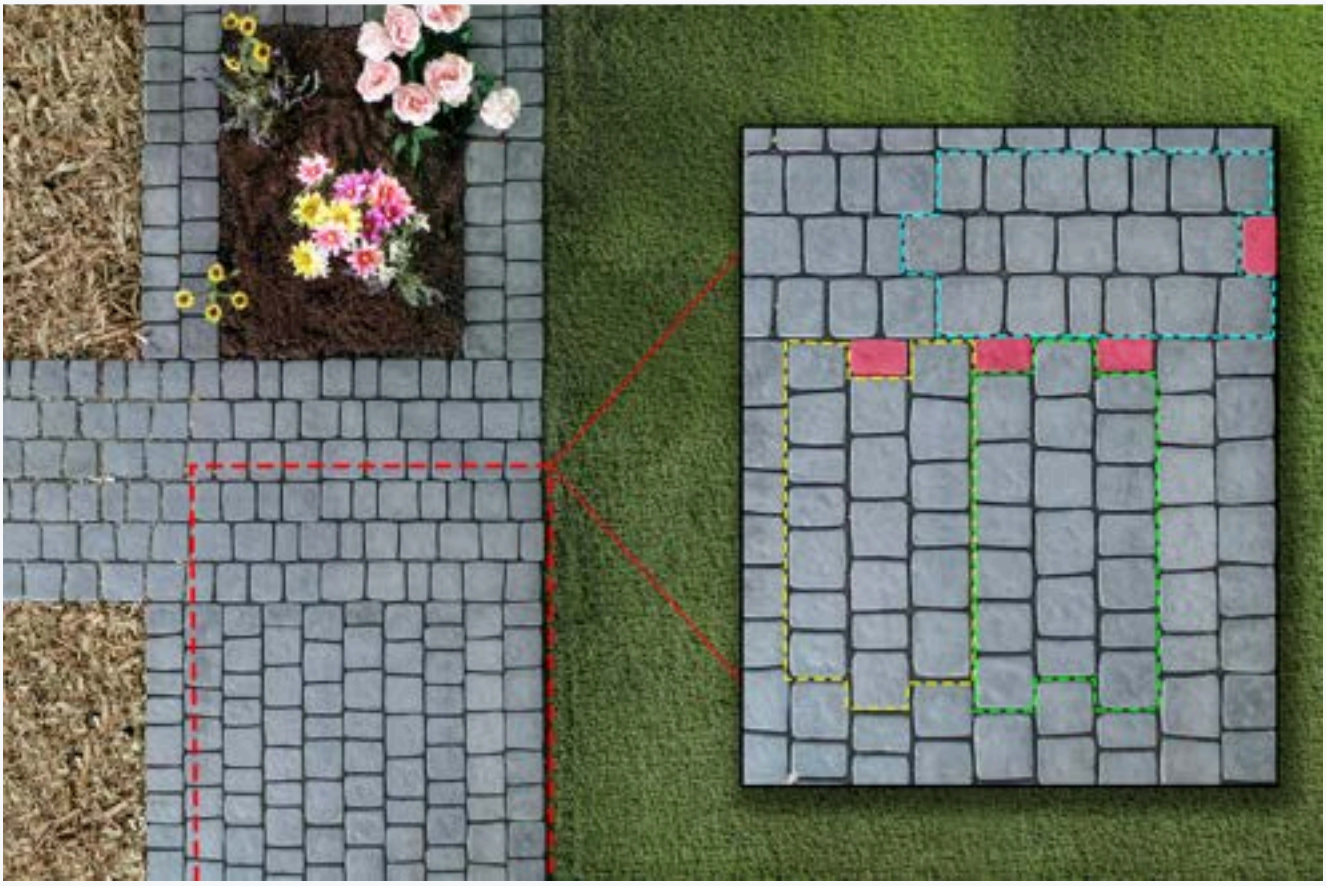


When working against a flat edge be sure to maintain spacing from your starting edge. We recommend .5” or 3/8th inch









SNIPPING MATS FOR CURVES AND BENDS





The Cobble Mat is designed for versatility, allowing it to be easily cut into strips to accommodate the unique contours of curved pathways. This feature makes it ideal for creating winding walkways and circular designs around garden features or through landscaped areas.









