

DFC-lots.com #DFCLots



DETROIT
FUTURE
CITY

**working
with lots**

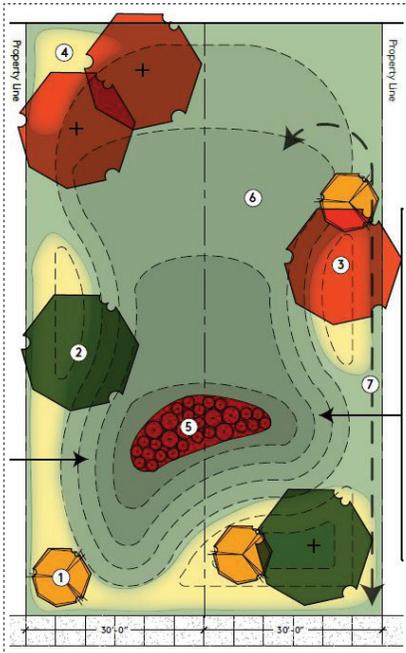
A FIELD GUIDE

DESIGNED + BUILT IN DETROIT — JANUARY 2020

CATEGORY 2: GREEN STORMWATER INFRASTRUCTURE

1 GRANT AWARDED
IN THIS CATEGORY!

ORGANIC BOWL



DETAILS:

- Anticipated installation: Spring 2021, following the planning/permitting process
- You will need to hire a professional engineer and landscape contractor to implement this project
- The landscape contractor should be open to including a workforce development component in the project installation
- The lot design may be customized to suit site variables

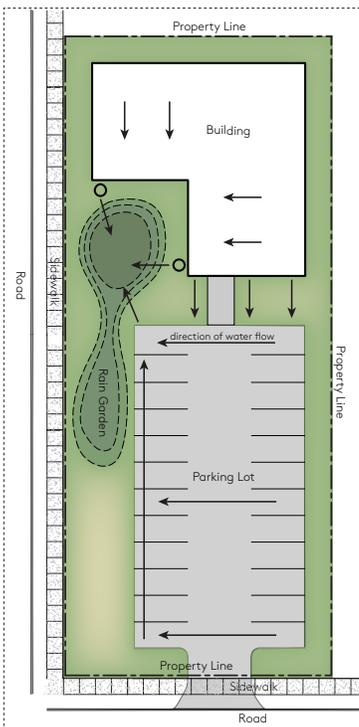
REQUIREMENTS:

- Ability to redirect stormwater runoff from adjacent roof(s) into practice

IDEAL FIT:

- A building that is currently occupied by an operating organization
- Preference for two lots bordered by occupied buildings (or 60' of frontage)

STORM SOAKER



DETAILS:

- Anticipated installation: Fall 2021, following the planning/permitting process
- You will need to hire a professional engineer or landscape architect to implement this project
- The landscape contractor should be open to including a workforce development component in the project installation

REQUIREMENTS:

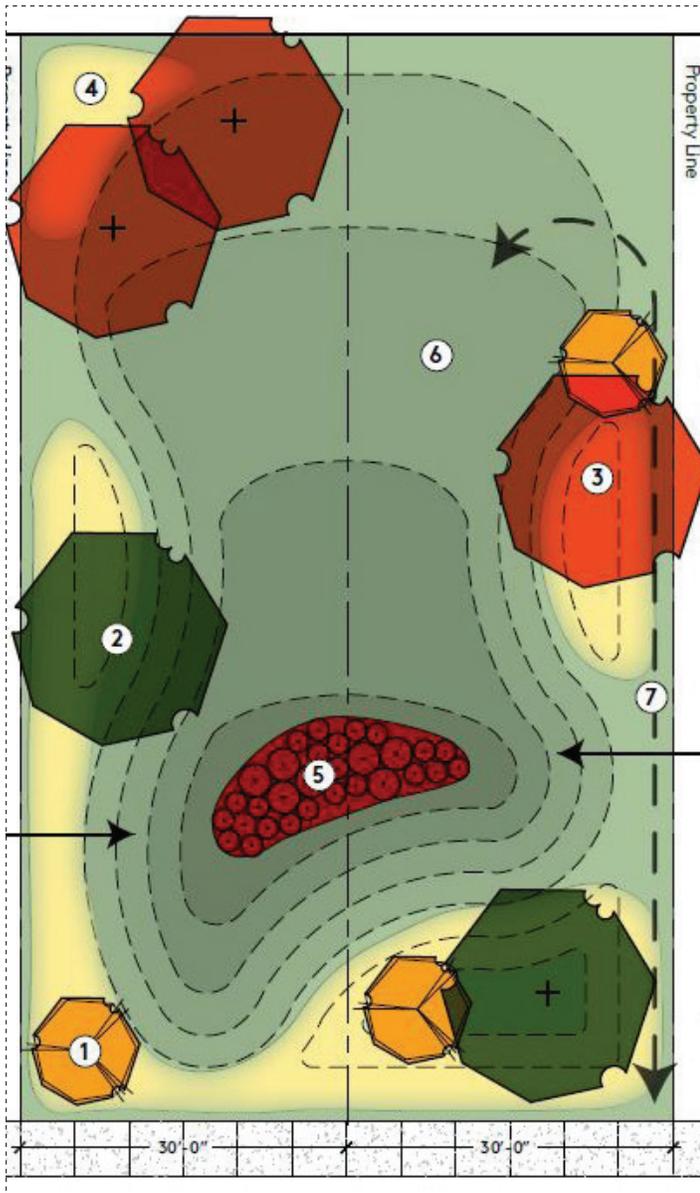
- Site must have the ability to redirect stormwater runoff from an adjacent impervious surface into the stormwater practice

IDEAL FIT:

- A building that is currently occupied by an operating organization
- A project that is aligned with a local neighborhood plan for green stormwater infrastructure
- Ideal for managing runoff from sites with 2,000- 10,000 sqft of building roofs, parking lots, or other impervious surfaces.

D

LOT DESIGN: ORGANIC BOWL



Do you want create a fun and attractive community space while managing stormwater?

GRANT AMOUNT UP TO: \$10,000

The Organic Bowl Lot Design occupies a double lot and is perfect for a neighborhood group that wants a space for community gatherings, picnics, or a place for children to play. The design includes a large open area just below street level, providing separation from traffic, and doubling as green infrastructure.

