# DesignScaping 

## Installation Patterns Using Cambridge Pavingstones With ArmorTec



## Cambridge Pavingstones With ArmorTec Are Superior Here's Why:



The technologically-advanced ArmorTec surface - exclusively on Cambridge Pavingstones - preserves the aver's rich color and smooth surface forever.


WITHOUT ARMORTEC


In pavers without ArmorTec, beauty is compromised when the surface reveals small stones (aggregate) after only one year of ordinary wear.


## Installation Pattern DSR-001

From The Cambridge RoundTable Collection. See Instructions For Placement In Chart At Bottom.
CIRCLE DESIGN KIT
Consists Of These 6 Numbered Shapes:


To Expand This 8' 5" Diameter Circle, A Second Circle Design Kit Is Necessary (See Ring Numbers 9-12).
For Ring Numbers $11 \& 12$, Add One Band Of $41 / 2 \times 6$ To Your Order.

| RING NO. ON PATTERN | CIRCLE DIAMETER | NO. OF PCS. \& SHAPE FOR EACH RING |
| :---: | :---: | :---: |
| 9 | 112" | 38 pieces of Circle IV <br> 38 pieces of Circle V alternate shapes |
| 10 | 124" | 42 pieces of Circle IV <br> 42 pieces of Circle V alternate shapes |
| 11 | 136" | 44 pieces of Circle V 40 pieces of Circle IV alternate shapes <br> 2 pieces of Circle VI 10 pieces of $41 / 2 \times 6$ place anywhere in ring |
| 12 | 148" | 48 pieces of Circle V <br> 51 pieces of $41 / 2 \times 6$ alternate shapes <br> 2 pieces of Circle VI <br> place anywhere in ring |

To Achieve Ring Numbers In Excess Of 12, Add The Appropriate Number Of $41 / 2 \times 6$ Pavingstones

| 13 | $160^{\prime \prime}$ | 107 pieces of $41 / 2 \times 6$ |
| :--- | :--- | :--- |
| 14 | $172^{\prime \prime}$ | 115 pieces of $41 / 2 \times 6$ |
| 15 | $184^{\prime \prime}$ | 124 pieces of $41 / 2 \times 6$ |



Upon Completion, There Will Remain Four Of I, II \& III;
Sixteen Of IV; Twenty-Three Of V And One Of VI.

| RING NO. ON PATTERN | CIRCLE DIAMETER | NO. OF PCS. \& SHAPE FOR EACH RING |
| :---: | :---: | :---: |
| Center | 6 " | 2 pieces of Circle I |
| 1 | 171/2" | 8 pieces of Circle II |
| 2 | 29" | 8 pieces of Circle III <br> 8 pieces of Circle IV <br> alternate shapes |
| 3 | 41" | 26 pieces of Circle V |
| 4 | $53^{\prime \prime}$ | 34 pieces of Circle V |
| 5 | 65 " | 21 pieces of Circle IV <br> 21 pieces of Circle V alternate shapes |
| 6 | 77" | 24 pieces of Circle V <br> 25 pieces of Circle IV alternate shapes <br> 3 pieces of Circle VI <br> place on opposite sides of ring |
| 7 | 89" | 29 pieces of Circle IV <br> 30 pieces of Circle V <br> alternate shapes <br> 1 piece of Circle VI |
| 8 | 101" | 34 pieces of Circle V <br> 33 pieces of Circle IV <br> alternate shapes <br> 1 piece of Circle VI |

## Appendix To DSR-001A

## DETERMINING SQUARE FOOTAGE FOR A CIRCLE AREA AND OTHER GEOMETRY

Formulas To Help In Calculating The "Not So Standard" Projects.

## AREA OF CIRCLE FORMULA - AREA $=\pi \mathbf{r}^{2}$

(3.14) (radius)2

## 2 Examples For A Circle Installation

(1) 15 $^{\prime}$ Diameter Circle - Area $=\pi \mathbf{r}^{2}$

Area $=\pi(7.5)^{2}=177$ sq. ft.


2 circle cubes $=100$ sq. ft.
(sq. ft. based on what pieces are applicable)
$41 / 2 \times 6=77$ sq. ft.

2 A 15' Diameter Circle With An 8' Planter In The Center

$15^{\prime}$ diameter $=177 \mathrm{sq}$. ft.
$8^{\prime}$ diameter $=(\pi)(4)^{2}=50.25$ sq. ft. $=177$ sq. ft. -50.25 sq. ft. $=126.75$
(Subtract outer circle from inner circle)
1 circle cube - 50 sq. ft.
$41 / 2 \times 6 \quad-77$ sq. ft.

