

Part 1-Paving Stone General

Work Included:

All labor and material for the furnishing and installation of exterior stone paving.

Related Work:

Paving contractor shall include building into the paving, equipment and materials furnished through other divisions such as site drains, tree grates, curbing, and other miscellaneous items, and shall also be required to do the cutting and patching of paving where necessary to accommodate work of other trades, all as hereinafter specified, shown on plans, or reasonably implied in either, providing a complete job.

Samples:

Provide samples of adequate size and quantity to represent the full range of color, texture, and other naturally occurring characteristics of the stone for approval.

Delivery, Storage, and Handling:

1. Stone shall be delivered on pallets.
2. General Contractor shall provide a dry, stable roadway for stone delivery truck and equipment for removing loaded pallets from truck.
3. Pallets shall be placed on level ground and shall not be stacked.
4. Contractor shall provide tarpaulin covering during inclement weather.

Site Conditions:

Base material shall not be frozen. Sand joint fill shall not be frozen or wet.

Part 2-Paving Stone Products

[VIEW OUR LANDSCAPE STEPPERS & PAVER PRODUCTS ONLINE](#)

Dry Laid Stone: Bed material to be gravel or crushed stone.

Bedding sand to be sharp torpedo sand.

Mortar Laid Stone: Mortar Mix: ASTM C-270-73 Type M

Sand: ASTM C144-70

Visit www.krukowskistone.com for Material Testing Results

PART 3 - STEPS TO PREPARATION

MEASURE AREA

Determine the length and width of the finished space.

SELECT MATERIAL

Determine the look you are trying to achieve. You may have many different effects on an area depending on if you use a patterned stone, a tumbled stone or irregular stone.

ESTIMATE QUANTITIES

To estimate the quantities of stone needed take the overall length of your area and times it by the overall width of your area, which equals the square footage of material needed. Take the total square feet number and divided that by the square foot coverage per ton, which will tell you the number of tons needed for you project. Remember when ordering the material you may want to purchase a few extra stones than you think you will need so you will have more control over the look that you are trying to achieve and will not have to make additional trips for more material. You can always incorporate extra pieces as accents around your yard.

PURCHASE MATERIAL

When purchasing the material you may place an order and pick it up from Krukowski Stone if it is quantities your vehicle can handle or if you prefer to buy the material as you need it.

Another option is setting up a delivery so you can receive all the material at once and save multiple trips.

GET READY

1. Gather all the material needed for you project.
 - Paving material
 - Crushed stone

- Stone dust
 - Edging
 - Weed proof fabric
 - Mortar, polymeric sand, or sand dust for in between joints
2. Follow all safety procedures.
- Wear protective lifting support and practice safe lifting when working with large flagstone material.
 - Wear gloves and safety glasses to protect you r hands and eyes.
 - Consider using knee pads or kneeling pads for placing the stone.
 - Call Diggers Hotline and other companies to mark out gas, water, and utility lines before any digging begins.
3. Tips
- To prevent water from running to your home, have finished height of the patio be a minimum of 2-3" below the finished floor level and slope away from the house at a slope of a minimum of 1/4" per foot.
 - Patterned material is easier to work with and requires little to no sawing if planned correctly.
 - For irregular shaped material cutting or trimming may be required. To shape the paving material, use a hammer and stone chisel to score a line where you want the stone to break. Do not hit the chisel too hard or it will cause the stone to break unpredictably or in many pieces. Another way to cut the stone is by using a circular saw with a diamond tipped blade, and for some materials you may also need some water.
 - Be sure to compact the sub-base and stone dust to ensure a firm base. The better the base is compacted the more stable your end result will be.

Part 4-Paving Stone Execution

BUILDING CODE REQUIREMENTS

Building Code requirements vary from area to area. Check with local authorities for building code requirements in your area.

INSPECTION

Verify that rough grading is per plan and that paving will not be set on any uncompacted fill. Before setting final elevations, verify that walk and surrounding areas have adequate slopes and swales to provide drainage and proper runoff of surface water. If wall is to be laid on soil base, remove any loose soil and debris. If walk is to be laid on a concrete slab base clean surface of any debris.

INSTALLATION DRY LAID

1. Preparing the Base
 - a. Sub-base shall be virgin or compacted soil.
 - b. Provide minimum 6" deep compacted gravel base.
 - c. For minimal weed growth, lay down landscape fabric.
 - d. Over base provide minimum 2" sand bedding.
Screed, sprinkle, and compact until proper grade is reached.
2. Dry Laying the Stone
 - a. Stone shall be laid in specified pattern.
 - b. Color range should be uniformly distributed over total area of work.
 - c. Position stone tight to one another by lowering stone vertically into position.
 - d. Set stone by tapping with rubber mallet.
3. Joints
 - a. Spread fine dry sand over surface of stone and sweep into joints until completely full.
 - b. Wet surface with fine spray.
4. Cleaning
 - a. Sweep surface of stone to remove loose sand and chips.

INSTALLATION WITH MORTAR

1. Preparing the Base
 - a. Sub-base shall be virgin or compacted soil.
 - b. Provide a 4" concrete slab with reinforcement 12" steel rods or 6"x6" wire mesh.
 - c. Screed and bull-float leave rough.
 - d. Construction per standard concrete sidewalk practice.
 - e. Allow concrete to dry-next day application for stone.
2. Laying the Stone
 - a. Moisten concrete before laying stone this helps bonding. Leave pallets wrapped so that moisture is retained in stone-if stone is dry moisten to damp-not wet.

- b. Spread 12" mortar on concrete slab, check that material is level.
- c. Stone shall be laid in specified pattern with 3/8" mortar joint
- d. Color range should be uniformly distributed over total area of work.
- e. Use a grout bag or hand tool to fill mortar between joints-pack joints. Make sure to keep the surface of the stone clean of mortar.
- f. Tuck-point joints when "thumb print" hard and brush smooth with flexible paint brush.
Flush cut joints are not tooled and recommended for outdoor application.
- g. When joints have hardened for 24 hours, clean stone with stiff brush and clean water only.

INDOOR MORTARED INSTALLATION

1. Preparing the Base

- a. Sweep floor.
- b. Apply with staples 30# felt paper as moisture barrier.
- c. Install either expanded metal lath or 18 gauge galvanized woven wire mesh with galvanized screws.
- d. Stone shall be laid in specified pattern with 3/8" mortar joint.
- e. Color range should be uniformly distributed over total area of work.
- f. Make sure stone is level throughout and keep mortar off stone surface.
- g. Tuck-point joints when "thumb print" hard and brush smooth with flexible paint brush.
Flush cut joints are not tooled and recommended for outdoor application.
- h. When joints have hardened for 24 hours, clean stone with stiff brush and clean water only.
- i. Apply stone sealant.

Please Note: Our sawn floorings-Cambrian, Aqua and Carmel - are sealed with a specially designed stone sealer in our facility. It is best to seal again after installation. Be aware that some sealers provide a gloss to the surface, or change the color-test stone first prior to application to get owners approval.