SNIPPING MAT

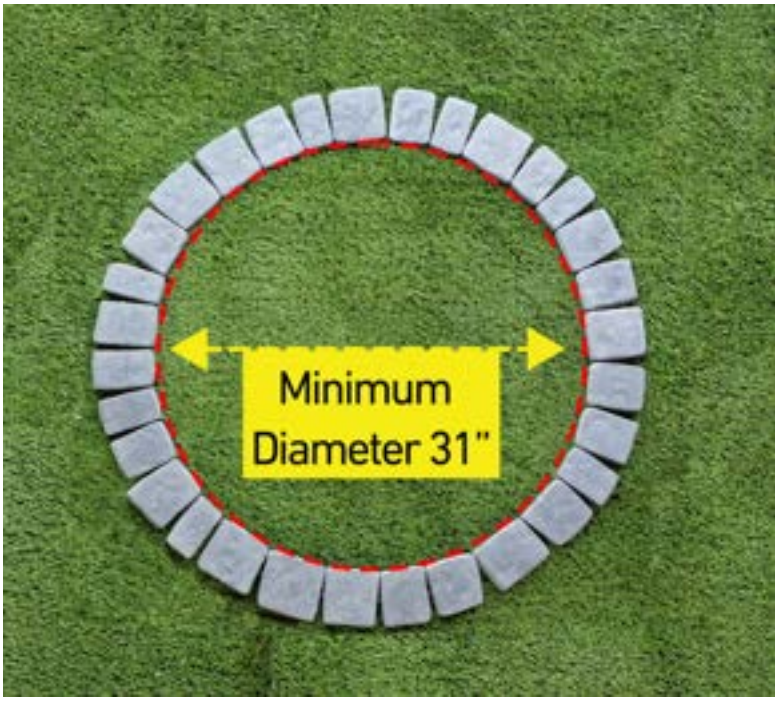
The mat is comprised of nineteen cobblestone pavers heald together by a internal grid. this grid can be cut easily cut with a pair of sissors or clippers. Each cobble mat can be cut into three strips as show

NOTING THE STRIPS ARE ANISOTROPIC



After creating strips take note that each strip is unique in the degree it can bend. this will help when working on projects that have varying tightness of curves. When using multiple mats noting the strips that can achieve a tighter radius can be used together to create tight turns, navigate around obstacles or create curved boarders

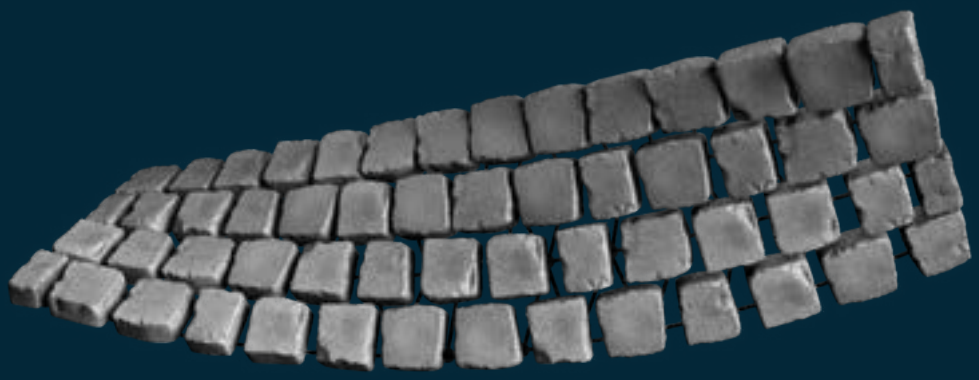




MAKING CIRCLES

After cutting the Cobble Mat into strips, you can form circular designs. For optimal results, it is recommend to maintaining a minimum diameter of 31 inches for circles you create. This size allows the cobbles to bend appropriately without excessively widening the joints, ensuring the integrity and beauty of your design. If you desire a tighter circle, you have the flexibility to cut the strips into individual cobbles, allowing for even greater adaptability and precision in your installation. This method offers a customizable approach to meet the specific design needs of your project.





