



PaverWise™

Hiring the right landscape contractor to install your project can be a daunting task. Even if you have done this before or are experienced in hiring contractors for other projects around the home, hiring a landscape contractor has some additional unique challenges. Landscaping includes all the aspects of design, installation, and in most cases, horticulture. The aim of this PaverWise™ brochure is to help you choose the right paving stone/retaining wall contractor and to work effectively and fairly with this contractor to achieve the results you desire.

Doing Your Homework

First, be sure not to rush this process. By rushing you are likely to overlook some important details, which you might regret later.

Selecting the Product

The products you select are a combination of visual aesthetics such as color, texture and pattern. There are several questions to ask when selecting product. **1.** Is the product backed by a lifetime guarantee? **2.** Does the manufacturer of the product support the contractor in effectively carrying out all aspects of the job? **3.** Are the retaining walls engineered, and is there engineering support for the product? **4.** Does the manufacturer have a wide selection of colors available? **5.** Are the products compatible for creating beautiful designs and borders? **6.** Do they have products that allow you to construct seatwalls, outdoor grills, pillars, etc? **7.** How readily available is the product?

Finding and Choosing a Contractor

The contractor you hire should have technical, business and interpersonal skills, as well as the tools and the experience needed to complete your paving stone and/or retaining wall project. Finding contractors who are experienced installing landscape projects similar to yours, is one of the best ways to narrow down your final selection. These contractors will know what materials and techniques are needed for your landscape installation and likely have the labor and equipment to do it right. For larger landscape projects, you can hire a "design-build" firm to take charge of the entire project, simplifying the management and organization of all the aspects. Another option available is to hire a landscape architect, landscape technologist or landscape designer to design a plan for your home. Then you can get several contractors to submit a quote based on the proposed design. Landscape architects can also execute your project from start to finish, including obtaining all necessary permits, hiring the contractor(s) and supervising the installation of the work.

To get a balanced look at pricing, you should start by looking for several suitable contractors. The best source of referrals may be a family member, friend, co-worker or neighbor who has had the same type of work completed. They can tell you about the dependability of the contractors they have worked with, the quality of the work and their overall experience with that company. Other sources include local garden centers, home building supply centers, manufacturer referral services and landscape associations. A search on the Internet may yield a number of potential candidates for the job, but their credentials must be closely examined. Contractors affiliated or aligned with recognized manufacturers and organizations are generally better contractors.

Is the product backed by a lifetime guarantee?

Look for contractors who have experience installing landscape projects similar to yours as a means of narrowing down your final selection

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Competent, honest contractors with integrity will never pressure you

After making your initial selection of contractors, arrange a time for them to come out to discuss your project. Be sure to get their advice and suggestions on how they would do the work. At this meeting, you might even get a rough estimate of the job, depending on its size and complexity. Don't get pressured into signing a contract right away, which is a sure sign that this contractor is not capable or is just after your pocketbook. Competent, honest contractors with integrity will *never* pressure you.

In this initial meeting you will want to find out as much as you can about this contractor. Below are some questions you should ask. To assist you we have developed a comparison checklist which we included for your convenience on the last page of this publication.

- How long have they been in the landscape business?
- Do they have liability insurance and are they covered by Workers' Compensation?
- Do they have the appropriate licensing for their work?
- What landscape jobs have they done that are similar to what you need done?
- Do they have a list of references?
- What is their landscape training and background? How are their employees trained? Do they attend manufacturer training sessions?
- What warranty do they offer? Do the products they recommend have a warranty?
- Have they provided you with any manufacturer's literature? Does the literature provide you with design ideas? What is the manufacturer's reputation? Warranty?
- Do they do the entire job with their own staff or subcontract parts out? Who are their subcontractors?
- Are there any permits required for this job? Whose responsibility is it to get these permits?
- Base preparation is a key factor in every paver and wall installation. Ask them about how they handle the base preparation.
- Drainage is also a key factor in every landscape job. Ask them how they plan to handle the drainage.
- Retaining walls over 3 1/2' high or with unusual loading conditions, such as a driveway, should be engineered (consult local building codes). Do they have an engineer to handle this?
- What is their timeline for your project?
- What is their clean-up routine?
- Do they provide a written contract?
- What are their payment terms?
- Do they have a website?

