

**Volunteer**

**Professional!**

**Volunteer + Professional**

# Gravel Garden

Image Source: Leonard G., "Living roof of the California Academy of Science, Golden Gate Park." 30 October 2008 via Wikimedia, public domain.



# HELLO

MY NAME IS

## Gravel Garden

**The Gravel Garden embraces the poor, rocky soils of commercial lots in Detroit by taking the green roof aesthetic of colorful succulents and bringing it down to street level. On the ground, these plants can provide similar stormwater benefits while being visible to all.**

**Sedum are tolerant of extreme heat, cold, and drought. These tough and colorful plants thrive in low-nutrient environments and provide a bright mix of colors and textures. This lot design will encourage the succulents to grow in habitats similar to but distinct from a green roof.**

**For more information refer to [DFC-lots.com](https://dfc-lots.com)**

### What is the lot design likely to cost?

The estimated cost of the Gravel Garden is high (\$2,500 – \$5,500) and based on utilizing volunteer labor and sedum sod mats. To save money, you can reduce the number of mats; however, it will take longer for the mats to establish and a smaller number of mats may not have the desired visual impact. The cost assumes that residents or volunteers have access basic safety gear and garden tools.

### How much upkeep will this lot design require?

The maintenance of this lot design is low and is minimal once established. Water sedum sod mats extensively, at least four times per week during the first four weeks of installation to help mats establish in their new environment.

### Will the installation of this lot design require a professional?

The installation of this lot design should not require professional assistance if you, with the help and support of friends, family, or neighbors, would like to construct this lot design. Please refer to the Step-By-Step section for guidance. If you do not have the required support or feel unable to tackle this lot design, please seek professional assistance.

### How long will it take to install this lot design?

While people tackle projects in different ways and at different speeds, the Field Guide estimates installation time of this lot design to be one full weekend with the help of at least three healthy adults or youth. The Field Guide assumes that the lot is 'construction ready,' and all equipment and materials required for lot design have been acquired and are ready to use.

Cost	\$50 - 1,000	\$1,000 - 2,500	<b>\$2,500 - 5,500</b>	\$5,500 +
People	<b>Volunteer</b>	Professional	Volunteer + Professional	
Experience	Beginner	<b>Intermediate</b>	Advanced	
Upkeep	<b>Low</b>	Medium	High	
Stormwater	Good	<b>Better</b>	Best	
Location	<b>Commercial Lot in Full Sun or Part Sun</b>			