Straight Mat

Cobble Mat (Slate Grey ONLY)
For Driveways, Patios, and Walkways
Nominal dimensions:
16”x48”x1-5/8”

5.33sq.ft.per mat/
160 sq.ft.per pallet
30 units per pallet/
2,050 lbs. per pallet



UNDERSTANDING SHAPE AND USE





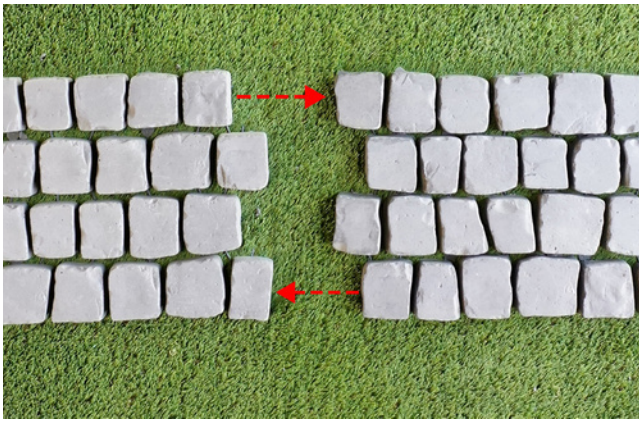
If you are joining two mats together vertically, first remove the small end piece get straight mats to interlock. Pieces for removal are highlighted red and can be removed with a strong pair of snippers cutting away attaching grid.

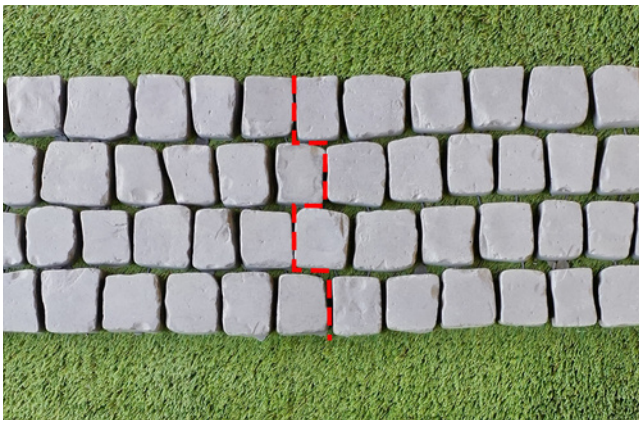
INSTALLATION

EQUIPMENT AND PREP CHECKLIST

1. Plate Compactor (>5000lb force, 75-100 hz
2. Sheet of Plywood, cut into thirds
3. Garden Snips
4. Brick Splitter or Masonry Saw (Optional?)
5. Large Flathead Screwdriver
6. 1/4”-3/4” thick spacing joints
7. Straight 8’ 2x4









EQUIPMENT AND SUPPLIES

Before starting installation, go through this checklist in order to make sure you are ready:

- The installed Pavement will be able to be protected against damage while work is in progress. Barriers highly reccomended
- Subgrade filled and compacted in approriate layers and specified depths
- Utilities such as electric conduit or drainage pipes have been installed and the subgrade has been throughorughly compacted once installed
- Ensure mats are placed for easy access during installation
- Subbase is filled to a height that allows the mats to rest at least 1/2” above the adjacent curb. The mats will be compacted down to be flush during installation.



INSTALLATION GUIDE

Note: A 2 man team is reccomended for installation.

Remove small stones at the end of the mats with heavy duty snips when joining another mat. If installing against a straight curb or border leave stones in place. Make any special cuts with a brick splitter or masonry saw.



At the area of placement, have one team member lower their end of the mat into place first. Use joining spacing sticks against any curbs to achieve correct joint width



Once first end is in place, second member can lower their end.



Important: if installing a mat adjacent to another in a new row, use spacing sticks to space the joint correctly. Frequently check your work, making sure all rows are aligned and joints uniform .



Periodically, use a straight 2x4 along the length of a row and use it to align the cobbles



Once the section has been installed, verify all your joints and mats are uniformly spaces. If any cobbles are out of alignment, you can make small adjustments by inserting a flathead screwdriver into the joint and rotating the cobble



Sweep or spray surface clean before compacting, making sure there are no conrete chips or rocks on the surface. these can damage the surface when the plate compactor is used



Place a sheet of playwood between the mats and plate compactor. This spreads the load and prevents any damage to the mat.