References are very important. A satisfied customer is the best reference you can get

You won't offend reputable firms with questions. If a contractor doesn't seem to know the answer to many of your questions or seems to avoid answering them, you may have the wrong contractor. References are very important. A satisfied customer is the best reference you can get. Get three or four references for installations they have done which are similar to yours. Phone these references and see if their experience was a positive one. If you can, ask them if you can come out and see the work.

Contractor–Customer Compatibility

Finally, be aware that you will be working with this individual over a period of several weeks and you'll need to get along. Select a contractor who is personable and who is willing to work with you in achieving the job that you're after within your budget. Remember, landscape jobs can also be done over a two-or three-year period. This will take pressure off your budget while allowing you the flexibility of getting a more complete job done.

Don't automatically choose the contractor who gives you the lowest price

Anatomy of an Estimate

Getting three estimates which include proper drawings, specifications and material should be enough for you to make a decision. Drawings and designs take time and most contractors will charge you for their time in preparing them. In some cases, when the proposal is accepted the design fee is waived. If you have contracted a landscape architect to prepare the design, you can provide each contractor with the same set of plans. This is the best way to compare "apples to apples."

The most important thing to remember is that you need to be specific. Open issues can easily become a platform for conflict. Small jobs with many unknowns are often quoted for time and materials. Be sure to ask for a "will not exceed" amount. The purpose of getting three estimates is to get a fair price. Don't automatically choose the contractor who gives you the lowest price. It's possible that this contractor did not understand the full scope of the project or they may be underestimating its value on purpose, just to get the job. On the other hand the lower price may indicate a very efficient contractor. Make sure all the details are documented so that you will not be faced with unexpected "extras" at the end of the job.

It is also important to account for intangibles such as the contractor's reputation, skills and warranties. At the end of the day, you'll have to rely on documentation and instinct to choose the contractor that you feel will give you the best value for your money.

Always document any changes on paper and sign off with the contractor ahead of time

Get It in Writing

The most responsible way to get the job done right is to get all the details in writing. It does not matter if the job is large or small. However, once the job is underway you may need to make changes which will affect the final price of the job. Always document any changes on paper and sign off with the contractor ahead of time. Be flexible on your completion date. Landscapers' schedules are often affected by the weather. Delays because of weather are inevitable. Delays in shipping or product availability may also affect the schedule.

The landscape contract should include the following:

1. Contractor's name, address and contact information (and license if applicable)
2. Your name, address and contact information
3. Complete description of the landscape project
4. Samples and literature showing the products to be used
5. Detailed drawings of the work to be carried out
6. Materials list including pavers, walls, accessories and plant material
7. Listing of any landscape architects, designers, engineers or subcontractors who will be performing a portion of the project
8. Start and completion dates
9. The price and applicable taxes and payment schedule
10. Agreement on who (homeowner or contractor) is responsible for all necessary permits, licenses, inspections and certificates
11. Workers' Compensation for all employees of the contractor or subcontractors (ask for a copy)
12. Contractor's liability insurance (\$2 million is standard; ask for a copy)
13. Warranties on all contractor-supplied work and materials (in addition to manufacturer's warranties) for a period of at least two years
14. Any special notes regarding property access and adjacent property permissions should be on the contract

Paving Stone Installation – the visual signs of quality workmanship

When you contact the contractor’s references you should make an attempt to see the contractor’s work. This is the best indicator of what the contractor’s work is like. If the job is three or more years old, you can also see how the job is holding up.

