

ASSOCIATION OF PROFESSIONAL LANDSCAPE DESIGNERS

the designer

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Marking Time

NATURE'S PATTERNS

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THE VALUE OF  OF
3D
Modelling

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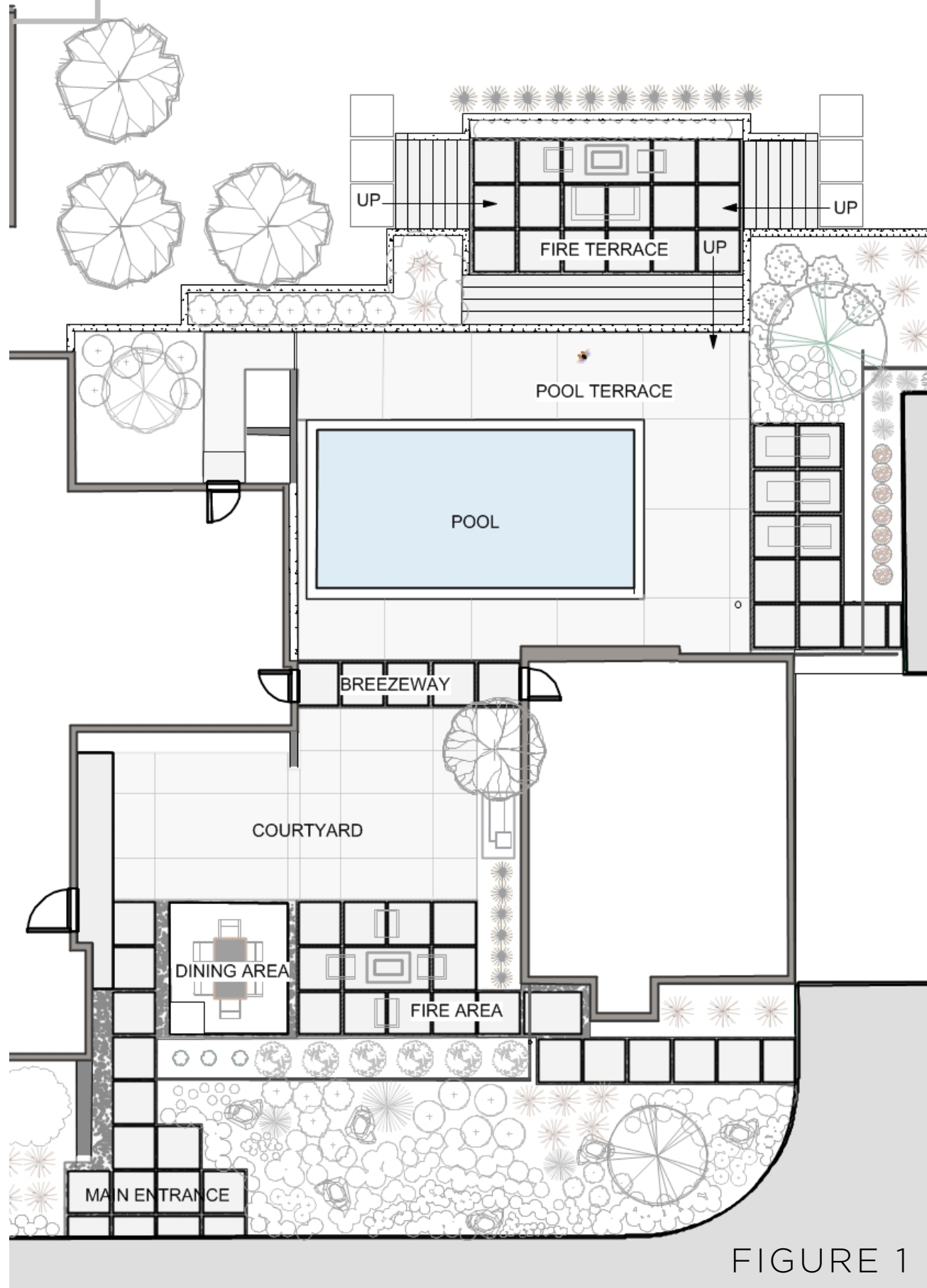


FIGURE 1



As landscape design professionals, our business depends on creating landscape plans that look good, get clients excited about the space, and show enough detail for both clients and builders to visualize the final product. Although we may be skilled in creating 2D representations of our design concepts complete with texture, color, and line distinctions, most of us stop there. Yet once our firm began using 3D modeling, it allowed us to bring a higher value to our design clients and increase our profit margin by:

- Improving our design skills, as the creation of a 3D model forces a designer to thoroughly evaluate the spatial relationships between landscape areas.
- Helping our clients to visualize themselves in the space we've created, which in turn sells the project installation.
- Allowing us to spot construction problems before they arise.

