



ESTIMATING GUIDE

Landscape Stone, Decorative Gravels & Aggregates, Dimensional Stone, Pavers & Concrete Wall Systems

Important Note: Stone is a natural product. Size and color will vary – that is part of the beauty of stone. However, because of this variation, coverage will vary. This Estimating Guide will give you approximate, average coverage per ton. We recommend buying 5% more to insure complete coverage.

I. WALLSTONE

- a. **Thin Wallstone:** Naturally shaped stones, cut from the top layers in a quarry, they are hand selected for size and generally need some shaping. Thin stones have a more natural, rustic appearance, and for the most part, are native to Ohio.
- b. **Cut Dry Wallstone:** These pre-split stones are split to proper depth for use in a wall, assuring maximum coverage and reduced installation time. Cut Dry Walls deliver a more finished or formal appearance. Standard depth is 8”.

Stone	6” Depth, Square feet of wall per ton	8” Depth, Square feet of wall per ton	12” Depth, Square feet of wall per ton
I. Thin Wallstone	Do Not Use	20-22	12-14
II. Cut Dry Wall			
a. Limestone	28-30	20-22	12-14
b. Sandstone	32-34	23-25	14-16

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II. FLAGGING & STEPPERS

- a. **Flagging** refer to large flat pieces of stone suitable for patios and paths. Depth of the stone is typically 1” to 3”
 - A. **Pattern Flagging:** Refers to flagging that is sawn into specific size squares and rectangles. Pattern flagging is laid in patterns creating a more formal, regular appearance.
 - B. **Irregular Flagging:** Irregular flagging are completely irregular shapes that typically come in large surface sizes. Irregular Flagging creates a more informal appearance.
- b. **Steppers** refer to smaller flat pieces of stone suitable for paths, although can be used in a patio. Steppers only come in irregular shapes.
- c. **Joints** refer to the space between the stone. Joint sizes can be increased to increase coverage. The larger the joint size, the more informal the appearance of the path or patio.

STONE	SQUARE FEET PER TON
Irregular Bluestone, 1.5” – 3”	60 - 90
Tumbled Bluestone Flagging, Irregular 1.5” – 2”	80 - 90
Apache Flagging, Irregular 1” – 1.5”	90 - 120
Camden Grey Flagging, Irregular 1” – 1.5”	90 - 120
Rocky Mountain Quartz, Irregular 1” – 1.5”	90 - 120
Ottawa Buff Smooth Flagging, Irregular 1” - 2”	80 - 110
Ottawa Buff Smooth Flagging, Irregular 2” – 3”	60 - 80
Ottawa Brown Flagging, Irregular 2” – 3”	60 - 80
Ottawa Buff Rustic Flagging, Irregular 1” – 3”	80 - 110
Ottawa Blue-Red Flagging, Irregular 1” – 3”	80 - 110
Ottawa Buff Smooth Steppers 1” – 2”	85 - 120
Ottawa Buff Rustic Steppers 1” – 2”	85 - 120
Split Granite Pavers 5”	35
5x5, 5x10 Tumbled Cobblestones 5”	35

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III. DECORATIVE GRAVELS AND CRUSHED AGGREGATES

- a. **Decorative Gravels** refers to loose gravel, washed pebbles and crushed stones in a wide variety of shapes and sizes suitable for attractive display. Decorative gravels can be used in paths, driveways, water features, muddy areas, and for joints between flagging.
- b. **Base Aggregates** refers to crushed stone capable of being compacted into a stable base for flagging, steps and pavers.

ITEM	1" DEPTH COVERAGE/ TON	WEIGHT/ CUBIC YARD	WEIGHT/ CUBIC FOOT	SQUARE FOOT/BAG
I. Decorative Gravels				
Crushed Bricks	250 Sq Ft	2,600	96	
Red Flowerock 1.5"	500	900	33	
Gold Dust	200	3,240	120	
Local Wash 1" – 4"		3,240	120	
Local Wash ¾"	200	3,240	120	
Medium Amberlite	200	3,240	120	
Meremac 5/8"	200	3,240	120	
1" – 2" Mexican Pebbles				5-6
2" – 3" Mexican Pebbles				5-6
Small Red Flint 5/8"	200	3,240	120	
Large Red Flint 1" – 4"		3,240	120	
Small Tan Silica 5/8"	200	3,240	120	
II. Aggregates				
46D Crushed Limestone	175 compacted	3,240	120	
Crushed B-19 1.5" Limestone	175 compacted	3,240	120	
Limestone Sand Mfgr	200	3,240	120	
Fine Mason Sand	200	3,240	120	