## DESIGNSCAPING USING CAMBRIDGE PAVINGSTONESTM WITH ARMORTECTM

## Table One: Formulas

|  |  |  |  |
| :--- | :--- | :--- | :--- |
| Circle | $\mathrm{A}=\pi \mathrm{r}^{2}, \mathrm{C}=2 \pi \mathrm{r}$ | Cuble One: Formulas | $\mathrm{V}=\mathrm{s}^{3}$ |
| Parallelogram | $\mathrm{A}=\mathrm{bh}$ | Rectangle box | $\mathrm{V}=\mathrm{l} w \mathrm{~h}$ |
| Right Triangle | $\mathrm{A}=1 / 2 \mathrm{bh}, \mathrm{c}^{2}=\mathrm{a}^{2}+\mathrm{b}^{2}$ | Right Circular Cylinder | $\mathrm{V}=\pi \mathrm{r}^{2} \mathrm{~h}$ |
| Square | $\mathrm{A}=\mathrm{s}^{2}$ | Pyramid | $\mathrm{V}=1 / 3 \mathrm{Bh}$ |
| Trapezoid | $\mathrm{A}=1 / 2 \mathrm{~h}(\mathrm{~b}+\mathrm{b} 1)$ | Right Circular Cone | $\mathrm{V}=1 / 3 \pi \mathrm{r}^{2} \mathrm{~h}$ |
| Triangle | $\mathrm{A}=1 / 2 \mathrm{bh}$ | Sphere | $\mathrm{V}=4 / 3 \pi \mathrm{r}^{3}$ |
| Sphere | $\mathrm{A}=4 \pi \mathrm{r}^{2}$ |  |  |

## Table Two: American System Of Weights And Measures

LENGTH
12 inches $=1$ foot
3 feet $=1$ yard
$51 / 2$ yards $=1 \mathrm{rod}$
5280 feet $=1$ land mile
6076 feet $=1$ nautical mile

## AREA

144 square inches $=1$ square foot 9 square feet $=1$ square yard 160 square rods $=1$ acre
640 square acres $=1$ square mile

VOLUME
1728 cubic inches $=1$ cubic foot
27 cubic feet $=1$ cubic yard

## WEIGHT

16 ounces $=1$ pound 2000 pounds $=1$ ton 2240 pounds $=1$ long ton

## CAPACITY DRY MEASURE

2 pints $=1$ quart
8 quarts $=1$ peck
4 pecks = bushel

## LIQUID MEASURE

16 fluid ounces $=1$ pint
2 pints $=1$ quart
4 quarts $=1$ gallon
231 cubic inches $=1$ gallon

| Table Three: Metric System Of Weights And Measures |  |
| :--- | :--- |
| LENGTH | 10 millimeters $(\mathrm{mm})=1$ centimeter $(\mathrm{cm})=0.3937$ inch |
|  | 100 centimeters $=1$ meter $(\mathrm{m})=39.37$ inches |
| 1000 meters $=1$ kilometer $(\mathrm{km})=0.6214$ mile |  |
|  | 1 square meter $=10.75$ square feet |
| CAPACITY | 1000 milliliters $(\mathrm{ml})=1$ liter $(\mathrm{l})=1.057$ quart |
|  | 1000 liters $(\mathrm{l})=1$ kiloliter $(\mathrm{kl})=264.2$ gallons |
| WEIGHT | 1000 milligrams $(\mathrm{mg})=1 \operatorname{gram}(\mathrm{~g})=0.0353$ ounce |
|  | 1000 grams $(\mathrm{g})=1$ kilogram $(\mathrm{kg})=2.205$ pounds |

## CREATING FANS USING A CIRCLE DESIGN KIT

From The Cambridge RoundTable \& Renaissance Collections.

## Cambridge Cutting Templates

With only thirteen cuts per fan, four fans consisting of a center paver and six rings can be created from each Circle Design Kit. Each fan will measure $65^{\prime \prime} w \times 377^{\prime \prime}$ d. One kit will also accommodate two half radius patterns that are necessary to complete the design. See C on Drawing No. 1: Fan Pattern Installation Detail below.

A fan design can be created from the six paver shapes included in the Cambridge Circle Design Kit. However, to place fans into a field of Cambridge Pavingstones, five of the shapes in the kit will require precision cuts. Five convenient cutting templates can be found on a separate sheet included in this instruction package. Cut out each template along the outer edge.

To achieve a proper fit where one fan meets another, mark the prescribed cuts by placing specific templates on top of the shapes that require cutting. See reverse side for instructions on using the templates.

## Proper Installation Procedures

1. Make sure that a properly compacted quarry process base and layer of screeded C-33 sand has been installed.
2. Run first string line down the center of the laying surface. See Center Line No. 1 on Drawing No.1: Fan Pattern Installation Detail.
3. Run a perpendicular line across the front of the laying face. See Line No. 2 on Drawing No. 1: Fan Pattern Installation Detail. To square up string lines, start the 3-4-5 triangle at B on Drawing No. 1: Fan Pattern Installation Detail. Leave sufficient room for the border course between Line No. 2 and the edge restraint.
4. Start the first fan. See A on Drawing No. 1: Fan Pattern Installation Detail. Follow instructions carefully, making sure that the appropriate pavers for each row are laid over Center Line No. 1. Note that this is the ONLY method that will maintain symmetry of bond lines throughout the pattern. Straying from lines could tighten one side of the pattern and open the other.