# Gravel Garden

## Examples of Sedum Groundcovers



1 - Sedum Planting

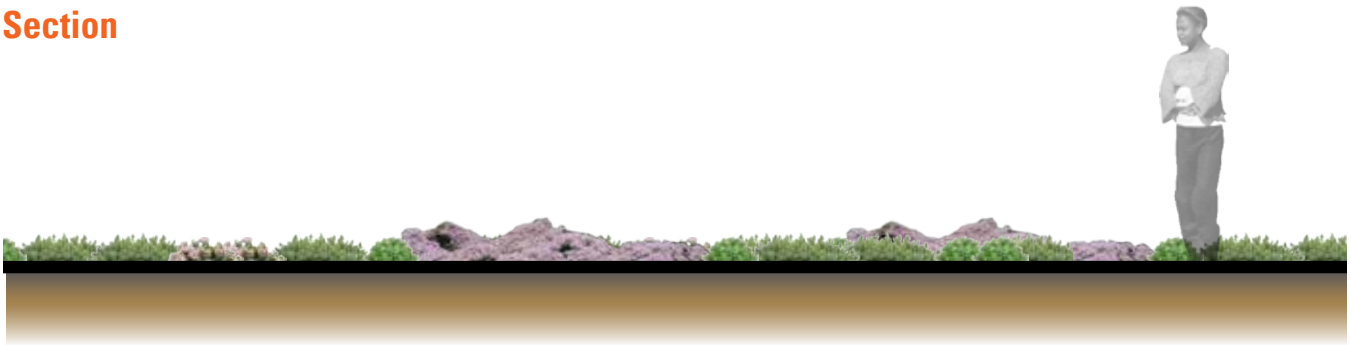


2 - Mixed Sedum Groundcover



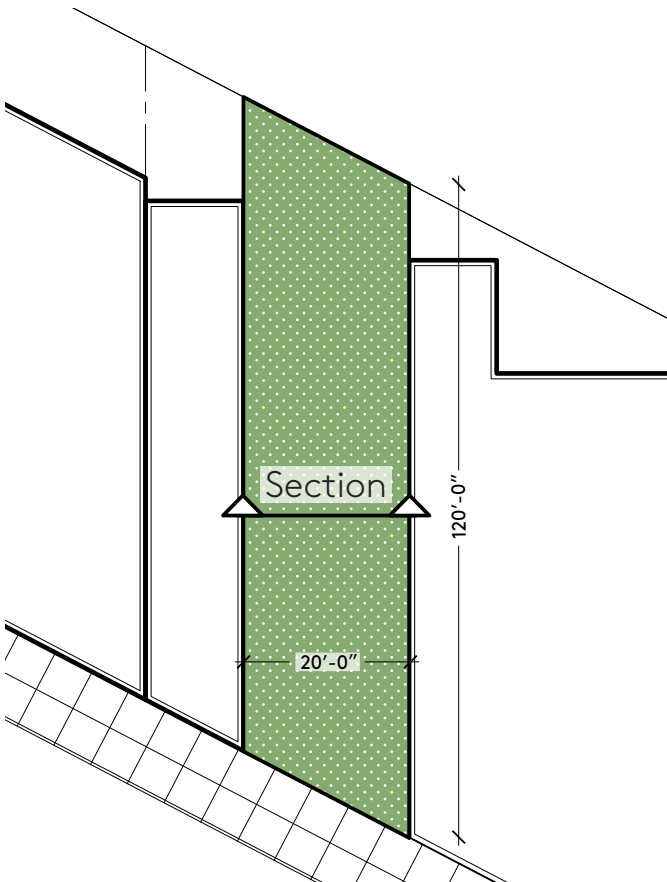
3 - Sedum on Roof

## Section



Sedum Groundcover

## Where Do I Grow?



The Gravel Garden can be constructed on single or multiple lots. This design is ideal for commercial lots, properties with little to no activity, and properties that are visible from roads, such as corner lots.



Sedum Groundcover

Image Source: 1) Lambert, Rotherstien & Associates, "DSC\_0401." Used with permission 2) Ryan Somma, "an example of a green roof project." 20 November 2011 via Wikimedia, CC BY-SA 2.0; 3) Lambert, Rotherstien & Associates, "roof\_porn." Used with permission

## Before You Start

### 'Construction Ready'

This lot design assumes that you have prepared the lot to a 'construction ready' state.

'Construction Ready' refers to a lot that is clean and clear of trash, hazardous objects, unwanted trees, brush and vegetation, fences, and other unwanted structures.

It may be necessary to remove grass in preparation for your lot design. Refer to the Remove Your Grass box located on the right hand side of this page for more information.

Is there an available water source near your lot? Consider how and where you will access water during and after construction to ensure that your plants can establish.

If your lot is not ready for construction, refer to the [Clean + Green](#) lot design.

You can find the lot design at [DFC-lots.com](http://DFC-lots.com).

### Call Before You Dig

Locate underground utilities before beginning your lot design. MISS DIG provides a free service to Michigan residents by locating and marking utilities on requested properties. Call (800) 482-7171 or 811 at least three days before you plan to start digging on your lot.

### Test Your Soil

Harmful pollutants have made their way into many urban soils. To proceed with awareness, consider having your soil tested before construction. Two great options are available:

Soil testing is free to members of Keep Growing Detroit's Garden Resource Program. Call (313) 757-2635 for more information or visit [detroitagriculture.net](http://detroitagriculture.net).

If you are not yet a member, you can work directly with Michigan State University's (MSU) Extension Program. They have a Home Lawn and Garden Soil Test Mailer for \$25. For more information call (888) 678-3464 or visit [msusoiltest.com](http://msusoiltest.com).

If you are concerned about the presence of lead or other contaminants in your soil, call the Michigan Department of Health and Human Services at (866) 691-5323 or (800) 424-LEAD.

### Remove Your Grass

Need to remove grass in areas where you are constructing your lot design?

There are many ways to remove unwanted grass. The first is to remove the grass and its root system by digging up the grass. Another option is to cover your lot with cardboard or a plastic tarp to smother your grass in darkness. It will take several weeks, but after being covered, the dead grass will be easier to remove.