DETAILS:

- Anticipated installation: Spring 2021
- You will need to hire a professional engineer and landscape contractor to implement this project
- The landscape contractor should be open to including a workforce development component in the project installation
- The lot design may be customized to suit site variables

REQUIREMENTS:

- A non-residential property seeking DWSD drainage fee credit
- Ability to redirect stormwater runoff from adjacent roof(s) into practice

IDEAL FIT:

- A building that is currently occupied by an operating business
- Preference for two lots bordered by occupied buildings (or 60' of frontage)

ADDITIONAL REQUIRED RFP QUESTIONS: ORGANIC BOWL

Please answer in a separate document and upload to Submittable with your proposal (.doc or .pdf file format).

1) Upload a basemap showing the outline of your building, indicating the location of external downspouts (and internal, if applicable), parking lots, additional impervious surfaces, and the property line.

2) Does your building have any internal roof drains? If so, what portion of your roof drains internally? Please show this on your basemap. (Due to costs of rerouting drains, if your building has only internal drainage, your site may not be a good fit for this lot design.)

3) Using the DWSD Parcel Viewer (found on DWSD's Drainage Charge page <https://detroitmi.gov/departments/water-and-sewerage-department/drainage-charge>) indicate your total current acreage and total impervious acreage according to DWSD.

4) If planning fees or construction expenses exceed the grant amount, or if a larger practice could be built with more funds, would you be able to contribute financial resources to the project? If so, up to how much?

5) Have you already participated in consultation with DWSD and/or a site assessment request from DWSD?

6) Have you already consulted with a private engineer or landscape architect regarding a stormwater practice on your site? (No problem if you haven't already)

If you haven't already, all applicants should start the process to request a DWSD site assessment here: <https://app.smartsheet.com/b/form/c4b7f6eb0af548d486eb18425210bcee>

More information is available here: <http://www.detroitmi.gov/drainage>

Volunteer

Professional

Volunteer + Professional

Organic Bowl

Image Source: Vmenkov., "North-Bend-Uplands-Runoff-pond-3942.jpg" 5 May 2007 via Wikimedia CC BY-SA 3.0





The Organic Bowl is your opportunity to create a dynamic recreational amenity in your community! This lot design occupies a double lot and is perfect for a neighborhood group or organization that wants space for community gatherings, picnics, or a place for children to play.

The design includes a large open area just below street level, providing some separation from the adjacent traffic. The low area doubles as green infrastructure with the ability to collect stormwater from any neighboring houses.

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 Organic Bowl is over \$5,500 and based on utilizing volunteer and professional labor. The Field Guide recommends hiring a professional for the earthwork, lot preparation, and installation of the overflow culvert. The overflow culvert requires a permit to connect to the municipal infrastructure. The cost assumes that residents or volunteers have access to basic safety gear and garden tools.

How much upkeep will this lot design require?

This lot design requires a medium level of maintenance to thrive. Maintenance will include weeding and watering plants in the newly planted rain garden, particularly during the first two growing seasons while the plants establish themselves.

Will the installation of this lot design require a professional?

The installation of this lot design will require professional assistance for the first few steps. The Field Guide identifies volunteer opportunities if you, with the help and support of friends, family, or neighbors, would like to complete the planting portion of this lot design. Please refer to the Step-By-Step section for guidance on the recommended professional and volunteer steps. If you do not feel able to tackle the volunteer aspect of this lot design, a professional can construct the entire project.

How long will it take to install this lot design?

This lot design requires a professional for several steps of installation. The projected installation time listed below is only estimated for the volunteer opportunities listed in the Step-By-Step section. While people tackle projects differently, the Field Guide estimates the installation time of the lot design to be one to two full weekends with a volunteer group organized by a knowledgeable lot leader. The Field Guide recommends the help of at least eight healthy adults or youth to complete this lot design. 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 go.

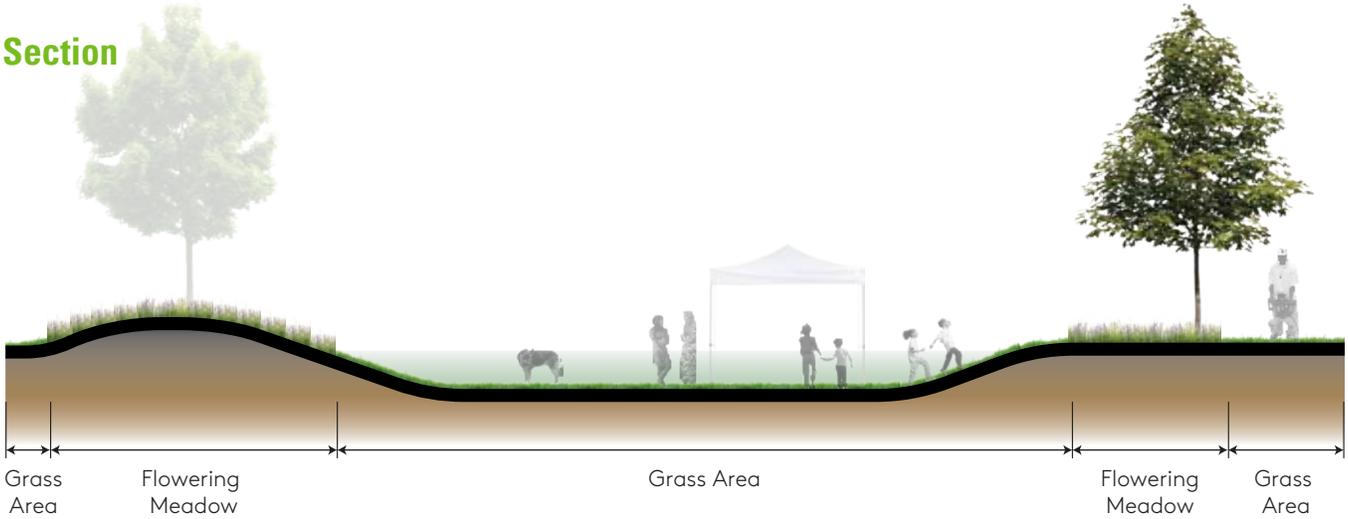
Cost	\$50 - 1,000	\$1,000 - 2,500	\$2,500 - 5,500	\$5,500 +
People	Volunteer	Professional	Volunteer + Professional	
Experience	Beginner	Intermediate	Advanced	
Upkeep	Low	Medium	High	
Stormwater	Good	Better	Best	
Location	Double Lot in Full Sun or Partial Sun (Near School or Community Hub is Ideal)			