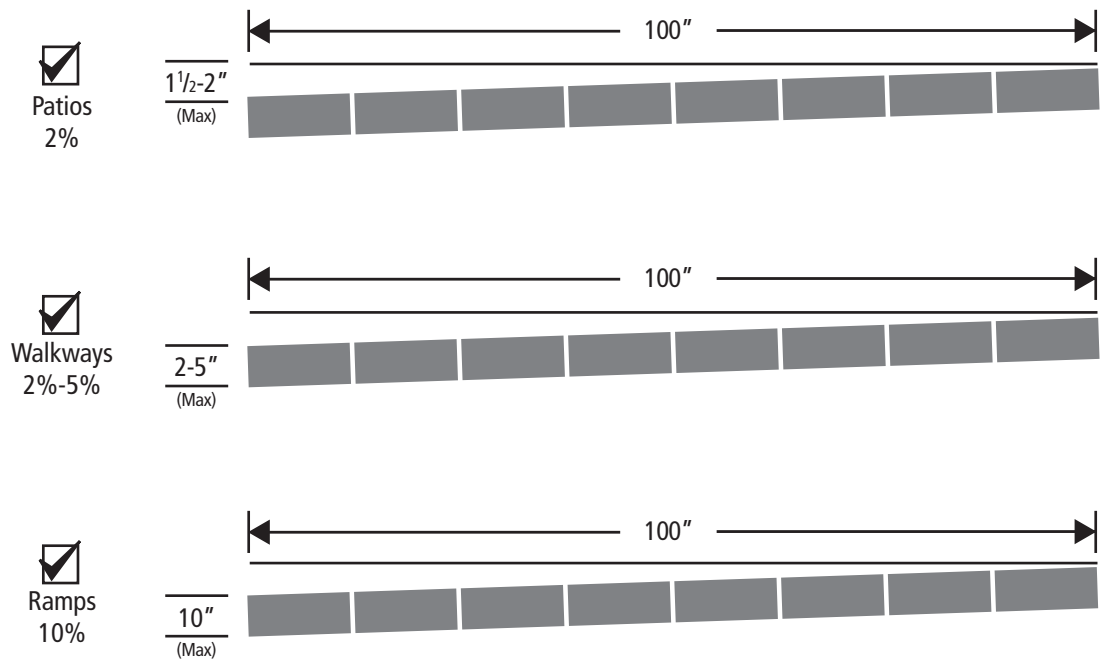
Make an attempt to see the contractor’s work

Design

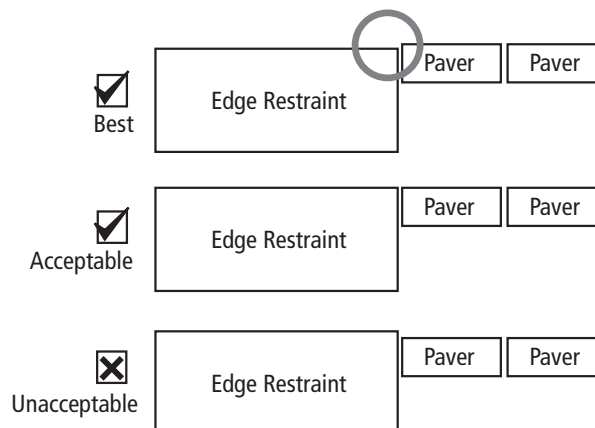
Does the design have flair and does it give you a sense of flow and organization? Are the colors complementary to the house? Did the contractor employ borders and accents with a combination of unique textures, styles and patterns? Is it a pleasing combination? Was the project nicely finished off with trees and plants?

Grading

Is the paver surface properly graded to divert water away from any buildings? In difficult drainage situations, has a drain been installed to handle rain water? Do any of the patio grades exceed a 2% slope (2” drop over a distance of 100”) ? If so, why? Anything over a 2% slope will make any patio furniture seem like it is leaning. On the other hand, anything less than 1.5% will not give you adequate drainage.



Where the pavers meet solid edge restraints, such as concrete patios or curbs, make sure the pavers are 1/4" higher than the edge (anything less than flush is unacceptable).

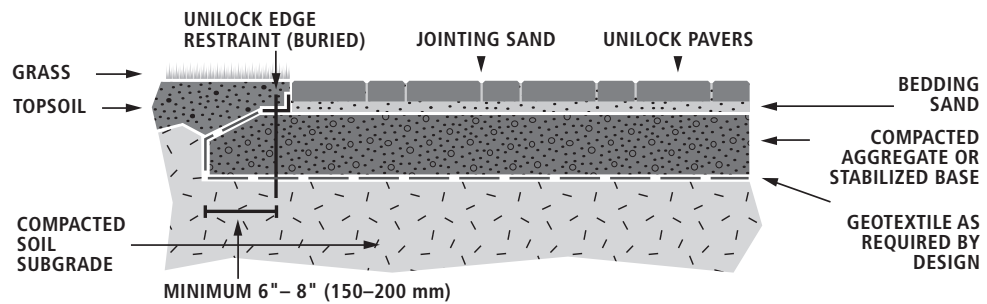


With a poor base installation, problems generally arise in the first two years

Base

Unless the job is several years old, you will never really know how well the base was prepared. With a poor base installation, problems generally arise in the first two years. If there is any sign of rutting, ponding or settling near the edges, it indicates one of four things. **1.** Incorrect base material and water absorption (one of the reasons that copious amounts of screenings should not be used as a bedding course). **2.** Insufficient base for the application. If you do not have enough base for a driveway, it will not support the load that will repeatedly travel over it. **3.** Poor compaction by the contractor, which is usually caused by using equipment too light for the job. **4.** Absence of any edge restraint. If there is no edge restraint then the edge pavers can move laterally into adjacent gardens or grass, creating unsightly gaps between the pavers at the edge.

