



A Guide to

BRICK PAVERS

Everything You Need to Know to Make
Your Landscaping Project a **Success**



TWIN OAKS
LANDSCAPE

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About the Artist



Chris Speen is the owner and General Manager of Twin Oaks Landscape, a full-service lawn and landscaping company serving Ann Arbor, Michigan and its' surrounding regions. With more than 20 years of experience in the landscape industry, Chris shares a passion for creating and maintaining beautiful outdoor living environments. He is committed to providing reliable landscape services to residential and commercial clients through his experience, adaptability and loyalty, and he provides them with the education necessary to understand and help maintain their landscaping beauty in the future.

Welcome to the World of Brick Pavers



Landscaping is a beautiful addition to any outdoor environment. Without it, yards can look flat and uninviting, land is often left unutilized, and the ground is left vulnerable to many harsh weather conditions. The inclusion of specialized landscaping is a highly necessary, wise investment for any home or property owner looking to add beauty, function and value to their green space.

One popular landscaping feature involves the usage of paving bricks. A very common material used for over 200 years, paver bricks serve a wide variety of purposes and can be used in a diverse number of locations. Their versatility and durability help them to remain one of the most sought after materials for landscaping projects around the country. When installed properly, generations to come will be able to enjoy the timeless beauty and function of brick pavers.



No matter the location or the complexity—whether a private driveway or a large, centralized community patio— brick pavers can be used to create an unforgettable statement about the property, its owners, and the people that enjoy the space.



Unfortunately, paving bricks have gotten a somewhat bad reputation over the years, due mostly to poor installation, causing property owners to look for alternative landscaping solutions instead. These concerns of safety, stability, durability and expense will be easily forgotten when property

owners speak with truly professional bricklayers. The aesthetic beauty and value that brick pavers provide should not be overlooked.

Why Does Brick Paver Landscaping Get a Bad Rap?

When looking at pictures of professionally landscaped brick patios and sidewalks, it's easy to see why people love them. The clean lines, dimension, and color variations that brick pavers add to any property are stunning. However, when looking at a property with brick hardscapes that are unkempt and in disrepair, the hesitation towards their inclusion in a future project can be understandable.



Many people fear that adding a brick patio or sidewalk will simply just not look good after completion. Will the patio last for years to come, or will the ground underneath collapse, creating a safety hazard and hardscaping eyesore that must be repaired? Are brick pavers really worth the investment?

The reason that so many brick sidewalks or patios look bad is because of improper installation. Many people will claim that they are experienced in laying brick pavers, but most of these contractors don't actually have the equipment, skill, or in-depth knowledge to get the job done right, the first time. When it comes to brick pavers, installation is key. A bad installation job will be detrimental to the life of your brick sidewalk or patio in the future.

Common Brick Paver Installation Mistakes



Poor Selection of Materials - Everything, from the type of base materials used to the type of brick pavers selected for construction, matters. You may not be aware that there are different types of paver bricks to choose from, and that there are various sealing methods available, depending on the region in which you are located, to help your patio or sidewalk withstand the elements. These options will vary depending on weather and climate specifications.

For instance, property owners living in Arizona or Southwestern U.S. state live in extremely hot, dry climates with rocky soil. Brick pavers made of clay are best suited to withstand these extreme heat conditions. Clay paving bricks are also wise choices for any hardscape being constructed in the American Southeast, like Florida, for example. However, when installing brick hardscape in any region that sees freezing and thawing in colder temperatures, the smart choice is to utilize concrete pavers for construction. Areas like Michigan, for example, experience regular frost heave (*note: we'll explain frost heave later on in another section*) due to extreme and frequent temperature changes. Concrete brick pavers are designed specifically to be longstanding against harsh winter weather conditions and ever-changing climates. Choosing the wrong brick type up front could be the root cause of significant problems in the years to follow.





If the wrong type of base material is used (dirt or pea gravel instead of quality limestone), the ground can settle and shift underneath the bricks, causing them to move or crack. As you can see, material selection does matter.

Wrong Timing for Installation - Another mistake that is often made during

construction that causes paver projects to fall into disrepair is the failure to consider the environmental conditions at the time of installation. Brick sidewalks, patios, and other hardscapes should never be installed during winter months when the ground is frozen, or after a heavy rain when the ground is saturated.