Organic Bowl

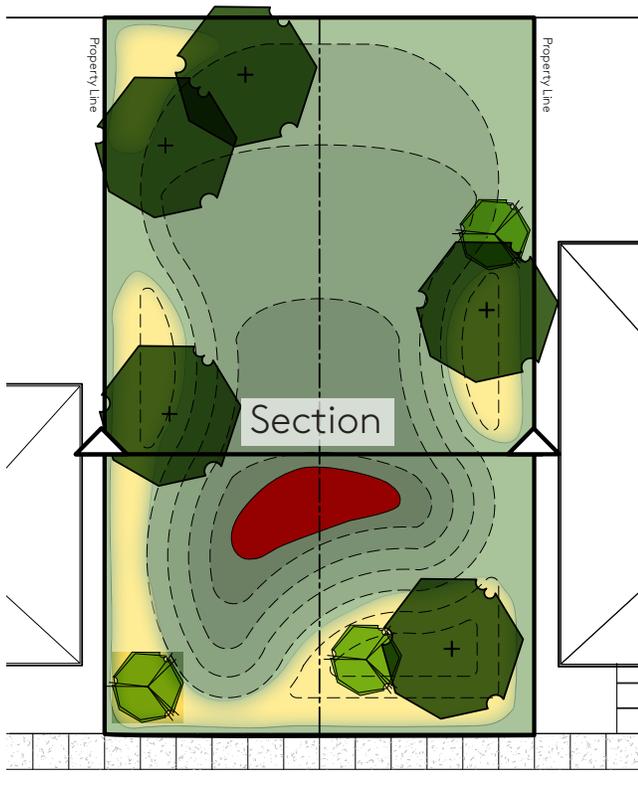
Examples of Earthwork



Section



Where Do I Grow?



The Organic Bowl is best on a double lot and has the potential to become a neighborhood amenity.

-  Rain Garden
-  Trees
-  Ornamental Trees and Shrubs
-  Flowering Meadow
-  Grass or Optional Groundcover

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.

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.

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.

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 double lot (60 by 100 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
- **Hacksaw and Screwdriver**

Potential Water Sources

- **Garden Hose with potential extension hose**
- **Sprinkler**
- **Downspout Disconnect (shown in lot design)**

Field Guide Resources

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

- **Clean + Green**
- **Perennials + Grasses Planting Detail**
- **Tree Planting Detail**
- **Bulb Planting Detail**

Materials List

Materials

- **Soil Removal**, 225 cubic yards, approximately 9 truck loads of soil
- **Rain Garden Planting Soil**, 10 cubic yards (50% sand, 25% topsoil, and 25% compost or leaf litter)
- **Mulch or Wood Chips**, 1.5 cubic yards
- **Downspout Disconnect:** Standpipe cap, downspout elbow, downspout connection pipe, rubber cap, and hose clamp

Planting

- **Black-Eyed Susan**, 5 pots
- **Purple Coneflower**, 6 pots
- **Smooth Aster**, 2 pots
- **New England Aster**, 2 pots
- **Blue Flag Iris**, 4 pots or bulbs
- **Bee Balm**, 4 pots
- **Common Milkweed**, 2 pots or bulbs
- **Swamp Milkweed**, 3 pots or bulbs
- **Yarrow**, 3 pots or bulbs
- **Amur Maple**, 3 pots or Balled and Burlapped
- **Scarlet Oak**, 3 pots or Balled and Burlapped
- **American Sycamore**, 2 pots or Balled and Burlapped
- **Mixed Daffodils**, 200 bulbs
- **Snowdrops**, 200 bulbs
- **Mixed Crocuses**, 150 bulbs
- **Autumn Crocuses**, 150 bulbs

Meadow

- **Clay Mix**, 1 pound of seed
- **Germination Blanket**, 1 roll (8 by 112.5 feet)

Remaining Lot (Optional)

Groundcover

- **Low-Maintenance Fescue Mix**, 26 pounds of seed
- **Germination Blanket**, 6 rolls (8 by 112.5 feet)

Organic Bowl Step-By-Step

Let's Start

Want to create the Organic Bowl? The Field Guide recommends hiring a professional for all tasks. Here are a few guiding principles to help you understand the tasks involved in the lot design. Only undertake installing the design yourself if you have professional construction experience.

Check off tasks as you go along.

Lot Design Steps

Professional Recommended:

- Prepare Your Lot
- Excavate + Sculpt Bowl
- Create Rain Garden

Volunteer Opportunities:

- Plant Perennials
- Plant Trees
- Sow Meadow
- Sow Groundcover + Bulbs
- Maintain Your Lot Design
- Disconnect Your Downspout

Prepare Your Lot

The Organic Bowl is one of the more complex lot designs within the Field Guide. It is recommended that you hire a professional for these steps: Prepare Your Lot, Excavate + Sculpt Bowl, and Create Rain Garden.

If you decide to construct this lot design without the recommended assistance of a professional, the guiding principles below can assist you with the installation of the lot design.

- This lot design utilizes a double lot, 60 by 100 feet.
- The Organic Bowl should be constructed as shown on the design plan to ensure the bowl is the correct depth and setback distance from adjacent lots and sidewalks.
- The Organic Bowl should be a minimum of five feet away from adjacent property lines and at least five foot from sidewalks.
- Use a string and stakes to map out the size, shape, and dimensions of your design.
- You do not need to kill grass in the lot you wish to construct the Organic Bowl as tilling and earth moving will naturally help with grass removal.
- For the Organic Bowl's rain garden to work, water must be directed into it. **The Field Guide recommends constructing your rain garden near downspouts from roofs of houses or garages or near other hard surfaces, such as driveways or patios.** Ensure water flows from these surfaces into your rain garden.
- Your rain garden should be one square foot for every ten square feet of hardscape or stormwater area directed into your rain garden. **The Field Guide recommends an approximately 10 by 18 foot rain garden (180 square feet).**
- The Organic Bowl is designed to collect stormwater runoff from a single standard single family houses up to 1,800 square feet of roof area. (The average Detroit house is 920 to 1,350 square feet.)