Compact the surface, not allowing the compactor to stay in one location. Keep moving the compactor, bringing the bedding flush with an adjacent edge. Note: Chipping may occur, this is normal and will be masked by joint fill.



MAKING STRIPS FOR CURVED PATHS/DRIVEWAYS





The Straight Mat is comprised cobblestone pavers held together by a bottom grid. This grid can be cut with a pair of snips. Each Straight Mat can be cut into three strips as show below.





NOTING THE STRIPS ARE ANISOTROPIC

After creating strips, take note that each strip is unique in the degree it can bend. This will help when working on projects that have varying tightness of curves. When using multiple mats noting the strips that can achieve a tighter radius can be used together to create tight turns, navigate around obstacles or create curved boarders.



MAKING CIRCLES

After cutting the Straight Mat into strips, you can easily form circular designs to enhance your landscaping. If you desire a tighter circle, you have the flexibility to cut the strips into individual cobbles, allowing for even greater adaptability and precision in your installation. This method offers a customizable approach to meet the specific design needs of your project.





INSTRUCTIONS

1. **Installation:** Concrete paver pavements typically consist of a soil subgrade, an aggregate base, geo-textiles, bedding sand, concrete pavers, edge restraints, and drainage. The installation guidelines below apply to pedestrian and many vehicular applications. For street, industrial, port and airport pavement designs, consult with a qualified civil engineer familiar with local soils and pavement design methods.

2. **Soil Subgrade:** Excavate the area a minimum of 6" larger in all directions than the area to receive the pavers. Once excavation has been complete, the soil subgrade should be compacted prior to placing the aggregate base. Compaction should be at least 98% Proctor density (per ASTM D 698) for pedestrian areas and residential driveways, and at least 98% modified Proctor density (per ASTM D 1557) for areas under constant vehicular traffic. Consult compaction equipment manufacturers' recommendations for applying the proper equipment to compact a given the soil type. Some soils may not achieve these recommended minimum levels of density. These soils may have a low bearing capacity or be continually wet. If they are under a base that will receive constant vehicular traffic, the soils may need to be stabilized, or have drainage designed to remove excess water. Geo-textiles are sometimes used under the base, over fine, moist subgrade soils to extend the life of the base and reduce the likelihood of deformation.

3. **Aggregate Base:** Aggregate base materials should conform to that used under asphalt. If no local, state, or provincial standards exist, then the requirements for aggregate base in ASTM D 2940 are recommended. The compacted base area shall be a minimum of 6" larger in all direction than the area to receive the pavers. The base should be compacted in 6 in. (150 mm) maximum lifts. The thickness of the base depends on the strength of the soil, drainage, climate, and traffic loads. Base thickness used under asphalt can typically be used under the concrete pavers. Minimum aggregate bases for walks should be 2 to 4 in. (50 to 100 mm), driveways 6 to 8 in. (150 to 200 mm), and streets 6 to 8 in. (150 to 200 mm). Thickness may be adjusted depending on site conditions and traffic. Compaction of the aggregate base under pedestrian and residential driveway pavements should be at least 98% of standard Proctor density (per ASTM D 698). The aggregate base should be compacted to at least 98% modified Proctor density (per ASTM D 1557) for vehicular areas. Compaction equipment suppliers can provide information on the appropriate machines for compacting base material. These density recommendations for areas next to curbs, utility structures, lamp bases, and other protrusions in the pavement are essential to minimize settlement. Site inspection and testing of the compacted soil and base materials are recommended to ensure that compaction requirements have been met. Compacted base materials stabilized with asphalt or cement may be used in heavy load applications or over weak soil subgrades. The surface of the compacted base should be smooth with a maximum tolerance of ± 3/8 in. (10mm) over a 10 ft. (3 m) straight-edge. Note that the surface of the compacted base will contain drainage contours and slope, which will be carried thru the bedding sand and pavers.

4. **Bedding Sand:** Bedding sand should conform to the grading requirements of ASTM C 33 or CSAA23.1-FA1. Do not use mason sand. Stone dust or waste screenings should not be used, as they can have an excessive amount of material passing the No. 200 (0.075 mm) sieve. The sand should be screeded to an even thickness of 1". Do not use the sand to fill depressions in the base. Geo-textile should be applied under the bedding sand to prevent the sand from migrating into the compacted stone base. When applied in this location the fabric should be turned up against vertical surfaces to contain the bedding sand.