Improper Installation of the Base Materials

When the base material isn't installed properly—specifically, it's all dumped at once and filled to the top before compaction begins—it isn't capable of providing the secure foundation that your patio or sidewalk requires. Effective compaction is a step-by-step process that happens in increments as the base materials are poured. A solid base must be given the proper amount of time to completely set after installation as well. Many companies will overlook the importance of these materials, and may not include them at all. But in fact, high quality base materials are absolutely vital to the stability of your brick paver project.





Improper Construction - The improper installation of your brick pavers will doom a hardscape's fate before anyone ever steps foot on it. Bricks should be installed tight, without any gaps. Proper construction of the patio or sidewalk edges is also of utmost importance. Structurally, the edges are the weakest parts of the walkway, and are more susceptible to damage. Failure to line the brick walkway with the proper adhesives and sealants will cause the bricks to loosen or break off over time. Loose edges could in turn compromise the structural integrity of the rest of your patio or sidewalk.

Ultimately, if the wrong company is hired to install your brick paver hardscape, the "finished" product could be a costly mistake, causing property owners like you future headaches and costing extra money in reconstruction fees.

Reasons to Say “Yes” to Brick Pavers

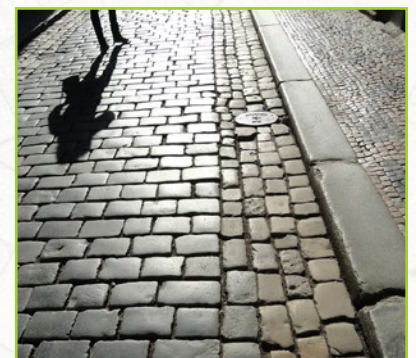
If the time has come to start choosing landscaping options for your property, installing a brick patio or sidewalk would be a fantastic addition to consider. With the proper installation, a new patio or sidewalk can add beauty and function that can last for a lifetime. When examining various materials to construct these hardscape features, be sure to keep brick pavers at the top of the list. There are countless reasons to say “Yes” to this timeless building material. Here are just a few of them.



Endless Design Possibilities - There are countless brick pattern and design options that can help transform any ordinary hardscape into a unique work of art that can be enjoyed for years to come. Common design patterns include, but are not limited to: Basketweave, Running Bond (and its variations), Stack Bond, Herringbone, Flemish Bond, Chevron, and Circular patterns. Teaming with professional installers can enable property

owners to design the ideal solution to fit the landscape. Unfortunately, choosing poured concrete for a driveway, sidewalk, or patio will only offer you a limited set of design options to choose from.

Durability and Strength for All Regions - There are numerous benefits to consider for both concrete and clay brick pavers. Ultimately, deciding which type of paver to use will most likely be determined by your geographical location.





Clay brick pavers generally are considered more durable than concrete, and are ideal for warm weather climates that experience heavy sunlight. Because these bricks are solid in color all the way through, they won't show chips and scuffs as easily. However, clay brick pavers are typically more expensive and may not always be a financial option for some.

Although concrete bricks may not be as durable as clay brick pavers are, they are still extremely strong and are better suited to withstand the harsh, cold weather conditions that are common in northern Midwest areas such as Michigan. Concrete pavers are the better option for this region because they are freeze-thaw resistant, and will withstand damage caused by de-icing salts better than clay brick pavers can. Many property owners within the Midwest region may simply opt for a poured concrete slab for their driveways, patios, or sidewalks. But, concrete brick pavers are stronger and can withstand up to 4500psi as opposed to a concrete slab's 3500psi. Plus, concrete brick pavers can be easily replaced individually; poured slabs are much more challenging to repair. Concrete bricks may be susceptible to cracking, blistering, or pitting over time but the solution to these concerns is actually quite simple. Sealing your concrete pavers after installation, and then periodically thereafter, helps to minimize any color changes, stains, or dirt that could affect the appearance and longevity of your pavers.

Easy Installation - Easy enough for any skilled and knowledgeable paver installer. Having the experience, in-depth knowledge of proper techniques and the right equipment and supplies is the basis for success. Unlike that of a concrete installer, refined paver installers are able to maintain proper techniques without the worry of imperfections (such as concrete/water mix ratios and trowling efforts that may cause ruin to the entire project).



Simple Maintenance - Aside from basic cleaning, installing sand annually or if polymeric sand (only every 5 years), and applying a periodic sealant and weed control, maintenance should be rather simple. Just sweep off the dirt or wait for it to rain. You can enjoy the benefits of your brick paver system without having to spend countless hours in hard labor just to keep it looking beautiful.

When the installation is done properly, and basic maintenance is performed on the sidewalk or patio, paver repairs should generally be a rare occurrence that is easily remedied.