### Till Safely

Before you till, inspect your lot for signs of buried concrete or rubble that was not removed during the cleanup stage. Large debris can ruin tiller blades.

When tilling, wear appropriate safety gear, such as covered boots with socks, long pants, safety glasses, dust mask, and ear protection. Make sure you understand the safe operating procedures of your tiller. Refer to the user's manual.

## What You Need: Shopping List

### Shopping List

The shopping list provides a breakdown of potential materials, tools and resources required to construct this lot design.

**This shopping list is designed for a commercial lot (20 by 120 feet).**

### Tools + Resources

#### Suggested Tools

- **Marking Paint and Tape Measure**
- **Safety Gear:** Gloves, heavy work boots, tall socks, pants, long sleeve shirts, dust masks, protective eye wear, ear plugs, and hard hats (if using heavy machinery)
- **Garden Tools:** Spades, shovels, rakes, trash bags, and wheelbarrows

#### Potential Water Sources

- Garden Hose with potential extension hose
- Sprinkler
- Rain Barrel in addition to other water source

#### Field Guide Resources

Resources are available on the Field Guide's web site.

- **Clean + Green**

### Materials List

#### Materials

- **Sedum Sod Mats**, 300 (10 by 20 inch) mats

## Gravel Garden Step-By-Step

### Let's Start

**Want to create the Gravel Garden but don't want to hire a professional? Here are a few guiding principles to help you construct your lot design.**

Check off tasks as you go along.

### Lot Design Steps

#### Volunteer Opportunities:

- Prepare Your Lot
- Select Sedum Sod Mats
- Install Sedum Sod Mats
- Maintain Your Lot Design

### Prepare Your Lot

Select the best location for your Gravel Garden. Use marking paint and a tape measure to map out the size, shape, and dimensions of your design. The Field Guide recommends using a full 20 by 120 foot lot.

This design is suitable for lots with poor or gravel soils. The soil quality on commercial lots varies greatly in Detroit. For lots with minimal vegetation, remove weeds by hand. If the lot is covered with healthy grass or a significant amount of vegetation, you may want to consider a different lot design or select an option from Remove Your Grass on page 4.

Although sedum do not require much in the way of soil, they do need surfaces and crevices into which their roots can grow. Soil should be prepared for planting by scarifying or raking to loosen any compaction, allowing for easier plant growth and better water infiltration.

### Select Sedum Sod Mats

For instant impact and easy installation, the Field Guide encourages you to consider covering your lot with pre-grown sedum sod mats.

A sedum sod mat is pre-grown with a mix of sedum plants and soil, covered at the bottom with jute or another porous fiber.

There are multiple suppliers of sedum sod mats suitable for the Gravel Garden. One such Michigan-based supplier is LiveRoof. LiveRoof offers two pre-grown sedum sod mats, Greenfast Mix or Lemon Zest Mix, which the Field Guide recommends for groundcover.

**To manage costs, the Field Guide recommends buying 300 sedum sod mats (Greenfast Mix or Lemon Zest Mix), allowing for 420 square feet of coverage on your 2,400 square foot lot.**

## Gravel Garden Step-By-Step

### ○ Install Sedum Sod Mats

Sedum sod mats are typically ten inches by 20 inches in size. Cut mats in half to create a total of 600 mats, resulting in ten inch squares. Space mats evenly across the site with 14 inches between mats. **This will create a grid 10 squares wide by 60 squares long.** Cutting mats in half and covering your lot evenly will allow sedum to grow together over time, reducing cost. If you are willing to spend more, you can purchase more mats, and your lot will be covered more quickly.

Press mats firmly into the ground, making sure the bottom of the mat touches the ground. Water extensively during the first weeks, and continue to water regularly through the first year.

An alternative to the grid arrangement is to cluster mats in areas of your choosing, creating full coverage in some areas and little coverage in others. You can also incorporate paths and benches to make the space usable. Do not walk on sedum. Be creative and make the Gravel Garden your own unique design!

### ○ Maintain Your Lot Design

Sedum requires care and maintenance to establish. Water sedum sod mats extensively, at least four times a week during the first four weeks of installation. **The ideal watering detail would include 30 minutes of light irrigation per day for the first month following installation.**

Watering during the first month will help the mats establish in their new environment. Once established, the mats will require little to no maintenance.