Organic Bowl Step-By-Step

○ Excavate + Sculpt Soil

The Field Guide recommends hiring a professional for the excavation and sculpting of soil. Here are a few guiding principles for this step:

- **This lot design creates extra soil, approximately 225 cubic yards, which must be hauled off site and disposed of properly.**
- Special machinery is required to sculpt the bowl.
- Slope begins a minimum of 5 feet from the property line.
- All slopes should not exceed 33% (maximum) slope to allow for safe mowing.
- The bowl should slope from the alley towards the rain garden at 5%.

○ Create Rain Garden

The Field Guide recommends hiring a professional to complete the rain garden installation. Here are a few guiding principles for this step:

- The rain garden will be 180 square feet.
- Dig the rain garden approximately 2.5 feet deep.
- **After removing soil, check that the bottom of the rain garden is level.** An easy way to check this is with a string level or a spirit level attached to a two-by-four board. A level bottom is important to maximize infiltration and minimize the chance of standing water in the rain garden.
- **After leveling the bottom, the soil should be prepared by scarifying, raking, or tilling the soil four to six inches deep to loosen any compaction.**
- **Fill the rain garden with 18 inches (ten cubic yards) of rain garden planting soil.** Ensure all points of the bowl slope towards the rain garden.

- Rain garden planting soil should consist of approximately 50% sand, 25% topsoil, and 25% compost or leaf litter. Mix together and place in rain garden.
- Use the soil removed from the rain garden area to create one foot high mounds around the bowl, as shown on the design plan.

○ Plant Perennials

Sunny to partly sunny plantings are recommended for the Organic Bowl. If your lot is in shade, seek alternative planting options.

Place plants in desired location, then remove plastic pots, loosen roots, and plant.

The Field Guide recommends three inches (1.5 cubic yard) of wood chips or mulch under perennial plantings. Adding wood chips or mulch will help suppress weeds.

For more guidance on planting perennials refer to the [Perennials + Grasses Planting Detail](#).

○ Plant Trees

The Field Guide recommends planting 1.5 inch diameter trees; however, smaller or larger trees can be planted if preferred. Trees and large shrubs can be purchased in pots or balled and burlapped. If you decide to plant larger trees, the Field Guide recommends speaking with a professional or an educational group as older trees can be more difficult to establish.

Plant trees as soon as possible after purchasing. If you cannot plant them the same day, do not leave unplanted trees in direct sunlight. Keep them in shade and well watered until you can plant them. (Trees dry out fast!)

Identify the location where you wish to plant the trees. Dig a hole three times the width of the root ball and equal to the depth.

Organic Bowl Step-By-Step

Pots should be removed before placing the tree in the planting hole. Balled and burlapped root balls should remain wrapped until placed in hole. Unwrap the top 1/3 of the root ball and peel back the burlap once planted. Remove any twine, nails, or stakes. The root flare should be level with the ground when you place the tree in the hole.

Water the root ball, then backfill the hole with the soil previously removed from planting. Add water to the tree every six inches as you backfill the hole. Compact the soil lightly after each watering until the hole is filled with soil and level with the adjacent ground. The Field Guide recommends three foot diameter by three inch depth of mulch or wood chips around trees. **0.5 cubic yards of mulch total is recommended for eight trees.** Keep mulch a few inches away from tree trunks.

For more guidance on tree planting refer to the [Tree Planting Detail](#).

○ Sow Meadow

The meadow area has several unique sections. Together, these areas total 800 square feet.

Soil should be prepared for seeding by scarifying, raking, or tilling the soil four to six inches deep to loosen any compaction, allowing for easier seed germination and better water infiltration. Tilling should not be done without an assessment of buried cement, debris, or large rocks. Be sure to select the correct size of machinery for the job.

Seeding should take place in either spring (mid-May to mid-June) or fall (mid October to end of November). Nativescape's Clay Mix seed mix is a good option for the Organic Bowl; similar mixes are available from other suppliers.

Nativescape suggests one pound of Clay Mix seed mix per 1,000 square feet. **The Field Guide recommends one pound of Clay Mix for meadow area (800 square feet).** Annual Cover Crop is not required for the seed mix.

Once seeds have been mixed, spread seed across the entire meadow area. You can do this by hand or with a hand-cranked whirlwind seeder. You will need to do this several times to get even coverage. Gently water seedlings daily until they are four to six inches in height.

Placing a thin layer of straw or a germination blanket over seeded areas will help ensure that your seed establishes by keeping seeds from blowing away and protecting them from birds.

A single roll of 8 by 112.5 foot single net germination blanket will cover the meadow areas. Germination blankets or straw can be purchased at most nurseries and garden stores, including Detroit Farm and Garden.

○ Sow Groundcover + Bulbs

If you are seeking a lower maintenance alternative to a traditional lawn, the Field Guide recommends a fescue seed mix. This family of floppy grasses is very drought resistant and requires only one cutting (in August or September) per year. The soil should already be loosened and prepared for seeding through tilling of lot.

Fescue can be established in full sun to shade and should be seeded in spring (mid-March to mid-May) or fall (August to September). Seed mix should be applied to a damp lot. Sow seeds by seed spreader or by hand across remaining lot. Spread seed mix evenly over entire lot. You may need to do this several times over the bed to get even coverage. A seed rate of five pounds per 1,000 square feet is recommended. **If you follow Organic Bowl lot design, you will need approximately 26 pounds of seed mix for full 60 by 100 lot.**

Gently water seedlings daily until they are four to six inches in height. Placing a thin layer of straw or a germination blanket over seeded areas will help ensure that your seed establishes by keeping seeds from blowing away and protecting them from birds. **Six 8 by 112.5 foot rolls of single net germination blankets required for 30 by 100 lot.**

Organic Bowl Step-By-Step

Germination blankets or straw can be purchased at most nurseries and garden stores, including Detroit Farm and Garden.

One fescue seed mix that the Field Guide recommends is Eco-Turf Low Maintenance Fescue Mix, which can be purchased through Michigan Wildflower Farm.

Other Field Guide lot designs can be used as groundcovers. Check out the web site for additional options and ideas.

Plant bulbs (daffodils, crocuses, and snowdrops) in clusters of three to five randomly throughout grass area. (This can be a fun activity to do with children!) Bulbs should be planted in the fall.

