



Top 11 Things To Consider Before Building A Paver Patio

By Luke Henry, founder and president

Provided by ProScape Lawn & Landscape Services

I started doing hardscape work in 2003. Since then, I have met with literally hundreds of people to consult about building, repairing, or expanding their outdoor living environment and I have learned a lot of lessons. Nearly every day, I speak with someone about a paver patio and in most cases, if someone is just starting the process, they are overwhelmed. I love working through the consultation and design process with people, and the following 11 questions are typically where we start at the first meeting.



1.) *How will you use the space?*

This is a question that sometimes people don't consider; however, I believe it is extremely important. Many of the other following questions stem from this overarching question. Will you entertain large groups? Do you just want an intimate area to use as a couple or small group? I encourage people to envision the largest and smallest groups that might be using the space, then think about traffic flow, seating, etc. What type of feel do you want? Should you consider creating different "rooms" within the space, or do you want a single large space?



2.) *How much space will you need?*

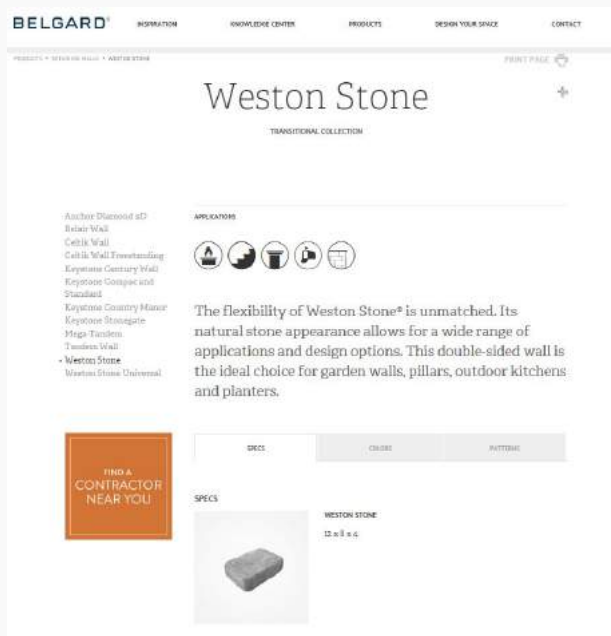
This question is very much related to how you will use the space. Once you answer the first question, we can start to discuss what size would be appropriate. It is interesting to me sometimes when people tell me on our initial phone call something like, “I want it to be at least 700 square feet”. When I ask how they arrived at that, they really can’t answer, admitting that it was just arbitrary because a friend built a patio that size. Sometimes that’s an okay approach, but it helps to further discuss to ensure we have the right amount of space. Do you plan to have 4 top or 6 top table? Do you want a spot for your grill? How much total seating area do you want? Will you have other furniture or fixtures as part of the space?



At ProScape, we design our patios in 3-D and we drop in furniture, grills, and built-in features, which really helps folks envision what it will look like and how they can use it. Another exercise that really helps is that once we have brainstormed a concept or even once we have created the 3-D design, we paint out the area on the ground so the customer can get a feel for it even better.

3.) *Which pavers will you use?*

This question doesn't have to be answered until later in the process. In fact, because of the way it relates to overall feel of the patio and the way it affects the overall price, I recommend not deciding until a design concept has been established. Many times I have seen people make the mistake of picking up a paver manufacturer's catalog, and spend a lot of time and energy discussing which pavers they prefer, then they get frustrated, or worse, they gloss over the other considerations that need to be made. In my mind, it is function first, then form.



First of all, there are a lot of different paver manufacturers. Each contractor more than likely has a brand that they tend to use. By and large, there are not a lot of differences between the different manufacturers. Most all offer a warranty, and most of them offer at least a few styles that are similar to the other manufacturers. I have worked with 5 or 6 different manufacturers, and I've not noticed appreciable differences. Unless you want something that is a little unusual, don't get hung up on using a specific manufacturer.

Once you get to the point of choosing a specific style from a manufacturer, note that there are a lot of different types of pavers, and not all pavers are appropriate for every application. Also, there is a lot of price variability between different styles of pavers, sometimes up to \$5-6 per square foot, which can mean on a 700 square foot patio, there could be a price difference of around \$3000-4000. Your contractor

should be able to make recommendations as to options that are appropriate for the style and construction requirements of your patio.