### Alternative Sedum Groundcover

Another option for the Gravel Garden lot design installation is to use sedum cuttings instead of sedum sod mats. Using cuttings is a technique for propagating plants by 'cutting' a piece of the stem or root source from an established plant. The cuttings can be scattered across lot to grow. While cuttings are a great option for spreading groundcover, it may be difficult to acquire sedum cuttings for this lot design.

If using cuttings, it is recommended that a professional be hired to hydromulch the entire lot before spreading cuttings. This will provide a nutrient-rich base that sedum can use for establishment. Hydromulch reduces moisture evaporation from the soil, making it easier for cuttings or seeds to grow.



**Visit the Resources page on the Field Guide's web site (DFC-lots.com) to discover other vendors and places to purchase plants.**

### Average Height of Plants



Sedum Groundcover

## Planting Options: Full Sun to Part Sun

### Sedum Sod Mats Species List

Pregrown Sedum Sod Mats (Greenfast Mix or Lemon Zest Mix) are available from LiveRoof and other Michigan companies.

#### 1. Greenfast Mix

*Sedum acre* 'Aureum'

*Sedum album* 'Chloroticum'

*Sedum album* 'Green Ice'

*Sedum sprium* 'Green Mantle'

*Sedum reflexum* Spring Green

*Sedum spurium* 'Album Superbum'

*Sedum spurium* 'John Creech'

*Sedum spurium* 'Pink Jewel'

#### 2. Lemon Zest Mix

*Sedum acre* 'Aureum'

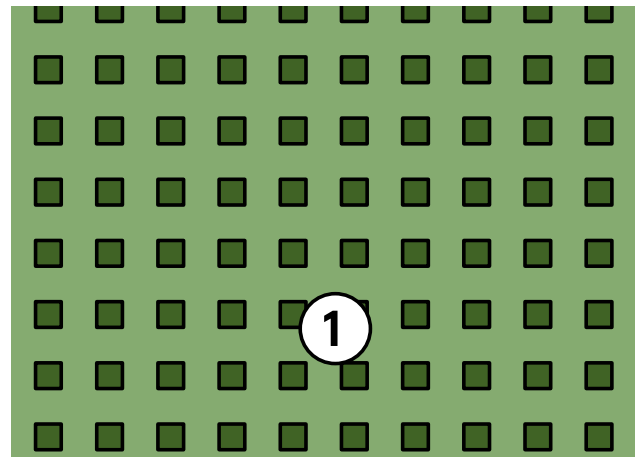
*Sedum album* 'Chloroticum'

*Sedum ellacombianum* 'Variegatum'

*Sedum rupestre* 'Angelina'

*Sedum reflexum* Moonshadow

*Sedum spurium* Moonshine



#### Key



#### Sedum Groundcover

(Space ten inch squares 14 inches apart across entire lot.)

#### Plant Sizes



**Mats:** Plants can be purchased in Sedum Sod Mats. Press into ground by hand.



**Cuttings:** Plants can be purchased in individual cuttings. Spread by hand.



**Seeds:** Some sedums can be purchased in seed form. Spread by hand.



## Did You Know?

### Professionals Can Help!

The Field Guide to Working With Lots provides a Construction Package for each lot design. The Construction Package includes information and details required for a professional to construct this design. On the Field Guide web site, use the [Construction Package](#) link located near the top of this lot design page to download and print. Your selected professional will then be able to provide a cost estimate and schedule based on the condition of your lot and the design you select.

### Want to Hire Locally?

DFC-lots.com has a growing list of Detroit-based professionals and suppliers of landscape materials and services.

Still unsure of where to start?

Call (313) 294-LOTS or email [fieldguide@detroitfuturecity.com](mailto:fieldguide@detroitfuturecity.com) for assistance.