In any case, if there is rutting it's usually a result of the contractor's poor installation methods. There are sometimes extenuating circumstances with respect to the failure of a job and this usually relates back to existing site soil conditions that the contractor was not made aware of or that were beyond his control. Below is a chart showing what is recommended for a base for your project. A knowledgeable contractor may recognize a site's potential base problem and recommend an alternative base thickness. For more information relating to construction and to download a detailed Tech Guide, visit www.unilock.com.



JOB TYPE	WELL-DRAINED AREA		POORLY DRAINED AREA		PAVER THICKNESS
	GRANULAR BASE (min.)	BEDDING COURSE (max.)	GRANULAR BASE	BEDDING COURSE	
Pedestrian traffic, patios, walkways, pool decks	4" (100 mm)	1" (25 mm)	6" (150 mm)	1" (25 mm)	2 3/8" (60 mm) 2 3/4" (70 mm)
Vehicular traffic, residential driveways	8" (200 mm)	1" (25 mm)	12" (300 mm)	1" (25 mm)	2 3/8" (60 mm) 2 3/4" (70 mm) 3 1/8" (80 mm)
Vehicular traffic, commercial areas	12" (300 mm)	1" (25 mm)	18" (450 mm)	1" (25 mm)	2 3/4" (70 mm) 3 1/8" (80 mm)

Total excavation = Granular base + Bedding course + Paver thickness - 1/2" (13 mm) for an uncompacted bedding thickness

Cutting

Where pavers have been cut, look for the quality of the cutting. Are cuts clean and straight and do they align with adjacent cuts? Gaps greater than 1/4" are generally unacceptable unless the project or product is designed to create a larger joint for aesthetic purposes. Unilock Polymeric Jointing Sand or Joint Sand Stabilizer Sealer is recommended for all paver installations, especially those where larger joints are expected.

Landscaping and Finishing

How well was the final project finished off? Is it neat and tidy? Are the planting areas graded in such a way that there will be no wash-out onto the paving stone surface? Even if there was no landscaping involved, examine how well the sod was restored around the edges and if it is properly graded away from the paving stone surface.

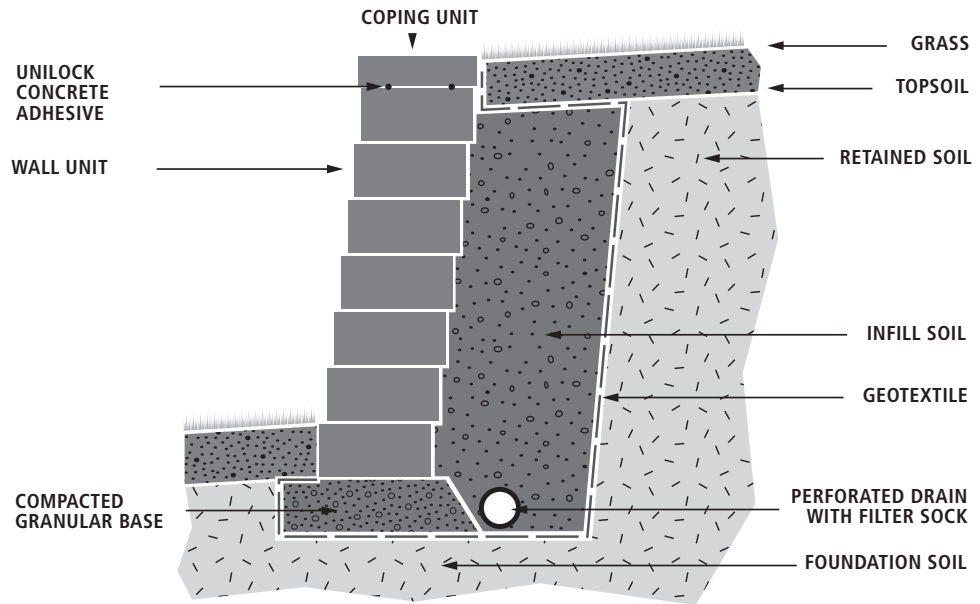
Retaining Wall Installation – the visual signs of quality workmanship

Design

Is the design pleasing and does it fit the architecture of the home? Is the design a practical use of space and will it function as it was intended? Did the contractor employ borders and accents with a combination of unique textures, styles and patterns? This is important so that the job takes on uniqueness and a creative signature all its own. On a structural note, walls over 3 1/2' should be engineered by a registered engineer (consult local building codes). The manufacturer of the wall system can assist you in this regard. Contractors can also source many cross sections at www.unilock.com to help them in their preliminary design.