For more guidance on blub planting refer to the [Bulb Planting Detail](#).

○ Maintain Your Lot Design

Landscapes require care and maintenance to thrive. Here's how to maintain the different sections of the lot design:

Meadow: The Organic Bowl meadow will require weeding, watering, and mowing. **In the first year, cut your meadow back to four to six inches whenever it reaches above ten inches in height.** After the first year, continue weeding, and mow your meadow in late fall or early spring to keep the meadow at its best. It will take about three years for the meadow to establish.

Meadows are a work in progress. If you feel your meadow needs more color, it is okay to add additional native seeds and seed mixes.

Rain Garden: The Organic Bowl rain garden is a manageable size; however, watering and weeding plants is still required especially during the first two years. **Do not let your rain garden dry out in the first warm season.** Add mulch annually to help suppress weed growth.

Gardens are a work in progress. Bulbs and perennials may need to be replaced to keep gardens dynamic and playful.

Grass: Low-Maintenance Fescue Mix should be watered daily until seedlings are four to six inches in height. Once established, grass will not require supplemental watering except during unusually dry periods. Fescue grasses do not grow tall and should only need to be mowed one time per year.

The Organic Bowl's shape and slopes may make mowing difficult with a standard mower. Consider using a weed whip or other special equipment when mowing the mounds. Always use caution when mowing slopes and follow the manufacturers' recommendations.

○ Disconnect Your Downspout

One of the easiest ways to collect stormwater is by disconnecting your downspout and directing it into your rain garden.

Before you start, remember that disconnected downspouts should extend at least six feet from any house foundation and five feet from adjacent property or public sidewalk. Avoid disconnecting downspouts where they might discharge water across walkways, patios, or driveways or where they might be a tripping hazard. Do not disconnect directly over a septic system.

Follow these steps to help you redirect your roof water into your rain garden.

- Measure the existing downspout, and mark it approximately nine inches above sewer connection or standpipe.
- Cut with a hacksaw and remove cut piece.
- Plug or cap the sewer standpipe with a rubber cap secured by a hose clamp. Use screwdriver to tighten and secure cap.
- Attach elbow joint over the downspout.

Organic Bowl Step-By-Step

- Add downspout extension to elbow joint. Extension should be length needed to carry water away from house and towards rain garden.
- Secure pieces with sheet metal screws at each joint.
- Use plastic or concrete splashblocks, rocks, flagstone, or boulders at the end of the downspout to control erosion of soil and plants in the rain garden from stormwater.

For more information, refer to the [DWSD's How to Disconnect a Downspout](#) document.



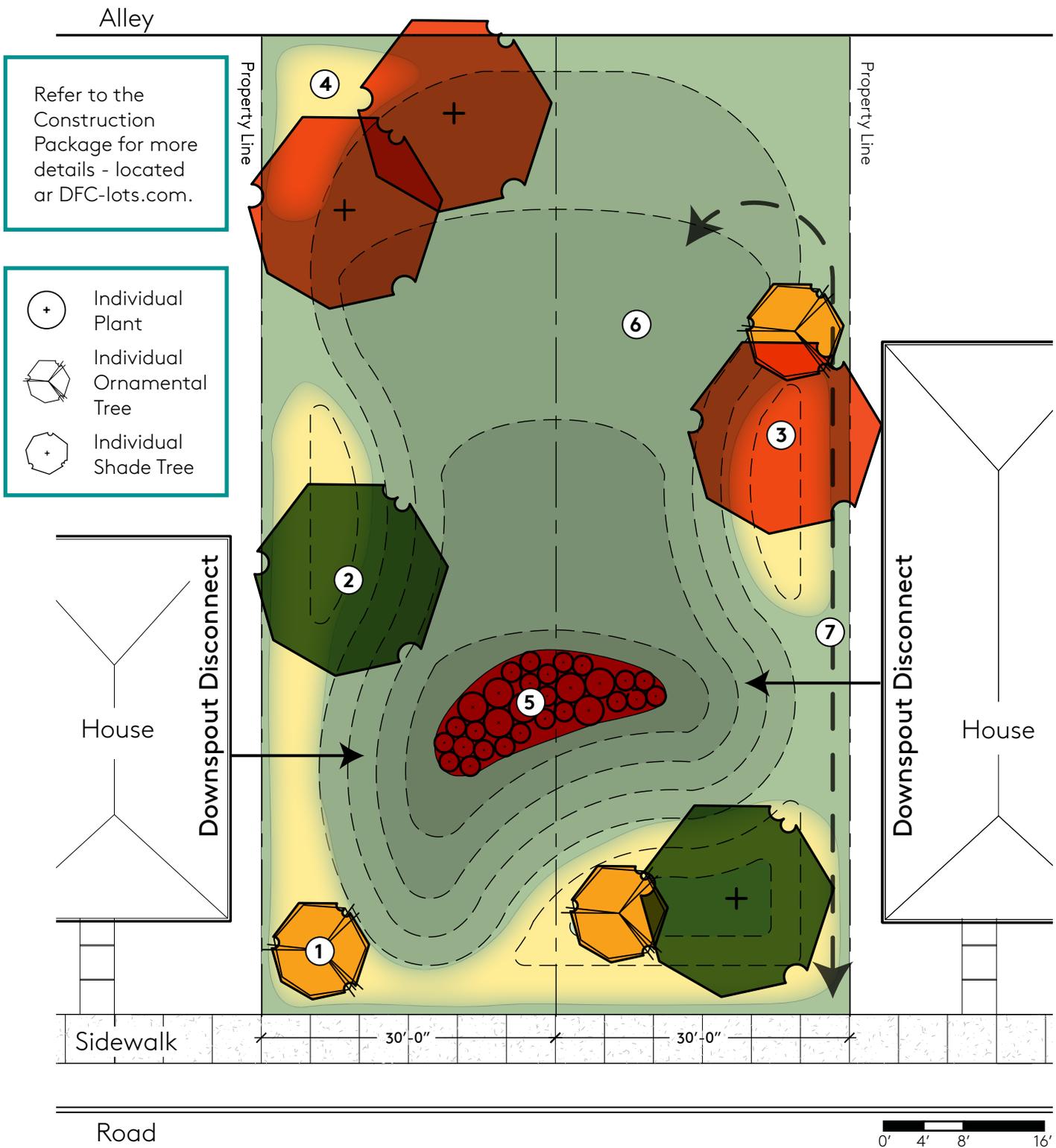
Visit the Resources page on the Field Guide's web site (DFC-lots.com) to discover other vendors and places to purchase plants.