5. **Concrete Pavers:** (This section refers to applications involving 1 5/8 inch thick pavers) The shape and style of the concrete pavers determines the range of laying patterns. All patterns are designed and recommended in areas subject to continual vehicular traffic. They will give the maximum structural performance. Concrete pavers can be cut with a brick splitter or diamond blade masonry saw to fit along the edge of the pavement. Once the pavers are placed in their specified pattern(s), they are compacted into the bedding sand with a plate compactor. The compactor should have a minimum force of 5,000 lbs. (22 kN) and frequency of 75 to 100 hz. Placement of 3/8" sheet of plywood between the pavers and the steel plate on the compactor will keep the steel plate from scarring the pavers. After the pavers are compacted the polymeric sand is placed into the joints until they are full but held down from the nominal top surface of the pavers approximately 3/16" to prevent scuffing the sand and provide definition to the pavers. All pavers installed to within 3 ft (1 m) of unfinished edges should be compacted at the end of each day, prior to the polymeric sand application.

6. **Edge Restraints:** Due to the compaction of concrete pavement and the polymeric sand, edge restraints around areas of nonvehicular traffic may not be essential to their performance. The polymeric sand enables the system to remain affixed together. Concrete restraints are recommended for heavy vehicular traffic, crosswalks, parking lots, drives, streets, industrial, port, and airport pavements. Edge restraints are typically placed before installing the bedding sand and concrete pavers. Consult your local representative for more information regarding the correct edge restraint system for your application.

7. **Drainage:** Surface and subsurface drainage systems, as well as pavement grades, should conform to that used for any other flexible pavement.



Additional Information

EFFLORESCENCE?

WHAT IS EFFLORESCENCE?

A white haze may appear on the surface of the pavers. This is known as efflorescence. It may appear randomly or in certain areas and will be more pronounced on dark colored pavers. The white haze may give the impression that the color of the pavers is fading. When wet, the white disappears and the color of the pavers is enhanced. When they dry, the white haze reappears.

EFFLORESCENCE IS COMPLETELY NATURAL AND WILL DISAPPEAR WITH TIME

There is no reason to be concerned that your pavers are damaged or defective. The concrete pavers are experiencing a natural process. It is a condition found in all cement base products, as well as in many other paving products, such as brick. In fact, the condition will usually correct itself with time and exposure to the elements.

WHEN WILL EFFLORESCENCE STOP?

Efflorescence is completely natural and will disappear with time. There is no reason to be concerned that your pavers are damaged or defective. The concrete pavers are experiencing a natural process. It is a condition found in all cement-based products, as well as in many other paving products, such as brick. In fact, the condition will usually correct itself with time and exposure to the elements. Over time, rainwater can wash and wear it away. In urban areas with acidic rainfall, efflorescence may go away faster than in rural regions. The process may take much longer in drier climates. Typically, efflorescence will stop developing in approximately 18-24 months.

THE CHEMISTRY OF EFFLORESCENCE

All concrete products contain cement which produces lime or water-soluble calcium oxide. Lime can also be in the bedding sand, aggregate base materials, or soil. Although concrete pavers are solid, strong, and very dense, they contain millions of microscopic capillaries that run from the interior to the surface. Moisture from rain, sprinkler systems, underground sources, poor site drainage, or dew, enters these microscopic capillaries. Calcium oxide inside the paver reacts with the water in the capillaries and forms calcium hydroxide. This rises to the surface, reacts with the carbon dioxide in the air, and forms a white haze of calcium carbonate. When moisture on the surface evaporates, the white haze of efflorescence becomes visible.