### Helpful Facts

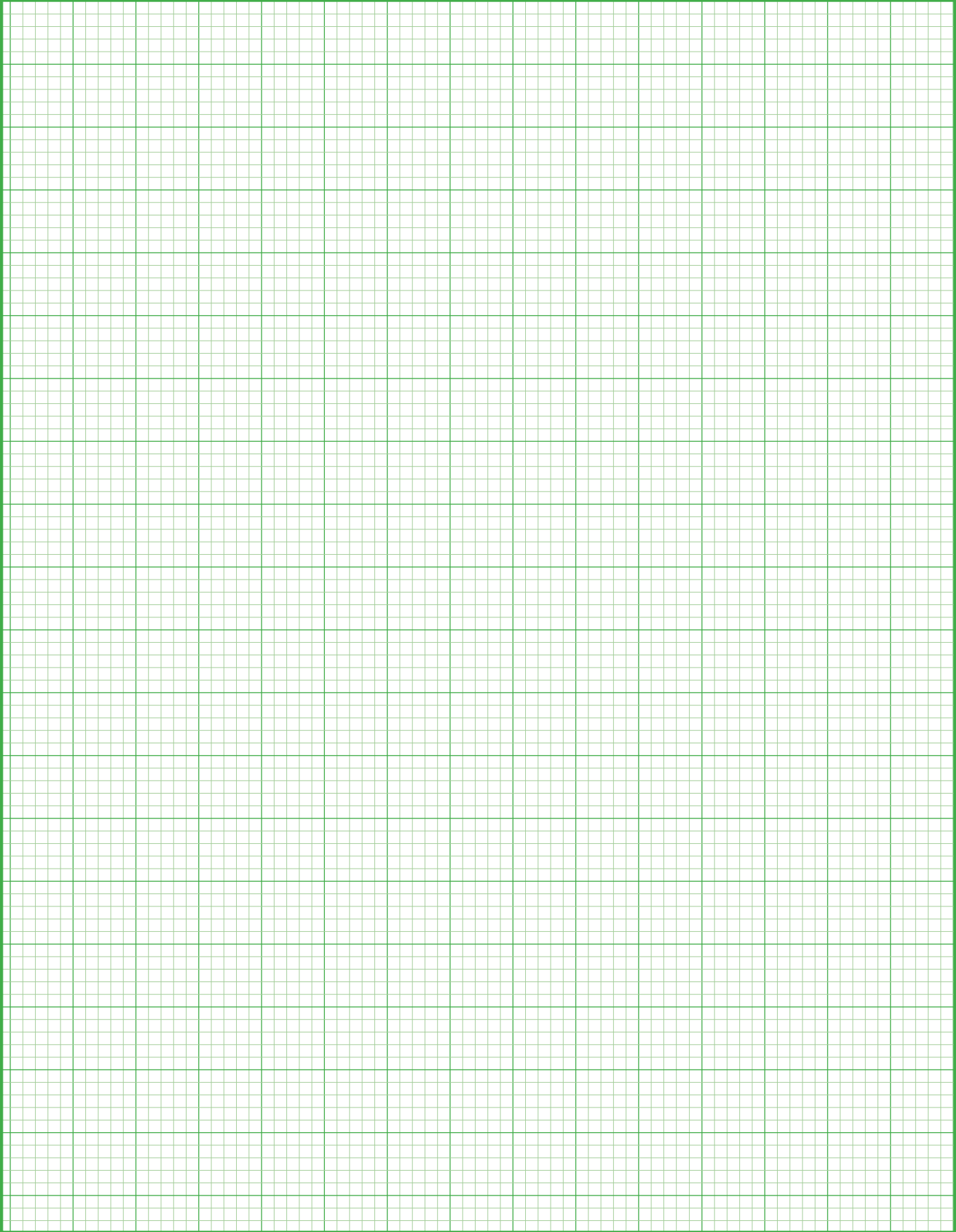
Green roofs have many benefits, some of which can be translated to the ground, including:

- Capturing stormwater and preventing runoff through the soil, the aggregate, and sedum roots and leaves;
- Reducing impermeable surfaces and shielding the ground from absorbing heat from the sun;
- Attracting pollinators, which in turn helps keep other plants healthy.