Average Height of Plants



Tree, Shrub, and Perennials

Organic Bowl Lot Design



Refer to the Construction Package for more details - located at DFC-lots.com.

-  Individual Plant
-  Individual Ornamental Tree
-  Individual Shade Tree

- | | | | |
|--|--|---|--|
|  1 Ornamental Tree (Amur Maple) |  3 Shade Tree (Scarlot Oak) |  5 Rain Garden |  7 Access Route from Sidewalk |
|  2 Shade Tree (Sycamore) |  4 Meadow (Clay Mix) |  6 Grass or Optional Groundcover | |

Planting: Full Sun to Part Sun



Black-Eyed Susan¹
Rudbeckia hirta
24" Height x 24" Width.
Blooms June - October.
Quantity: 5 pots



Purple Coneflower²
Echinacea purpurea
24" Height x 12" Width.
Blooms July - August
Quantity: 6 pots



Smooth Aster³
Aster laevis
12" Height x 18" Width.
Blooms August - September
Quantity: 6 pots



New England Aster⁴
Aster novae-angliae
12" Height x 18" Width.
Blooms August - September
Quantity: 2 pots



Blue Flag Iris⁵
Iris Virginica
24" Height x 12" Width.
Blooms May - June.
Quantity: 4 pots or bulbs



Bee Balm⁶
Monarda fistulosa
24" Height x 28" Width.
Blooms July - September.
Quantity: 4 pots



Common Milkweed⁷
Asclepias syriaca
48" Height x 24" Width.
Blooms July - August.
Quantity: 2 pots



Swamp Milkweed⁸
Asclepias incarnata
48" Height x 24" Width.
Blooms July - August.
Quantity: 3 pots



Yarrow⁹
Achillea millefolium
24" Height x 24" Width
Blooms June - September
Quantity: 3 pots



Amur Maple¹⁰
Acer ginnala
20' Height x 20' Width.
Quantity: 3 pots or B & B



Scarlet Oak¹¹
Quercus coccinea
70' Height x 50' Width.
Quantity: 3 pots or B & B



American Sycamore¹²
Platanus occidentalis
24" Height x 28" Width.
Blooms July - September.
Quantity: 2 pots or B & B



Mixed Daffodils¹³
Narcissus
18" Height x 24" Width
Blooms in spring
Quantity: 200 bulbs



Snowdrops¹⁴
Galanthus nivalis
4" Height x 4" Width
Blooms in March - April
Quantity: 200 bulbs



Mixed Crocuses¹⁵
Crocuses
4" Height x 4" Width
Blooms in spring
Quantity: 150 bulbs



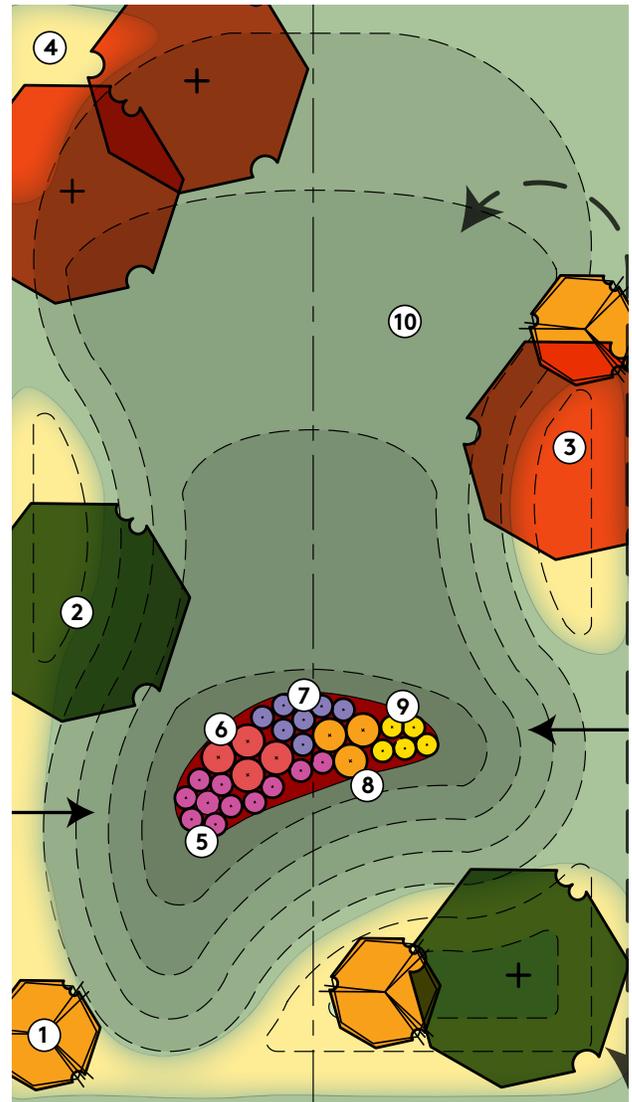
Autumn Crocuses¹⁶
Colchicum cilicicum
4" Height x 4" Width
Blooms September - October
Quantity: 150 bulbs