Cambridge Circle Design Kit
The Cambridge Circle Design Kit Consists Of These 6 Numbered Shapes:


Circle I
Center


Circle III
Small w/ Curved Top


Circle V
Large Tapered


Circle II Small w/ Angled Top


Circle IV Three Quarter Rectangular


Circle VI Half
5. Run two additional string lines parallel with Center Line No. 1. Refer to Center Line No. 3 on left and Center Line No. 4 on right on Drawing No. 1: Fan Pattern Installation Detail. Repeat this step as many times as needed to fill the width of the laying face.
6. Repeat Step 4 on Lines No. 3 and 4. Make sure that the radii of the outer fans meet. See Drawing No. 1: Fan Pattern Installation Detail.
7. Fill in with a half radius against the lower concave radius of each fan starting with Ring No. 6. Work back to Ring No. 3 as needed. See C on Drawing No. 1: Fan Pattern Installation Detail.


DRAWING NO. 1: FAN PATTERN INSTALLATION DETAIL


PROPER INSTALLATION \& CUTTING PROCEDURES
Refer To Drawing 2: Fan Pattern Placement Detail

| RING | $\begin{aligned} & \text { LEFT } \\ & \text { HAND CUT } \end{aligned}$ | RIGHT HAND CUT | SHAPES | TEMPLATE | INSTRUCTIONS |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Center | Shaded Area | Cut Pc. Used | 1 of Circle I | No. 1 | Using Template No. 1, cut a Center paver shape and place it. |
| No. 1 |  |  | 3 of Circle II | No. 2 | Center first Circle II paver on center line. Using Template No. 2 and Circle II paver shapes, cut a right and left hand piece and place them at ends. |
| No. 2 |  |  | 3 of Circle III <br> 2 of Circle IV | No. 3 | Center one Circle III paver shape on center line. <br> Add two Circle IV paver shapes. <br> Using Template No. 3 and Circle III paver shapes, cut a right and left hand piece and place them at ends. |
| No. 3 |  | $\square$ | 7 of Circle V | No. 4 | Place one paver on center line. <br> Add remaining pavers. <br> Using Template No. 4 and Circle V paver shapes, cut a right and left hand piece and place them at ends. |
| No. 4 |  |  | 2 of Circle IV <br> 8 of Circle V | No. 4 | Place one Circle V paver shape to the left and one to the right of center line. <br> Add remaining pavers. Alternate shapes. Using Template No. 4 and Circle V paver shapes, cut a right and left hand piece and place them at ends. |
| $\text { No. } 5$ |  | \% | 4 of Circle IV <br> 8 of Circle V <br> 2 of Circle VI | No. 5 | Place two Circle V paver shapes in the same starting position as Ring No. 4. <br> Add remaining pavers. Alternate shapes. Using Template No. 5 and Circle V paver shapes, cut a right and left hand piece and place them at ends. |
| No. 6 |  | \% | 8 of Circle IV <br> 9 of Circle V | No. 5 | Place one Circle V paver shape on center line. Alternate Circle IV and Circle V paver shapes. Using Template No. 5 and Circle V paver shapes, cut a right and left hand piece and place them at ends. |




Installation Pattern No. DSR-014
From The Cambridge RoundTable Collection.


Installation Pattern No. DSR-015
From The Cambridge RoundTable Collection.


Installation Pattern No. DSR-016
From The Cambridge RoundTable Collection.


Installation Pattern No. DSR-017
From The Cambridge RoundTable Collection.


Installation Pattern No. DSR-018
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Installation Pattern No. DSR-019
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Installation Pattern No. DSR-020
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Installation Pattern No. DSR-021
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Installation Pattern No. DSR-022
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Installation Pattern No. DSR-023
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Installation Pattern No. DSR-025
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## DESIGNSCAPING USING CAMBRIDGE PAVINGSTONESTM WITH ARMORTECTM

Installation Pattern No. DSR-026
From The Cambridge RoundTable Collection.

## CAMBRIDGE RANDOM DESIGN KIT



EXAMPLE 1: RANDOM PLACEMENT PATTERN

You can choose one of 5 standard Cambridge Blends for each 113 Sq. Ft. Random Design Kit. If you opt to use a standard solid color in one or more of the shapes in your random pattern, these shapes must be ordered individually from your authorized Cambridge Pavingstones distributor.



EXAMPLE 2: RUNNING BOND PATTERN

Note: Order an additional 5\% of material to allow for cuts and field changes.

DESIGNSCAPING USING CAMBRIDGE PAVINGSTONESTM WITH ARMORTEC™
Installation Pattern No. DSR-027

## RANDOM LAYING PATTERNS USING $12 \times 12$ FROM THE CAMBRIDGE RENAISANCE COLLECTION



EXAMPLE 2: RATIOS TO CONSIDER

$12 \times 12$ (15\%)

$6 \times 9$ (51\%)

EXAMPLE 3: RATIOS TO CONSIDER

$12 \times 12$ (15\%)
$6 \times 9$ (64\%)


$6 \times 6$ (34\%)

$6 \times 6$ (21\%)

Note: Order an additional 5\% of material to allow for cuts and field changes.

