

GENERAL SUSTAINABILITY DESIGN GUIDELINES

+PLEASE NOTE: OUR PREFERRED SITE PLANNERS ARE CAPABLE OF ASSISTING WITH GUIDING YOU IN SUSTAINABILITY OR ENERGY CONSUMPTION STRATEGIES. THEY ARE ALSO CAPABLE OF CREATING A HIGH-PERFORMANCE SITE PLAN. ADDITIONAL FEES MAY APPLY DEPENDING ON SCOPE OF WORK.

1. THE ENVIRONMENTAL PERFORMANCE OF SMALL STRUCTURES SUCH AS ACCESSORY DWELLING UNITS ARE HIGHLY DEPENDENT ON A FEW SIMPLE DESIGN CHOICES THAT GREATLY IMPROVE GENERAL ENERGY CONSUMPTION AND COSTS OVER THE LIFETIME OF THE STRUCTURE.

2. ENVIRONMENTAL FACTORS THAT AFFECT ENERGY AND UTILITY BILLS IN SOUTHERN ARIZONA ARE:

- A. SOLAR ACCESS IN WINTER & SHADE IN SUMMER**
- B. ON-SITE RAINWATER HARVESTING**
- C. ON-SITE GRAYWATER SYSTEM**

3. COOLING COSTS IN WARMER MONTHS ARE MINIMIZED DUE TO A FEW SIMPLE DESIGN CHOICES:

- A. ORIENT THE BUILDING SO THAT THE LONG ELEVATIONS ARE FACING NORTH AND SOUTH, AND THE SHORT ELEVATIONS ARE FACING EAST AND WEST.**
- B. SHADE THE EAST AND WEST ELEVATIONS OF THE BUILDING WITH TALL TREES AND/OR TRELLISES.**
- C. SHADE THE SOUTH ELEVATION OF THE BUILDING WITH AN OVERHANG, PORCH, SHADE SAIL, OR OTHER OVERHEAD SHADING DEVICE DESIGNED TO MAXIMIZE SHADING DURING THE HOT SUMMER MONTHS, AND TO ALLOW FOR DIRECT SOLAR ACCESS DURING THE COLD WINTER MONTHS.**

4. HEATING COSTS IN THE WINTER ARE MINIMIZED DUE TO A FEW SIMPLE DESIGN CHOICES:

- A. ALLOW SUNLIGHT TO ENTER SOUTH-FACING WINDOWS BY KEEPING OVERHEAD SHADING DEVICES WITHIN 6' OF THE BUILDING ELEVATION OR REMOVING SHADING DEVICE(S) IN WINTER.**
- B. PLANT TREES TO SOUTHEAST AND SOUTHWEST OF STRUCTURE, BUT NOT DIRECTLY SOUTH, AS THIS WILL PREVENT SUNLIGHT FROM HEATING STRUCTURE IN WINTER, AND PREVENT SOLAR PANELS FROM CAPTURING MAXIMUM SUNLIGHT.**
- C. SPECIFY TREES THAT LOSE THEIR LEAVES IN THE WINTER AND ALLOW SUNLIGHT AND WARMTH TO ENTER THE HOME.**

5. MECHANICAL COOLING AND HEATING COSTS CAN BE FURTHER DIMINISHED BY CHOOSING ENERGY-EFFICIENT MINI-SPLITS/HEAT PUMPS, AND USING DUAL PANE LOW-E WINDOWS ON ALL NORTH, SOUTH, WEST, AND EAST FACADES.

6. SITE PLAN DESIGN IS NOT INCLUDED IN THE ADU MODEL BUILDING PLANS. SITE PLAN DESIGN,

INCLUDING VEGETATION AND WATER MANAGEMENT, ARE CRITICAL TO A HIGH-PERFORMING AND LOW-CONSUMPTION STRUCTURE.

- **OBSERVE THE EXISTING PRIMARY STRUCTURE ON THE SITE TO PROVIDE MUCH OF THE INFORMATION NEEDED TO PLAN A HIGH- PERFORMING SITE DESIGN FOR THE ACCESSORY DWELLING UNIT. TAKE NOTE OF AREAS OF SHADE, VEGETATION, EXCESSIVE HEAT, EXCESSIVE COOL, WATER POOLING, WATER DRAINING, SOLAR EXPOSURE, ETC. OBSERVE WHAT WORKS WELL AND NOT SO WELL THAT CONTRIBUTE TO A NICE AND ACCOMMODATING OUTDOOR ENVIRONMENT, AND OBSERVE HOW SUN AND SHADE AFFECT INTERIOR ENVIRONMENTS**
- **IF YOU NEED FURTHER ASSISTANCE TO DRAW A SITE PLAN, [PLEASE CONTACT THE URBAN INFILL PROJECT](#). AN ADDITIONAL FEE APPLIES.**

HIGH-PERFORMANCE SITE PLAN RESOURCES FOR BUILDING SITES IN SOUTHERN ARIZONA

- [WATERSHED MANAGEMENT GROUP](#)
- [SONORAN INSTITUTE](#)
- [RAINWATER HARVESTING FOR DRYLANDS & BEYOND](#)
- [DUNBAR/SPRING NEIGHBORHOOD FORESTERS](#)

DROUGHT-TOLERANT AND NATIVE VEGETATION SPECIES THRIVE IN SOUTHERN ARIZONA'S HEAT, SUN, AND WATER CONDITIONS. RESOURCES FOR NATIVE PLANT PURCHASE AND DESIGN CAN BE FOUND THROUGHOUT TUCSON AND ONLINE, INCLUDING:

- [TUCSON CLEAN AND BEAUTIFUL'S TREES FOR TUCSON INITIATIVE](#)
- [DESERT SURVIVORS](#)
- [SPADEFoot NURSERY](#)