1) Parshotam Lal Tandon, "Rudbeckia hirta." 27 July 2013 via Flickr, CC BY-NC-SA 2.0; 2) Jordan Meeter, "Purple Coneflower (Echinacea purpurea)." 07 August 2008 via Flickr, CC BY 2.0; 3) Tom Potterfield, "Symphyotrichum leave 'Bluebird.'" 25 September 2011 via Flickr, CC BY-NC-SA 2.0; 4) Tom Potterfield, "Symphyotrichum." 20 September 2012 via Flickr, CC BY-NC-SA 2.0; 5) Jenny Evans, "Blue Flag Iris." 28 December 2010 via Flickr, CC BY-NC 2.0; 6) Corey Seeman, "Bee Balm Flowers." 16 July 2013 via Flickr, CC BY-NC-SA 2.0; 7) Peter Gorman, "Common Milkweed and Friends." 24 June 2007 via Flickr, CC BY-NC-SA 2.0; 8) PDH, "Asclepias incarnata.jpg." 03 February 2006 Public Domain; 9) Stefano, "Achillea millefolium." 29 June 2012 via Flickr, CC BY-NC-SA 2.0; 10) F.D. Richards, "Amur Maple." 24 October 2013 via Flickr, CC BY-SA 2.0; 11) Jean-Pol Grandmont, "Feuilles du Chêne écarlate - Quercus coccinea." 04 October 2008 via Wikimedia, CC BY-SA 3.0; 12) Georges Janssoone JoJan, "Plantanus Orientalis." 22 April 2007 via Wikimedia, Public Domain; 13) Plashing Vole, "Mixed daffodils 2." 8 April 2011 via Flickr, CC BY-NC-SA 2.0; 14) Gideon Chilton, "Snowdrops - Little Oakley." 16 February 2014 via Flickr, CC BY-NC 2.0; 15) Rachelgreenbelt, "jdy072 bpl Crocus Mixed epl Blo." 13 March 2011 via Flickr, CC BY-NC-SA 2.0; 16) Carol, "The autumn crocus IMG_5061." 15 September 2014 via Flickr CC BY-NC-SA 2.0

Planting: Full Sun to Part Sun

Key

- 1 **Amur Maple**
- 2 **American Sycamore**
- 3 **Scarlet Oak**
- 4 **Clay Mix** (for meadow areas)
- 5 **Black-Eyed Susan & Purple Coneflower**
- 6 **Smooth Aster & New England Aster**
- 7 **Blue Flag Iris & Bee Balm**
- 8 **Yarrow**
- 9 **Common Milkweed & Swamp Milkweed**
- 10 **Mixed Daffodils, Snowdrops, Mixed Crocuses, and Autumn Crocuses** (Mix bulbs and plant randomly throughout grass area.)



Plant Sizes



Pots: 1.5 inch diameter trees are available at commercial landscape supply stores in pots or balled and burlapped (B & B).

Plants can be purchased in one to five gallon pots. The size of pots can change based on availability.



Bulbs: Bulbs are cheaper if purchased in bulk. You can find bulk bags at garden stores.

Planting: Full Sun to Part Sun

Clay Mix

One pound of Clay Mix is recommended for the Organic Bowl lot design.

You can buy these seeds premixed at Nativescapes.

Temporary Grasses (60%)

Seed Oats, *Avena sativa*

Annual Rye, *Lolium multiflorum*

Native Grasses and Sedges (10%)

Big Bluestem Grass, *Andropogon gerardii*

Canada Wild Rye, *Elymus canadensis*

Switch Grass, *Panicum virgatum*

Little Bluestem, *Schizachyrium scoparium*

Indian Grass, *Sorghastrum nutans*

New England Aster, *Aster novae-angliae*

Heath Aster, *Aster pilosus*

Boneset, *Eupatorium perfoliatum*

Dense Blazing Star, *Liatris spicata*

Great Blue Lobelia, *Lobelia siphilitica*

Bergamot (Beebalm), *Monarda fistulosa*

Smooth Panstemon, *Penstemon digitalis*

Mountain Mint, *Pycnanthemum virginianum*

Yellow Coneflower, *Ratibida pinnata*

Black-eyed Susan, *Rudbeckia hirta*

Lance-leaved Goldenrod, *Solidago graminifolia*

Ohio Goldenrod, *Solidago ohioensis*

Riddell's Goldenrod, *Solidago riddellii*

Blue Vervain, *Verbena hastata*

Plant Sizes



Seeds: All plants can be purchased in seed form.

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 for assistance.