Quality of workmanship can sometimes be a little more difficult to ascertain because of the varying projects that are constructed with modular retaining wall products. Most retaining wall products can be adapted to create not only walls but also steps, planters, pillars, seatwalls, outdoor grills, fences, mailboxes, fireplaces and fire-pits. Each item has its own installation specifications and requirements. But once again, the base is critical for each of these elements, as is the drainage below or behind the wall.

JOB TYPE	GRANULAR BASE	UNIT THICKNESS BELOW GRADE	GRANULAR BACKFILL WIDTH
Steps, planters, raised patio Height less than 18" (45 mm)	Min. 4" (100 mm)	Min. 3" (75 mm)	Min. 8" (200 mm) 12" (300 mm)
Steps, planters, raised patio Height greater than 18" (45 mm)	Min. 6" (150 mm)	Min. 6" (150 mm)	Min. 12" (300 mm) 18" (450 mm)
Special applications: Pillars, fountains, water features	Min. 6" (150 mm)	Min. 6" (150 mm)	N/A
Retaining wall applications	Min. 6" (150 mm)	Min. 6" (150 mm)	Min. 18" (450 mm)
Total excavation = Granular base + Unit thickness below grade			



Grading

Much like bricks and mortar on a building, retaining walls and related elements such as planters, steps and pillars should always be constructed level, or in the case of pillars, plumb. Walls should not be constructed on an angle. It is unattractive, impractical and structurally unsound, especially if there are curves or corners, which can be problematic if the wall is not installed level. When dealing with slopes, the top of the wall as well as the base of the wall should be stepped to accommodate the grade.

If steps were constructed using wall units and coping units, take a test walk up and down the steps to see if they feel safe and comfortable. Retaining walls are usually constructed to level off an area or to change the grade in order to accommodate part of the landscape, such as a patio. It is imperative that the area behind the wall be well drained with a proper drainage layer of gravel so that frost will not push the wall over.

Landscaping and Finishing

As with a paving stone installation, ask yourself how well the final wall project was finished off. Is it neat and tidy? Are the planting areas graded in such a way that there will be no wash-out over or from behind the wall? Even if there was no landscaping involved, examine how well the sod was restored at the top of the wall and if it is properly graded away from the edge of the wall.

We hope that the information provided to you in this guide is helpful. To assist you in the final selection of a contractor, we have prepared a comparison chart (last page) which you can use to compare the various proposals. If your landscape job is complex or you need further information please call us at 1-800-UNILOCK or download our Tech Guide from www.unilock.com.

**CONTRACTOR
PROPOSAL CHECKLIST**

*Please use this
checklist to compare
contractors*

PROJECTS – CONCRETE	CONTRACTOR 1 Explanation, notes and sizes	PRICE	CONTRACTOR 2 Explanation, notes and sizes	PRICE	CONTRACTOR 3 Explanation, notes and sizes	PRICE
Walkway						
Driveway						
Patio						
Steps						
Seatwalls						
Planters						
Built-in grill						
Built-in bar fridge						
Fireplace – open pit						
Fireplace – built-in wood						
Fireplace – built-in gas						
Water feature/ reflecting pool						
	Subtotal		Subtotal		Subtotal	

PROJECTS NON-CONCRETE	CONTRACTOR 1 Explanation, notes and sizes	PRICE	CONTRACTOR 2 Explanation, notes and sizes	PRICE	CONTRACTOR 3 Explanation, notes and sizes	PRICE
Special excavation/ machine work						
Tree removal						
Fencing						
Wooden accents or structures						
Boulders & stonework						
Planting						
Sodding						
Lighting						
Irrigation						
Multimedia (audio and/or TV)						
Swimming pool						
Driveway security gates						
Disposal costs						
Applicable taxes						
	Subtotal		Subtotal		Subtotal	

MISCELLANEOUS				
Completion date				
Terms and conditions				
Installation guarantee				
Workers' Compensation				
Insurance				
Designations & certificates				
Reference locations & contacts				
Permits				

TOTAL