The other thing that your contractor should be able to recommend is a few options for accent pavers. I try not to give too many options, so my client won't get overwhelmed (because the options are endless!); however, the great thing about paver patios is how customizable they are, so incorporating a few custom touches takes a patio from just nice...to completely awesome. At a minimum, we use a contrasting soldier course around the outside with a different paver style and/or color. Sometimes we will use a paver as an accent band in a wall or pillar, or perhaps do an inlay in the middle of the patio.

4.) *Are there elevation changes within the proposed space?*

For someone who has never constructed a patio, this can be an easy one to overlook. What we are talking about is whether or not the grade of the existing lawn gets higher or lower. The patio surface has to be built flat, which means it might be elevated or recessed. Sometimes it can complicate matters, and other times we can use it to create spaces that are both functional and unique. In any case, if there are elevation changes, we will have to utilize retaining walls of some kind to either build up at least part of the patio, or to hold back the ground around the patio to keep it from collapsing or washing onto the patio surface.

Be aware that adding walls or creating a raised patio area will add additional cost. With this in mind, sometimes we have to look at alternative areas of the property that are flatter (have less grade change). The least expensive paver patio is one that is laid on a completely flat area.



5.) *Do you want a fire pit or other built in elements?*

Fire features are the most requested built in element that I encounter, so I start with that. Some people have already decided that they do or do not want a fire pit. The most common is a round fire pit; however, they can be square, rectangular, semi-circular, free-standing or built into a wall. They can be wood-burning, propane, or natural gas. Your contractor can discuss what will work at your home.



Take some time to consider if you would enjoy other built-ins like a grill, kitchen, sink, refrigerator, water feature, or fireplace.

Recognize with fire pits or any other built-in feature, you must consider how you will use the space, and choose carefully where you place a built-in feature, since you won't be able to move it later.

6.) Do you have any setbacks, easements, or HOA restrictions?

You will need to consult your Plot Plan. If you don't know if you have a plot plan, check with your closing documents when you bought your house. It's usually with all those other papers. You will also want to check your HOA bylaws (also possibly with your closing papers, otherwise, your HOA representative is usually happy to share them with you). Some (reputable) contractors will actually ask for your plot plan at your first meeting, to figure out if there is anything that we need to work around. There is nothing more frustrating than designing something, loving it, then learning you can't do it because it violates an easement. The plot plan is usually pretty cut and dried, and a qualified contractor can help you decipher all the markings to ensure you don't have any problems later. In my experience, occasionally HOAs can be another story. For the most part, as long as it's nothing gaudy or crazy, they don't care what you do in your backyard, and as long as you pay a \$25-50 fee and submit for approval, they rubber stamp it and you are good to go. However, I have ran into a couple cases where they got pretty picky about what you can build and where, especially if you are going outside of the "build lines" of your house.

Pomeroy & Associates
Surveying Engineers & Surveyors
 593 Schenck Court • Northampton, Ohio 45860
 Phone (937) 485-5455 • Fax (937) 485-5505

DOMINION
 IT'S YOUR HOME

REVISION DATE & REQUEST	
1	06-04-03 ADDED PP
2	06-04-03 ADDED UTILITY PLAT

ORDER NO. _____ FOR **DOMINION HOMES** HOUSE STYLE **KINGSTON 4838 D**

LOT/SUBDIVISION _____ VIL. OF **SUNBURY**

SCALE 1" = **20'** PR. UNB. PG. **X** DATE **9-30-13** DRN. TLP. CK. **SLH** CO. OF **DELAWARE**

FLOOD ZONE **X** COMM. PANEL **39041C** PAGE **0257K** DATE **4/16/09**

MINIMUMS R. **40'**

SOIL CLASS = TYPE 2
 NOTE: SOIL INFORMATION WAS DERIVED FROM COUNTY SOIL SURVEY

ZONING OFFICER APPROVAL _____ DATE _____

PLOT PLAN
 We hereby certify that the foregoing PLOT PLAN was prepared from information provided by the Client and data obtained from Engineering Subdivision Plans. This Plan is to be used by the Client for the sole purpose of obtaining a building permit. The use of the Plot Plan for any other purpose is not permitted.