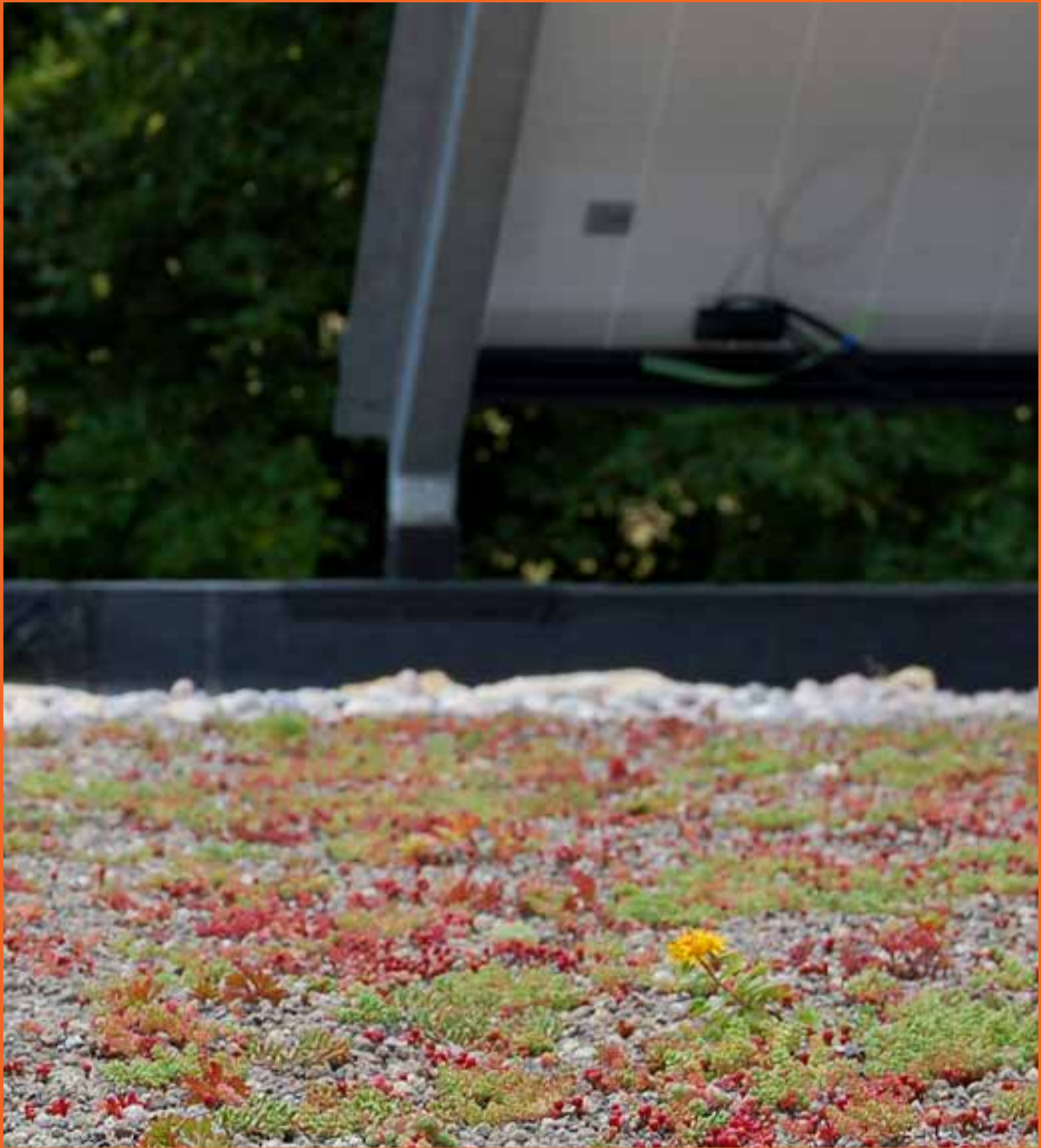
### Planting Tips

- Call ahead to be sure the nursery or garden store has the plants you need for your lot design.
- The best time to plant sedum sod mats is in the spring or fall.
- Do not plant sedum sod mats in extreme heat.
- Press sedum sod mats firmly into the ground. Make sure the bottom of sod mat touches the soil.
- Plan to water extensively during the first three weeks to ensure plants establish.
- Lot may require weeding until sedum covers entire lot.

# Draw Your Lot



## Gravel Garden Field Notes



**DETROIT  
FUTURE  
CITY** | **working  
with lots**  
A FIELD GUIDE

Visit [DFC-lots.com](http://DFC-lots.com)  
**#DFClots**

Image Source: Thingermejig, "Green roof with Sedum plants and solar panels." 02 August 2007, via wikimedia CC-BY-SA-2.0.