Getting started is easier than you might think. With a learning curve similar to the conversion from hand drafting to CAD-based design, you can learn the skills needed to create 3D models of your landscape plans. Programs like Vectorworks Landmark, my professional choice, and Google SketchUp have integrated tools for professionals to produce 3D models from their 2D landscape plans. The following case studies show how powerful integrated 2D and 3D landscape plan formation can be.

3D modeling can help refine many of the questions that arise during a landscape design project, including:

- How will steps integrate with a patio wall?
- How will the architecture influence the perceived space?
- How will furniture placed in the space affect the flow pattern dynamics?
- How will an alternate walkway configuration change the space for better or worse?

Project One

DESIGN GOAL: Create intimate interconnected spaces throughout the site that balanced the modern architecture of the home with the native landscape around it.


◀ The 2D design (Figure 1) shows an entrance courtyard aligned with the main entrance to the home and leads past a pool terrace to a series of terraced outdoor steps. While it is easy to see that these spaces are interconnected, the 2D rendering  does not convey how the architectural style of the home will affect the space ➡



FIGURE 2

dynamics, nor does it show how the terraced steps will create a visual connection to the native ground level.

▲ Multiple camera angles of the 3D landscape model (Figure 2) allow us to instantly grasp how these spaces will be perceived in the constructed landscape, as if we were actually standing in the space. More importantly, in the 3D model we feel the impact of the home's architecture on the spaces being designed. During the design process, the 3D model allowed us to easily visualize the impact of several different design configurations. In this project, by defining the landscape spaces prior to construction work, the 3D model sold the installation contract and streamlined construction. Images of the installed project (Figure 3) ▲ demonstrate how accurately the 3D models represent the finished site.



FIGURE 3

Project Two

DESIGN GOAL: Create outdoor destinations that integrate seamlessly with the existing deck and site grade.

► At the rear of the home you see the development of a patio space with an intimate seating and fire pit area (Figure 4). The presence of steps makes it clear there is a grade change, however, the 2D plan does not allow for a full appreciation of the weight of the existing upper deck, which directly impacts the designed spaces.

▼ The preliminary 3D model (Figure 5) helped us to understand in better detail how the existing deck could be used to define the edge of the transitional space between the intimate seating area and the fire pit area. For this project 3D modeling of the site was crucial to a smooth installation, as it allowed the successful integration of existing elements in a tight space with little margin for error. Traditionally, we would have been fine-tuning in the field during construction and watching our profit margin disappear. ➡➡