LOT CALCULATION INFORMATION IS FOR ESTIMATE PURPOSES ONLY AND SHOULD BE VERIFIED BY THE CONTRACTOR OR BUILDER	
LOT AREA	15108 SQ. FT. BEARING 48.33
LOT AREA	0.347 ACRES BEARING 33.33
SOC AREA	1407 SQ. YARDS BEARING 17.00
DRIVE AREA	78 SQ. YARDS BEARING 17.00
APPROACH AREA (R)	178 SQ. FT.
PAVED AREA	172 SQ. FT.

By *[Signature]*

7.) *What about permits?*

In general, paver patios do not require permits, because they are not considered “permanent structures”. That is assuming they are built per manufacturer recommendations on compacted gravel and screeded sand. When you enter into the world of decks, that is a different story, and they do almost always require a permit and multiple inspections during the construction process. As you get into more complex outdoor living areas that include electric, plumbing, and other wood structures, permits/inspections may be required, but it does vary widely between municipalities.

It can be a little intimidating for most homeowners to deal with inspectors and municipalities; however, in my experience, they are mostly great people who, if you are trying to do things right, are willing to help. That being said, most quality contractors will just prefer to handle the permits on your behalf, including researching if/what permits are required, arranging the inspections, and dealing with the inspector(s).

MARION TOWNSHIP, MARION COUNTY, OHIO ,
ZONING APPLICATION
RETURN ALL COPIES FOR APPROVAL
MARION TOWNSHIP ZONING 1225 E. FAIRGROUNDS ST, MARION, OHIO 43302

DATE OF APPLICATION.....12-30-15.....

Application is hereby made by.....John Smith.....
(Name of Owner or Owners Agent)

For a zoning permit to occupy, use, erect and/or alter the premises described on the attached sheet. The plot plan on the attached sheet and the representations therein contained, are made a part of this application, in reliance upon which, and as an inducement therefore, the Township of Marion, Marion County, Marion, Ohio is requested to issue a zoning permit in accordance with the following fee schedule.

Cost of Construction Permit Fee
\$25 plus .05 per sq ft for new construction, Pool \$25, Fencing \$25, Storage shed \$25
Variance \$100, Re-zoning resident \$200, Re-zoning non-resident \$300
Permit Fee for signs.....per sign / per face.....\$75.00
Permit Fee for temporary signs.....\$50.00

TYPE OF PERMIT
☒ Residential () General Commercial () Industrial
() Sign () Temporary Signs

GENERAL INFORMATION FOR PERMIT:
Cost of Construction \$ 8,000.00 Permit Fee \$ 38.80 (must be included with application)
Purpose of occupancy or use.....Outdoor Pavilion/Gazebo.....
No. of Stories.....1.....No. Rooms.....1.....No.....
Families.....
Width.....16.....Length.....12'.....Height.....12'.....
Lot No.....House No. 1234.....Street.....Anywhere Dr.....

CERTIFICATION OF APPLICANT:
It is understood and agreed by this applicant that any error, misstatement or misrepresentation of any material fact, either with or without intention on the part of the applicant, such as might, or would operate to cause a refusal of the permit, or any material alteration of change in this accompanying plans made subsequent to the issuance of a permit in accordance with the application without the approval of the Township of Marion, shall constitute sufficient grounds for the revocation of such permit. It is further certified that the premises for which this application is made is not now being occupied or used contrary to the Zoning restrictions or agreements, which impose greater restrictions than those imposed by the Zoning Resolution.

Do Not Sign Here Unless The Drawing Submitted Is Correct
Signature of Applicant.....
Present Address of Applicant.....1234 Anywhere Dr, Marion, OH 43302
Permit No.....ZONING PERMIT (completed by Zoning Inspector only)
The foregoing application for zoning permit is () Granted () Refused
If refused state reason and section of Zoning Resolution.....