ELIMINATING EFFLORESCENCE

Most manufacturers of pavers put chemical additives in the concrete to reduce the likelihood of efflorescence; however, it is impossible to prevent because it is a natural by-product of cured concrete. It will stop when no more calcium hydroxide is available to move to the surface. There are cleaners available that can remove efflorescence. However, it is important to follow manufacturer's instructions carefully to avoid any detrimental results. Efflorescence cleaners are acid based and will remove a micro layer of the paver surface each time they are used. Repeated use will expose aggregate and affect the overall appearance of the pavers. Be sure to follow all label directions and environmental directions on cleaners. Careless or improper cleaning can result in injury, damage and/or discoloration to the surface of the concrete pavers. Always conduct a test in a small inconspicuous area before applying any cleaner to the entire area of the concrete pavers. After cleaning, the pavers should be completely dry and free from efflorescence prior to applying any sealers."

“ADA REQUIREMENTS & RESULTS

4.5 Ground and Floor Surfaces. 4.5.1* General. Ground and floor surfaces along accessible routes and in accessible rooms and spaces including floors, walks, ramps, stairs, and curb ramps, shall be stable, firm, slip-resistant, and shall comply with 4.5. Appendix Note

4.5.2 Changes in Level.
Changes in level up to 1/4 in (6 mm) may be vertical and without edge treatment (see Fig. 7(c). Changes in level between 1/4 in and 1/2 in (6 mm and 13 mm) shall be beveled with a slope no greater than 1:2 (see Fig. 7(d). Changes in level greater than 1/2 in (13 mm) shall be accomplished by means of a ramp that complies with 4.7 or 4.8.

***A4.5.1 General.**
People who have difficulty walking or maintaining balance or who use crutches, canes, or walkers, and those with restricted gaits are particularly sensitive to slipping and tripping hazards. For such people, a stable and regular surface is necessary for safe walking, particularly on stairs. Wheelchairs can be propelled most easily on surfaces that are hard, stable, and regular. Soft loose surfaces such as shag carpet, loose sand or gravel, wet clay, and irregular surfaces such as cobblestones can significantly impede wheelchair movement.

This would apply to natural cobblestones which are very irregular and rough on the top.

Our paver products are not that way on the top of the stone.
Slip resistance is based on the frictional force necessary to keep a shoe heel or crutch tip from slipping on a walking surface under conditions likely to be found on the surface. While the dynamic coefficient of friction during walking varies in a complex and non-uniform way, the static coefficient of friction, which can be measured in several ways, provides a close approximation of the slip resistance of a surface. Contrary to popular belief, some slippage is necessary to walking, especially for persons with restricted gaits; a truly “”non-slip”” surface could not be negotiated. **Our paver products meet slip coefficient testing as noted in test ASTM C 102896** The Occupational Safety and Health Administration recommends that walking surfaces have a static coefficient of friction of 0.5. A research project sponsored by the Architectural and Transportation Barriers Compliance Board (Access Board) conducted tests with persons with disabilities and concluded that a higher coefficient of friction was needed by such persons. A static coefficient of friction of 0.6 is recommended for accessible routes and 0.8 for ramps. It is recognized that the coefficient of friction varies considerably due to the presence of contaminants, water, floor finishes, and other factors not under the control of the designer or builder and not subject to design and construction guidelines and that compliance would be difficult to measure on the building site. Nevertheless, many common building materials suitable for flooring are now labeled with information on the static coefficient of friction. While it may not be possible to compare one product directly with another, or to guarantee a constant measure, builders and designers are encouraged to specify materials with appropriate values. As more products include information on slip resistance, improved uniformity in measurement and specification is likely. The Access Board’s advisory guidelines on Slip Resistant Surfaces provides additional information on this subject.

Per testing done in 2007 on the products in Florida by Ardaman & Associates, Inc. the forming system provides:

• a dry static Coefficient of Friction of 0.63 • a wet static Coefficient of Friction of 0.77 • slip resistance testing per ASTM C 1028-96 • vertical level changes do not exceed 1/4” • the joints between the paver stones do not exceed 1/2” in width • it should be noted that the product is delivered with open joints, but when the joint infill is installed properly, there should not be more than 1/4”” of vertical change from the top of the adjacent pavers to the top of the infill.

Beyond the forming system, the paving specifications will address the sub-grade preparation so it is a uniform level and not telegraphing non-uniform surface conditions thru the flexible mats. The specifications would, also, address the level of the joint infill so that it is not recessed to the point of providing problems with ADA requirements, as noted above.

This product meets ADA requirements...