Installation is the Key to Success and Beauty



Properly installing brick pavers is a multi-step process that should not be overlooked or underestimated. As you've read before, poor installation is the primary reason that many sidewalks or patios fall apart over time. Preventing common problems —like loose, cracked, broken, or shifting bricks— is simple with the right contracting team on board at installation.

- ***The highest skilled brick pavers should understand that walkways and driveways require different installation methods.*** Tire rotation and turning can cause pavers to separate; therefore, your brick paver design must be installed in an interlocking pattern to prevent your driveway's stability from being compromised. Your contractor should be prepared to not only explain the differences, but also have the necessary training and equipment available to complete these differing projects properly.
- ***During installation, it's important to consider water drainage on the property, and how it will impact the stability of the brick pavers.*** Whether the land surrounding and underneath your paver system simply needs to be sloped or trench drainage is the proper solution, it's crucial to create a way for water to be directed away from the pavers after a heavy rain. Otherwise, excess water could cause your brick pavers to become loose, shift, or even break. Be sure that the contractors installing your paver system have the knowledge and experience to properly implement specified water drainage solutions for your region.
- ***Excavation and dig outs must extend out past the perimeter of the brick surface.*** This helps to eliminate roll over. Proper excavation is needed to ensure that the brick pavers don't sink into the ground or become uneven over time, leading to cracking or other defects. When digging out for a walkway, industry standards recommend that there should be a minimum of 4" of dig out for use on open graded soil. Driveways should be dug out at least 15" below the surface to create a firm, secure base for interlocking brick pavers to rest. To prevent roll over (the side bricks sinking in on the outside), dig outs should extend approximately 9" beyond the perimeter of the surface pavers.



- ***An experienced landscaping contractor or company should understand the unique requirements necessary to construct a brick hardscape with longstanding ability specific to your region.***

This is especially crucial in areas that experience frost heave (caused by the freezing and thawing of the ground) annually. True experts can help reduce or eliminate the effects of frost heave on your brick pavers. Without accounting for this environmental factor during installation, brick pavers won't last up to their potential on a northern Midwest property. A professional installer should first use a geo-grid textile layer placed on top of the dig out and covered by crushed limestone, to reduce/eliminate the effects of frost heave.



- ***The proper type of base material must be used to create a stable foundation that the completed feature will be rest upon.*** This material must be compacted fully down before any bricks are laid. Some contractors may simply dump all base material within the dig out and then begin compacting. This causes a problem, however, as the bottom portion of material can never be fully compacted with this method. Instead, an expert understands that base material must be spread in layers, and should be tamped every 4" to ensure that all material is properly compacted.
- ***A landscaping contractor must be sure to line the brick pavers with the proper bonding materials and edge bricks.*** This ensure that vulnerable edge bricks don't break off down the line.

What to Look For When Hiring a Professional Brick Paving Company

Most property owners compare prices and service options available from numerous contractors before choosing one for the installation job. The ICPI recommendation is for property owners to actually obtain detailed written proposals from at least three separate contractors or agencies before making a final selection to help ensure the end product offers the best possible outcome. Although there are numerous factors to consider, it's wise to go into an initial consultation with a few questions in mind. Asking the right questions, and then comparing the answers, can help make the selection process much simpler.

Important Questions to Ask Before Hiring a Brick Paving Professional

Q: *How long have you been professionally installing brick pavers? Is this your primary business focus, or do you have other areas of expertise?*

Q: *Are you ICPI (Interlocking Concrete Pavement Institute) certified?*

This certification will ensure that there are fully licensed and capable employees constructing your brick paver landscape feature.



Q: *Do you use your own, trained employees, or do you subcontract out your work to others?*

If a company subcontracts out this type of work, it doesn't matter what their credentials are. What matters is that the ones actually conducting the work have the necessary credentials to complete the job.



Q: Do you offer a warrantee, and if so, how long is it good for? Are there any conditions or stipulations that need to be considered?

Q: Will you visit the work site before you make a proposal?

Some contractors will quote their clients with an estimate up front, and then discover hidden costs and unexpected expenses along the way. Don't let a contractor take advantage of you.

Q: Do you offer information to your property owners about where the bricks come from or who the suppliers are?

Q: Does your brick paving company carry the necessary insurances, including workman's compensation?

Q: How well do you work within city codes and ordinances or Home Owners Associations? What is your process here?

Q: Start to finish, what can I expect the installation process to look like?