Charles S Fosnaugh, Marion Township Zoning Inspector

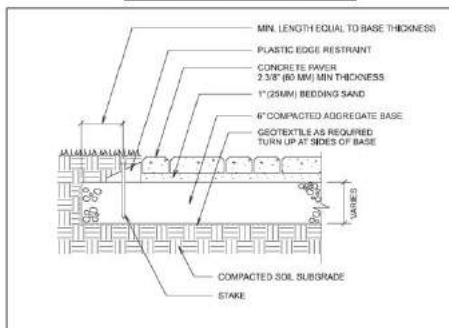
8.) How will you select a contractor?

This topic is obviously near and dear to my heart. Of course, my job and my goal is to earn the business from paver patio prospects that I am consulting with. Sometimes they choose another contractor because they may have conceived a better design, or carry a certain product line that we don't, and although I am disappointed, I respect that they are choosing another quality contractor. However, in some cases, I see them choose a cut-rate contractor, or worse, a friend or relative that might be "getting into the business" or has worked for a patio company. In most cases, we end up getting a call a year or two down the road when the patios completely fall apart. You see, it's not rocket science, but there is some science and engineering (and a LOT of back-breaking work) involved to ensure that all the proper installation steps are closely followed so that your project will be both beautiful and long-lasting. *It is what you don't see that determines if your new patio will be a dream or a nightmare!* I have worked with many, many clients who have spent \$5000 to have someone install what probably should have been a \$7000 patio, then only 1-2 years later have a reputable company like ours come in and have to charge another \$5000 to completely tear out and properly rebuild it.

Therefore, I highly recommend you qualify your contractor by finding out if they are an Authorized Contractor by their preferred paver manufacturer (ie Belgard Authorized Contractor, Unilock Authorized Contractor), if they abide by ICPI and NCMA specifications and have installers that are ICPI and NCMA certified (the gold standard accreditation organizations), check out online reviews, and verify that they have proper liability insurance and Workers Compensation coverages in place.

Also, I think it is important you work with someone who you genuinely like and that catches your vision.

Paver Installation Standards



Paver and bedding layer		Base and subbase layer	
Attribute	Tolerance	Attribute	Tolerance
Paver joint width	1/8 in. (2 mm) to max. 1/4 in. (6 mm)	Top of base surface variation	+ 1/4 in. (3 mm) over 10 ft. (3 m) (non cumulative)
Paver surface flatness	± 1/4 in. (6 mm) in 10 ft. (3 m) (non cum.)	Attribute	ICPI recommendation
Lapage at catch basins/drains	1/4 in. to 1/2 in. (3 to 10 mm) (see ADA)	Base thickness variation	+ 3/4 in. to -1/2 in. (+20 mm to -13 mm)
Lapage between individual pavers maximum 1/4 in. (2 mm) for pedestrian access routes		Compaction	min. 98% standard Proctor
Attribute	ICPI recommendation	Over-excavation (dense graded bases)	greater of 6 in. (150 mm) or equal to base thickness as needed
Paver aspect ratio (H length divided by thickness)	max. 4:1 for pedestrian & driveways max. 3:1 for street/parking	Geotextile	
Joint fill depth	max. to 1/2 in. (13 mm) measured from top of pavement	Minimum base thickness	
Board lines	± 1/2 in. (13 mm) max. over 50 ft. (16 m)	Sidewalks, patios, pedestrian	6 in. (150 mm)
Slope for drainage	min. 2%	Residential driveways	8 in. (200 mm)
Cut pavers	No less than 1/4 in. for vehicular application No less than 1/8 in. (3 mm) for all other applications	Edge restraint/curb edge	
Paver laying pattern	Acceptable for application	Attribute	ICPI recommendation
Minimum paver thickness	3-1/2 in. (8 cm) for street/parking 2-1/2 in. (6 cm) for pedestrian & driveways	No movement	firmly in place
Bedding layer thickness	1 in. (25 mm) nominal	Proper restraint	acceptable for application
Joint sand gradation	ASTM C144 or C33		
Bedding sand gradation	ASTM A23.1 F43 or CSA A179 ASTM C33 or CSA A23.1 F43		

9.) *Will you need shade?*

Depending on where your patio will be located relative to your house, you may want to consider a shade structure. Especially if your patio is on the south or west side of your house and there is not shade from trees or buildings, you should perhaps consider something for shade. The afternoon and late day sun is going to be very intense and may keep you from enjoying your patio during the summer months. The most popular structure is a pergola or arbor, which are typically constructed from cedar lumber, which is beautiful and is naturally rot-resistant. Pergolas or arbors can also be constructed from other types of lumber, or vinyl if you are looking for a no-maintenance solution. Pergolas can provide more or less shade based on the size and spacing of the slats on the top of the structure.