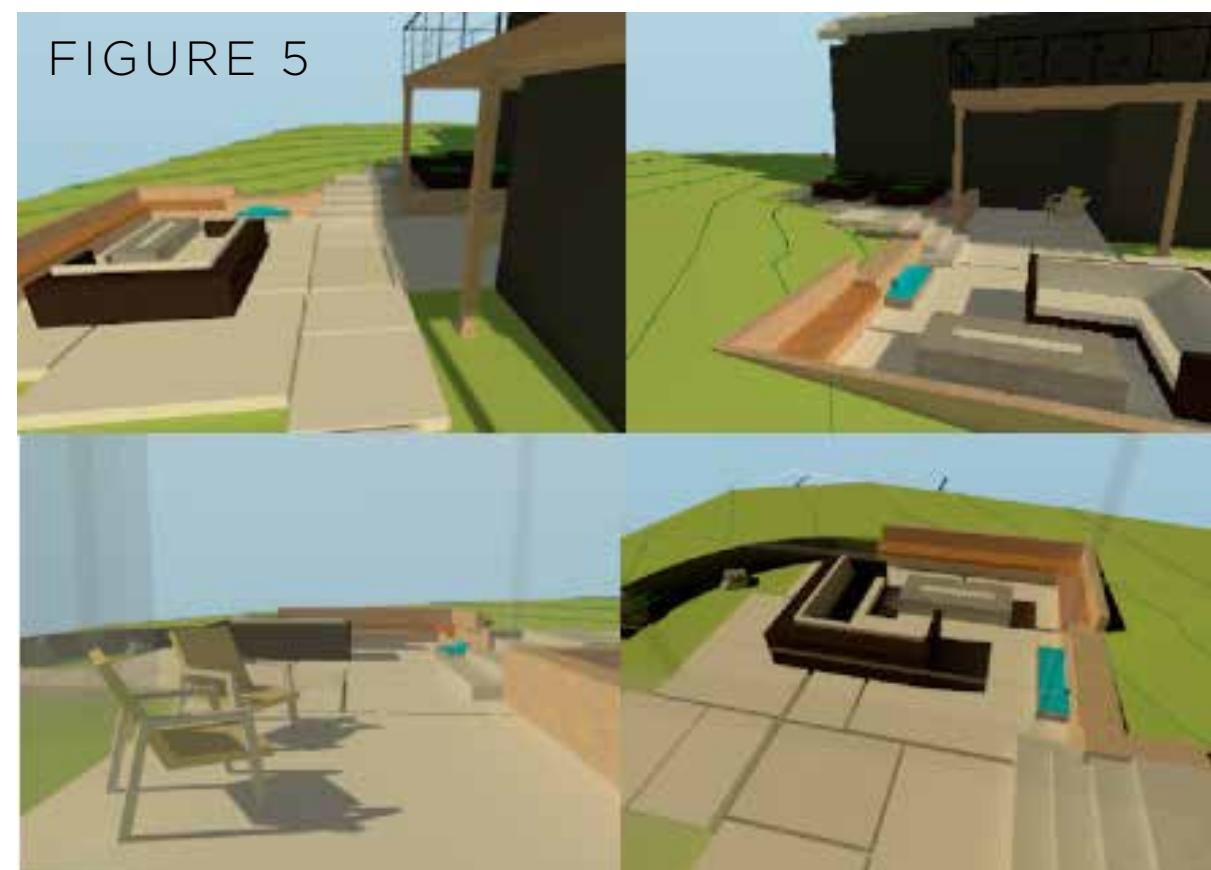
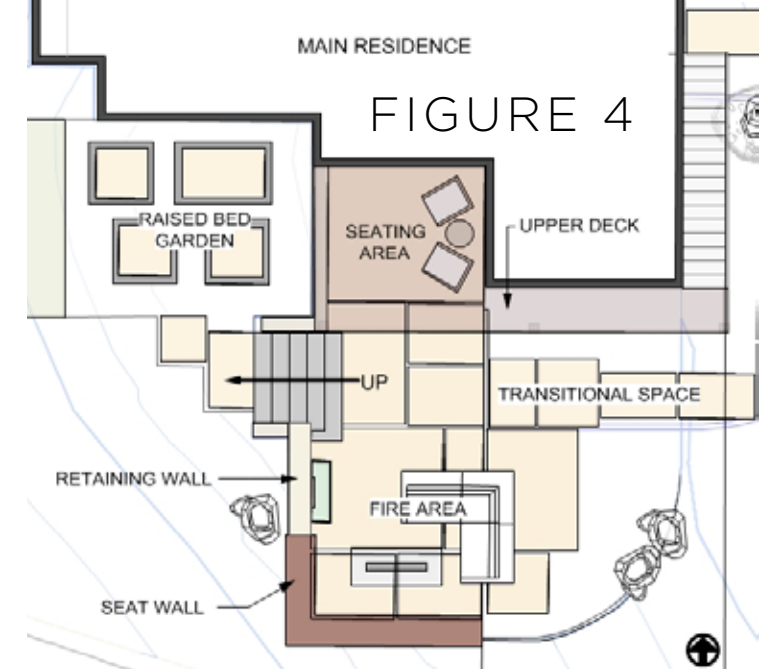


FIGURE 5

Improved Communication & Construction

In our practice, 3D modeling doesn't replace 2D design, but rather enhances it. It is especially helpful in explaining the relationship of a newly designed space to existing structures. For a project that included a central courtyard with seating sandwiched between two buildings, ▼ we placed the 2D landscape plan (Figure 6) and 3D model (Figure 7) ►