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IV. LANDSCAPE BOULDERS & SLABS

- a. **Boulders** are large to very large stones that may be rounded or angular, and of limestone, sandstone or granite.
- b. **Slabs** or what are sometimes referred to Outcroppings, are large flattish pieces of natural stone.

c. Coverage Calculations

A. Single Round Boulders: In feet, calculate the area of a sphere of the approximate diameter of a desired boulder ($A = 4/3 \times \text{Pi} \times \text{radius}^3$). Note: An ellipsoid of the same diameter and twice the length of a sphere, equal two times the volume of the sphere.

B. Angular Boulders: Use the Slab Method below.

C. Slabs:

1. **Single Slab:** In feet, calculate the average thickness x average length x average width = CUBIC FEET
2. **Wall:** In feet, calculate the average height x average depth x average length = CUBIC FEET
3. **CUBIC FEET Weight:**
 - a. Limestone = 165 pounds
 - b. Sandstone = 150 pounds
 - c. Granite = 175 pounds

V. STEPS

- a. **Steps** refer to stone cut into standard sizes for changes in elevation.
- b. **Sawn Steps:** Steps that have been sawn to a consistent 16" tread, 6" riser and 4' width, consequently the steps have a more formal, regular look and surface.
- c. **Natural Cleft Steps:** Steps that have been made on a splitter and are less consistent in size: 18" tread, 5" – 7" riser, 4' width, consequently the steps have a less formal, more rustic look, and changes in the surface.

VI. DIMENSIONAL STONE

- a. Call Lang Stone at 614-228-5489 for assistance estimating dimensional stone requirements.

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VII. PAVERS

- a. Pavers are concrete product with coloring added, come tumbled or untumbled, can have surface dimpling, come in a variety of standard sizes (e.g. 6"x6", 6"x9") and are very durable. Pavers have a regular appearance and cost effectively cover a surface. Three measurements are required: surface area, base depth, and outside edge:
 - A. Surface Area: measure the area in square feet to be covered in pavers.
 - B. Base Depth: standard base material depth is 4" of 46D and 1" to 1.5" of sand and most pavers are 2 3/8" high.
 - C. Outside Edge: measure the outside edge requiring edging material that is required to hold the pavers in place. Outside edging material is typically not required where the edge abuts concrete walls, buildings or stone walls.
 - D. Call Lang Stone at 614-228-5489 and we will help you identify the Pavers that fit your project and budget and the required quantity of paver, base material and edging.

VIII. CONCRETE WALL SYSTEMS

- a. Concrete Walls offer a method of creating a strong wall capable of holding back great pressure from soil, or decorative walls and piers with a regular appearance.
 - A. Wall Material: Measure the height, width and length of the wall.
 - B. List any special details such as number of steps, and length of wall coping.
 - C. Identify what the wall will be holding back if anything, e.g. soil, pavers.
 - D. Call Lang Stone at 614-228-5489 and we will help you identify the Concrete Wall System that fit your project and budget and the required quantity of walls and back fill material.

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IX. BASIC FORMULAS FOR AREA & VOLUME CALCULATIONS

Pi = 3.1416

Area: length x width

Area of a Circle = square of diameter x .7854 or Pi x Radius Squared

Area of a Triangle = (length x width) divided by 2

Areas of an Ellipse (Oval) = ½ length x ½ width x Pi

Area of a Parabola = 2/3 side x height

Decimal Equivalents:

INCHES	DECIMAL		INCHES	DECIMAL		INCHES	DECIMAL
1"	.0833		5"	.4167		9"	.75
2"	.1667		6"	.5		10"	.8333
3"	.25		7"	.5833		11"	.9166
4"	.3333		8"	.6666		12"	1.00

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