Notes for Snow Climates

Please keep in mind that this product can move with frost heave in a freeze thaw cycle with no cracking. The product's interconnecting grid is made from an engineered polymer that remains flexible even in low temperature conditions, because of its unique shape, and that it is manufactured using air entrained concrete for cold weather climates. The product also contains polypropylene fiber 3D reinforcement so cracking of the individual mat pads should not be a concern if installed correctly.

When installing , do not use frozen materials or materials mixed or coated with ice or frost. Do not build on frozen, wet, or muddy sub-grade. Joint infill materials such as polymeric sand must be installed as per manufactures directions. When is installed with proper slope and on a properly prepared sub- grade, ponding that causes freeze thaw deterioration should not be an issue.

Snow plow operators should be educated as to the type of surface they are plowing over prior to beginning snow removal. Teflon runners placed under the snow plow blade are highly recommended. The snow plow operator should be advised to keep the blade up a bit. A 2" to 3" layer of snow left on the paver mats after plowing will rapidly melt, even in cold conditions, due to earth temperature warmth emitting through the product voids and/or solar radiation. Melting snow will infiltrate and will not result in icy conditions on the mat surface in the event of a refreeze. For sites that will require the use of heavy-duty snowplowing machinery, install concrete curbs and/or strips as a level guide for the snow plow blade prior to installation of mats. Mats should be depressed ¼" below the top of the curb/strip to protect the product from the snow plow blade."

Section 32 12 __

PERMEABLE, FLEXIBLE, ARTICULATING and MATTED CONCRETE PAVEMENT SYSTEM

PART 1: GENERAL

1.01 Description

A. Work shall consist of furnishing all material, labor, services and related items to complete the installation of a permeable pavement system using an articulating, matted concrete paver product in accordance with these specifications.

1.02 Related Sections

A. Section 31 10 00 - Site Clearing
B. Section 31 20 00 - Earth moving
C. Section 32 14 00 - Unit Pavers
D. Section 32 80 00 - Irrigation
E. Section 32 91 13 - Soil Preparation
F. Section 32 92 00 - Turf and Grass
G. Section 03 30 00 - Cast in place concrete

1.03 Reference Documents

A. ASTM D-422 - Particle Size Analysis
B. ASTM D-698 - Laboratory Compaction Characteristics of Soil - Standard Proctor

C. ASTM D-1557 - Laboratory Compaction Characteristics of Soil – Modified Proctor
D. ASTM C-39/39M – Std. Test Method for Compressive Strength of Cylindrical Concrete Specimens
E. ASTM C-33 Std. Spec. for Concrete Aggregates
F. ASTM C31/ C31M Standard Practice for Making and Curing Concrete Test Specimens in the Field
G. ASTM C 150 Std. Spec for Portland Cement
H. ASTM C94 / C94M Std. Spec. for Ready – Mixed Concrete
I. ASTM C 1157 Std. Performance Specification for Hydraulic Cement
J. ASTM C595 Std. Spec. for Blended Hydraulic Cement
K. ASTM C618 Std. Spec. for Coal Fly Ash and Raw or Calcined Natural Pozzolan for use in Concrete
L. ASTM C1611 / C1611M Std. Test Method for Slump Flow of Self-Consolidating Concrete
M. ASTM C989 Std. Spec. for Ground Granulated Blast-Furnace Slag for use in Concrete and Mortars
N. ASTM C979 Std. Spec. for Pigment for Integrally Colored Concrete
O. ACI 201 American Concrete Institute- Report on Durability
P. ACI 211 American Concrete Institute- Std. Practice for Selecting Proportions for Normal, Heavy Weight, and Mass Concrete
Q. Permeability Studies by the University of Central Florida
R. Coefficient of Friction and ADA Compliance report by Ardaman & Associates, Geotechnical, Environmental and Materials Consultants.

1.04 Submittals/Certification

A. Procedures: Comply with Section 01 33 00 – Submittal Procedures.
B. Product Data: Submit manufacturer’s product data, including installation instructions.
C. Samples:
   1) Submit 12” x 12“ Articulating Concrete Mats Articulating Concrete Mats™ sample
   2) Contractor to submit sieve analysis for grading of bedding sand and base material based on soil condition, proposed loadings and drainage criteria…permeable or non-permeable