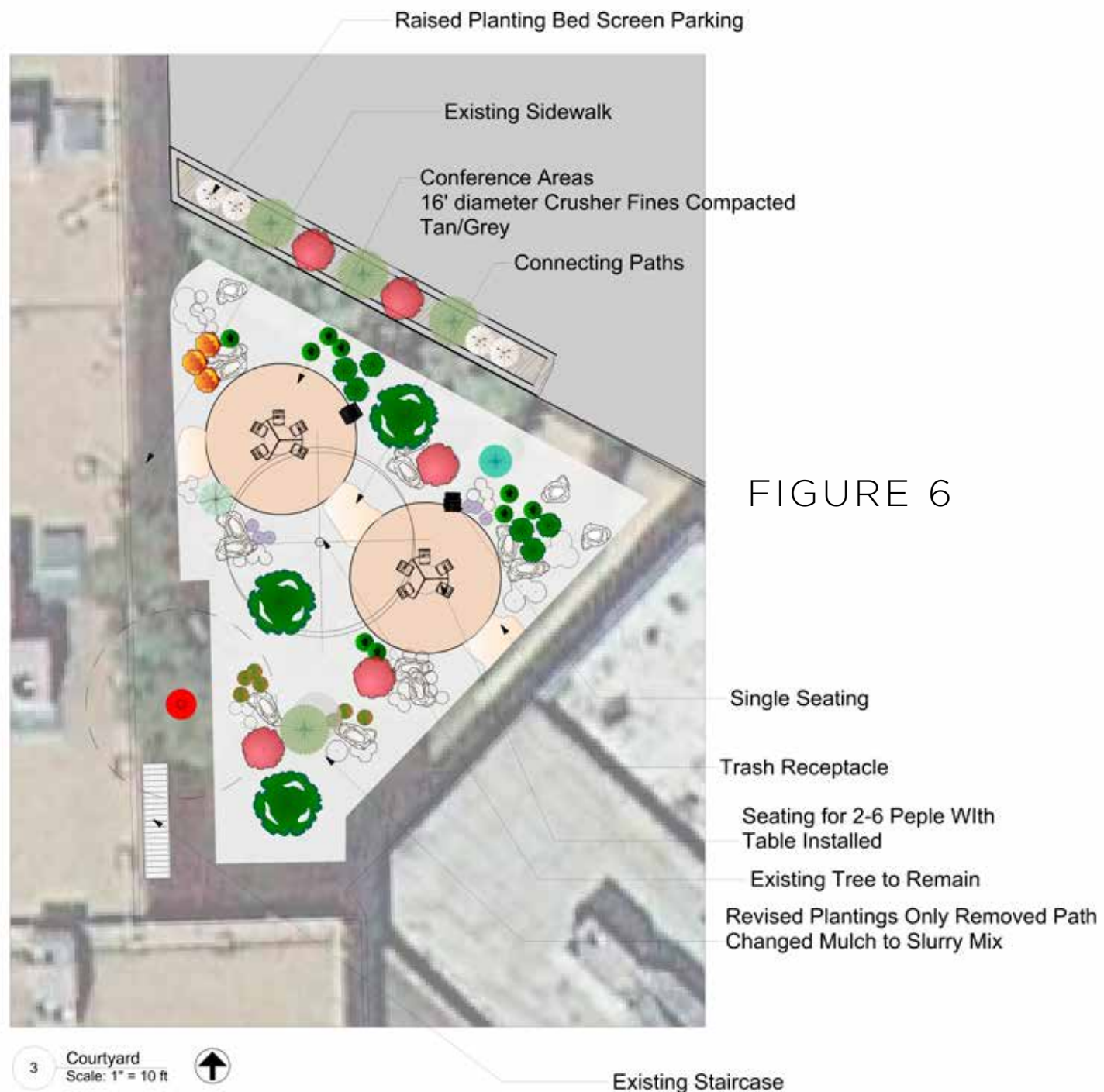


FIGURE 6



FIGURE 7

side by side during our client presentation. This helped the client understand how existing buildings would impact the new space. The 3D model allowed us to explore these dynamics prior to creating a contract for installation; it sold the project, simplified construction, and increased the design value.

There are many programs out there that allow you to integrate 3D models into your design process. I prefer Vectorworks Landmark because of the flexibility it provides in presenting 3D models and because both the 2D and 3D environments are created at the same time. Regardless of the program you use, incorporating 3D models into your design process will improve the value of the finished product by improving your spatial design skills, streamlining your construction, and increasing your profit margin.

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