ICPI Standards and Why You Should Dig Deeper With Your Landscaping Company

The landscaping industry, as a whole, follows recommendations set forth by the ICPI. The ICPI (Interlocking Concrete Pavement Institute) sets these brick installation guidelines by looking at specific variables from all across the nation. They use the information gathered to create universal recommendations that all reputable brick installers across the United States can follow. These standards also allow consumers to effectively compare various providers for quality, cost, and service.

What's the Problem?

The Institute considers a variety of factors from every region across the United States to form these recommendations. Factors like heat/cold, annual precipitation, soil conditions, amount of sunlight, etc. will impact what type of bricks should be used and



how they should be installed. These general guidelines may prove to be too overwhelming or underwhelming for some regions depending on how far these specifics deviate from the national average.

Before you sign any contract with a landscaping contractor or company, be sure to ask them how their installation specifications and practices measure up to the recommended ICPI standards. You'll want to know that the installation of your brick paver system is best suited to the needs of your geographical location.

Why Choose Twin Oaks Landscape?

Twin Oaks Landscape proudly sets the stage as an industry leader, providing beautiful and functional landscape, hardscape, and drainage solutions for residential and commercial clients throughout Michigan since 1993. Backed by decades of education and experience, our licensed and insured contractors, engineers, architects, horticulturalists, and expertly trained staff design, build and maintain beautiful and effective landscape features through innovation and creativity.

With decades of experience in brick paver installation, Twin Oaks Landscape has perfected the process of sidewalk, patio, driveway and other hardscape installation, ensuring long-term satisfaction on every project.



We promise our clients:

- ***Team's credentials include ICPI Certifications.*** "For contractors involved in the residential and commercial installation of interlocking concrete pavements, the ICPI Concrete Paver Installer Certification is THE industry recognized program for the professionals committed to industry guidelines for segmental concrete pavement installation. It's more than just a certificate on the wall – it's a testament to your level of investment in your profession that demonstrates your knowledge and skills for interlocking concrete pavement installation best practices." (Source: ICPI.org)
- ***A 5-year warranty on our brick paver systems.*** Although it's unlikely that you'll need it, Twin Oaks Landscape backs up our work with a guarantee to prove that with a better process that offers you greater value in return.
- ***Only the highest quality materials will be used throughout the installation of their brick paver application.*** Twin Oaks Landscape has two main suppliers for our brick pavers. Fendt pavers are made locally in Michigan and are well known as industry leaders marked by their innovative design, function, and elegance. Our second brick paver supplier is Unilock, well known throughout the continent for their expertly crafted brick pavers that are engineered for superior performance for a lifetime. The ICPI industry standard for crushed limestone is 21AA. Twin Oaks Landscape uses 6A $\frac{3}{4}$ " Angular Limestone with no fines for every dig out, to ensure the brick pavers rest on a solid base at all times. **BONUS:** Limestone also acts as a natural deterrent for weeds.



- **Expert drainage solutions to reduce or eliminate the risk of water damage to your patio, sidewalk, or driveway.** As an industry leader in commercial and residential drainage solutions, we specialize in services aimed at keeping water from pooling around or under your brick paving system. From simple drainage solutions like grading to more complex applications that include tile, peat gravel and other materials, we work hard to ensure that the stability of your brick paver system isn't washed away due to excess water. You should never have to feel like your investment is ruined because of Mother Nature.



- **Expert installation that goes above and beyond the recommended industry standards.** ICPI standards suggest that patios and sidewalks be installed with a 4" base digout. Twin Oaks Landscape utilizes an 8" base standard with every project to ensure a more stable end product. Compared to the industry standard recommendation of a 15" base for every driveway, Twin Oaks Landscape provides a 20" base standard for our customers. We exceed industry standards to ensure the strength and durability of our work every time. Because our installation process has gone above and beyond industry-recommended standards for more than a decade, our clients are seldom in need of paver repairs.





- **Maintenance programs.** Including periodic sealing, sweep sand and polymeric sand (grout), to help keep your brick paver system non-permeable and looking and functioning in optimum condition.
- **Rejuvenation options.** Restores life back into brick pavers not installed by Twin Oaks Landscape.
- **Experience, reliability, and adaptability.** Qualities that can be trusted.

If you're considering adding brick pavers to your outdoor landscape, call Twin Oaks Landscape today. Our expert designers will sit down to discuss your needs and vision, and will create the right solutions to meet your specific application. Call **734-213-6911** today to schedule a no obligation consultation and get your landscape looking beautiful all year long.