There are other options such as a pavilion, which has an actual roof, and is more “all weather” than a pergola, or sail-cloth, which is a colorful and unique way to provide some shade. We generally recommend staying away from pop up canopies or other “aftermarket” pieces as your primary shade source because they are usually light-duty, a hassle to put up and down, or do not provide enough shade for a larger group.


10.) *Should you include any seat walls?*

Seat walls are very popular, and if placed properly, are usable to expand seating capacity. They are great for defining spaces, give the patio dimension, and are a fun place to take pictures! Be sure to provide openings that are big enough and properly placed to provide good flow between different areas of the patio or lawn. Also, if building a fire pit with seat walls around it, leave enough space for chairs between the wall and pit so you have seating choices!



11.) *What are you looking to spend?*

Uh-oh! Now we are getting personal. I always discuss money at the first appointment. Some people totally understand and are prepared to discuss, and some get squirrely on me. A lot of people don't have a lot of context and they don't know what a reasonable investment is. I totally understand that, and in that case, I will provide a possible ballpark range (giving the disclaimer that it's usually a "dirty" number just based on some similar projects that come to mind). That way, before someone throws out a number, they know if it's totally out of line or not. But no matter what, it's my goal to leave the meeting with an idea of what my client wants *and* at least a general idea of what they are wanting to spend.

 (740) 389-6214 (614) 888-5285 www.proscape-services.com	<i>BUDGET STUDY</i>	Client: John Smith 1234 Anywhere Dr. Marion, OH 43302 Date: 12/30/15
Paver Patio	Possible Range Of Costs	
Two landings and paver patio (including removal of deck & concrete)	\$14000	\$16000
Water Feature	Possible Range Of Costs	
Ranges from cored boulder to built-in color falls (pictured in render)	\$2500	\$5000
Planter Box & Walls & Columns	Possible Range Of Costs	
Raised planter box and seat walls. Higher end also includes planting in planter and around wall	\$5000	\$6500
Lighting	Possible Range Of Costs	
Includes transformer & hardscape lights. Higher end includes lighting in landscape beds	\$1200	\$3000
Planting	Possible Range Of Costs	
Planting for screening in yard (including removal of existing)	\$4000	\$5000
Stepper Path	Possible Range Of Costs	
From patio to driveway cut down into grass	\$1500	\$2000

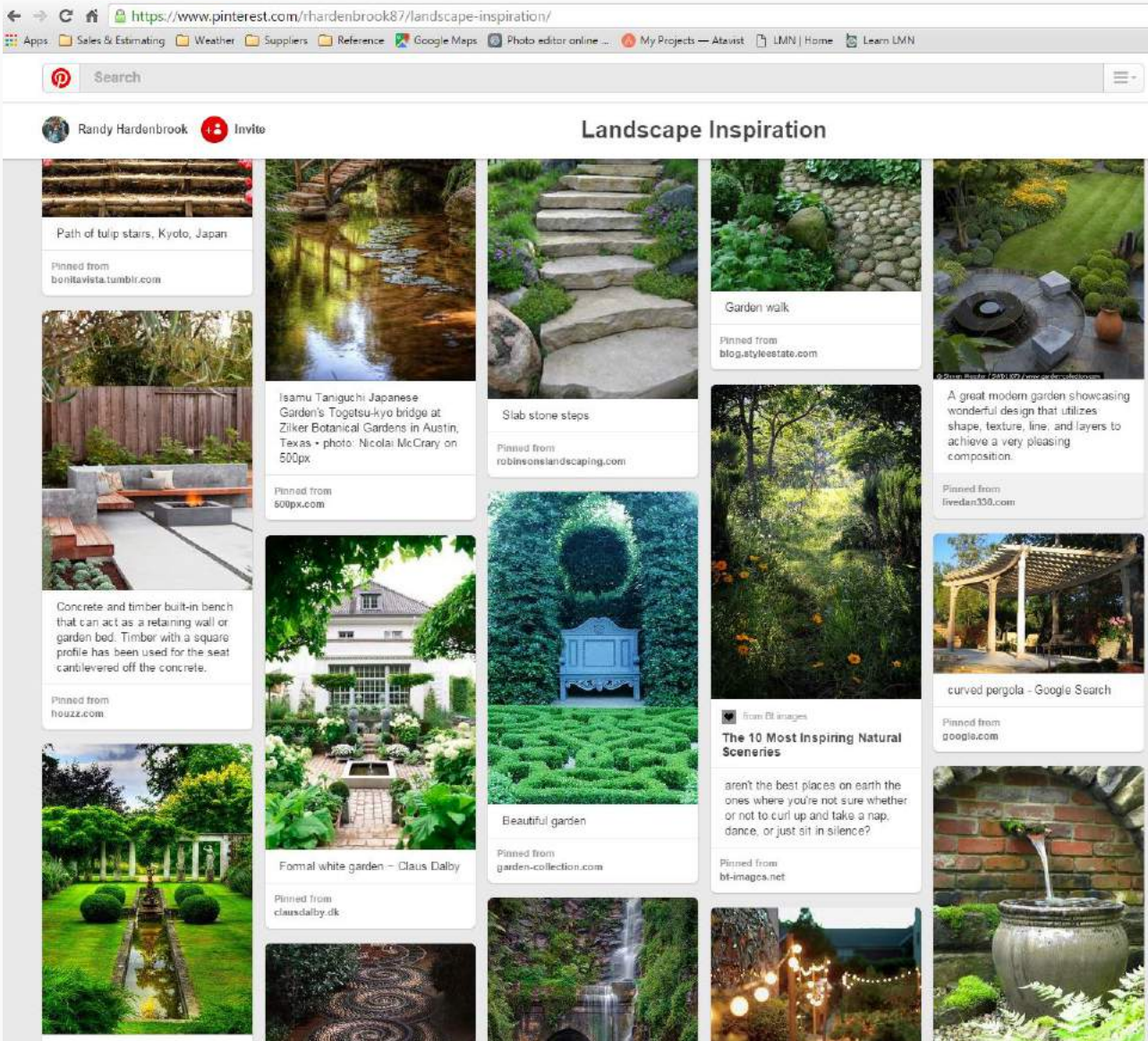
Believe me, I understand that this is a fluid situation in many cases. It can be affected by competing projects, financing, and frankly, what you are getting for the money. Would you spend \$50k if we came up with something a lot cooler and more functional than what you were initially thinking? Perhaps. Maybe we need to focus on keeping the project as basic as possible to maximize square footage for \$15k in another situation. It's really different in each case, and we need to be shooting at the same targets.

I totally understand that some people have had bad experiences in the past or might be guarded about talking money. However, through the years before I started having more productive money discussions, we designed a lot patios that were two or three times more than what someone wanted to spend because we included everything they said they wanted...except they didn't have any idea what it would cost. Unfortunately that wasted time and led to some frustration for all parties. Sometimes people say "give us your best price", which we do, but our best price (or heck, our direct cost) might still be a lot more than

what they are willing or able to spend. A quality contractor who you feel comfortable with is going to be a partner that helps guide you through this complex process and shouldn't be viewed as an adversary.

BONUS TIP: Find some inspirational pictures that capture your vision for the space or include a specific feature that you like.

These days, before meeting with me, most people have seen friends' patios and/or looked at pictures on Pinterest or other websites. From a design standpoint, it's really helpful for you to provide a handful of pictures and indicate the specific things you do or don't like about them.



A properly designed and constructed outdoor living area can bring you many years of good times and memories, and can be a great investment too. Recent studies tell us resale value is in the 90-110% range! We have built a lot of really cool living areas and our clients tell us that they love using them. Hopefully this e-book has helped you gain a better understanding of what to consider prior to building a paver patio. All these questions need to be answered, and one must realize that the process sometimes require you to revisit certain questions after another question contradicts it. If we can be of further help or if you have feedback about this book, I'd love to hear from you. My email is luke@proscape-services.com. Enjoy your new space!