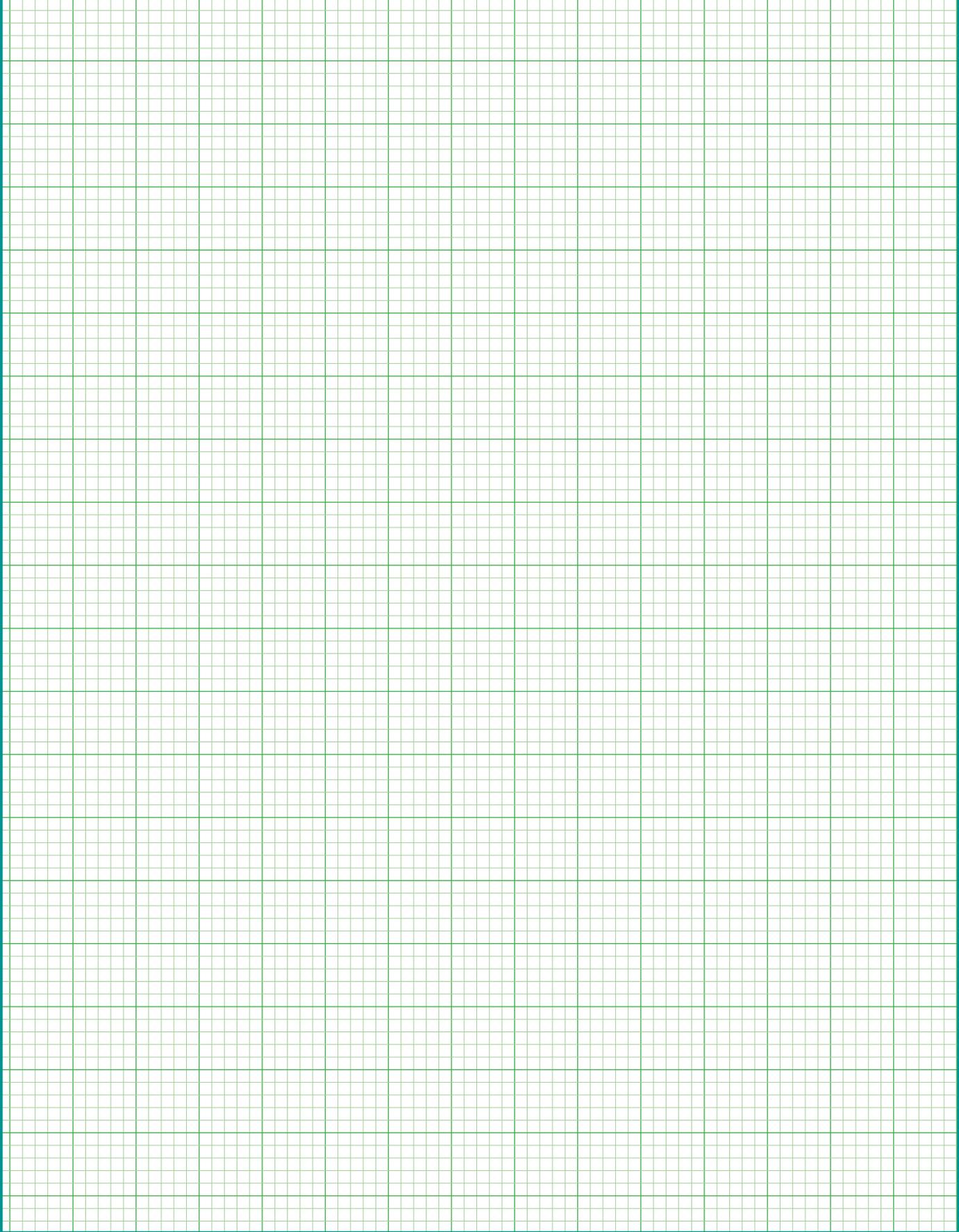
Helpful Facts

- Rain gardens are designed to decrease the amount of rainwater flowing off your roof and property into the city's storm system.
- Rain gardens capture, hold, and release stormwater back into the ground.
- This rain garden is designed to provide habitat and food for a variety of butterflies and birds.

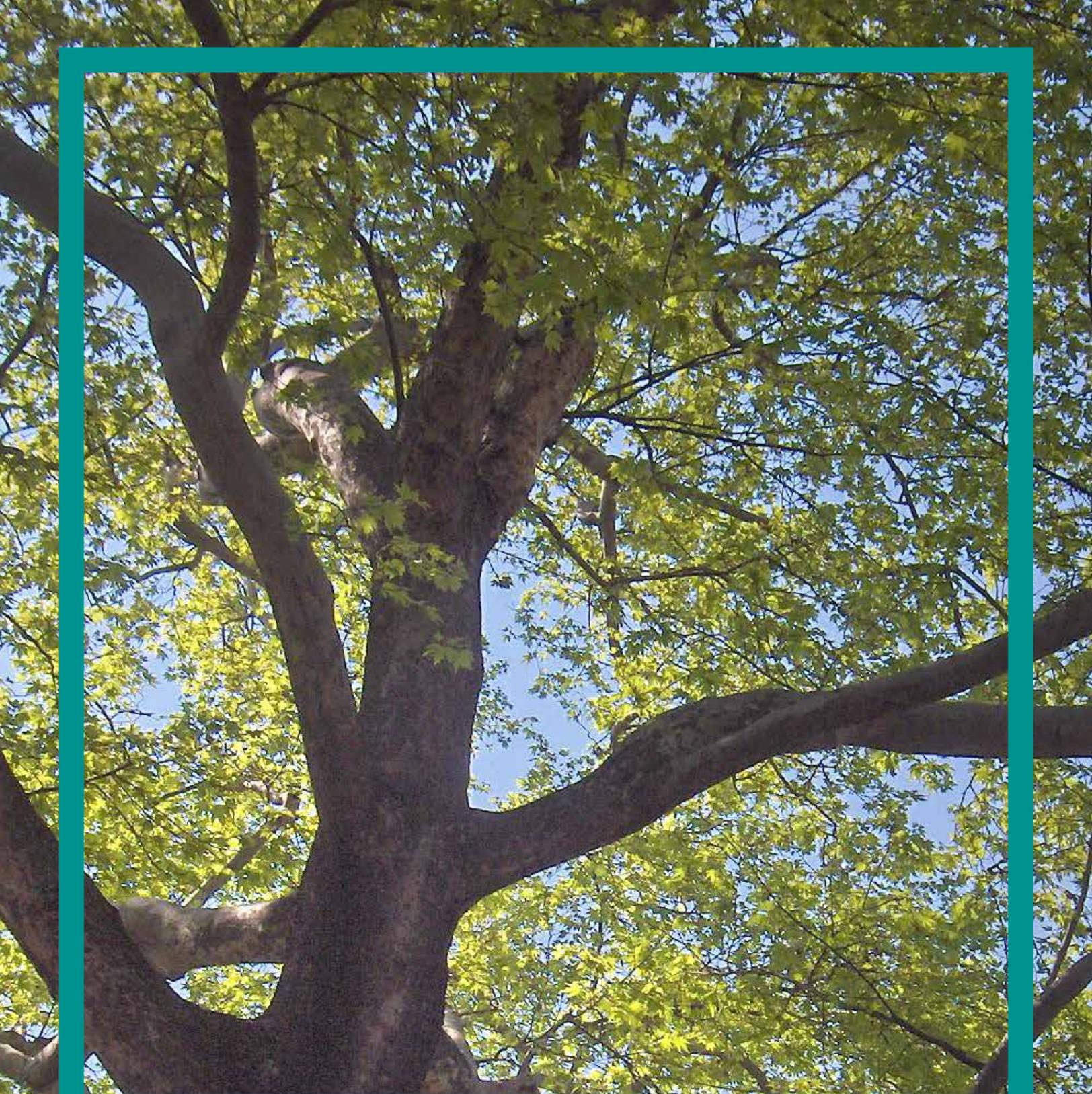
Planting Tips

- Call ahead to make sure the nursery or garden store has the plants you need for your lot design.
- Native Bee Balm can be difficult to find. You can substitute a different cultivar if necessary.
- Not interested in the Clay Mix? An alternative is a Butterfly and Hummingbird Garden Mix, such as ERNMIX-179 or equivalent.
- Looking for a more cost efficient planting option? Consider a rain garden seed mix, such as ERNMIX-180 (Ernst Rain Garden Meadow Mix).
- The recommended trees for this lot design are 1.5 inches in diameter. To save money, you can purchase smaller trees.
- To save money, ask a friend or family member if they have any plants or cuttings they are willing to donate to your rain garden.
- Inspect trees before purchasing to make sure they are healthy and are well formed. This will help you select trees that are more likely to survive.
- The best time to plant is in spring or fall.
- Do not plant in extreme heat.
- If mulching around trees, do not place mulch too close (less than three inches) to tree trunks. This will help keep trees free of disease.

Draw Your Lot



Organic Bowl Field Notes



**DETROIT
FUTURE
CITY**

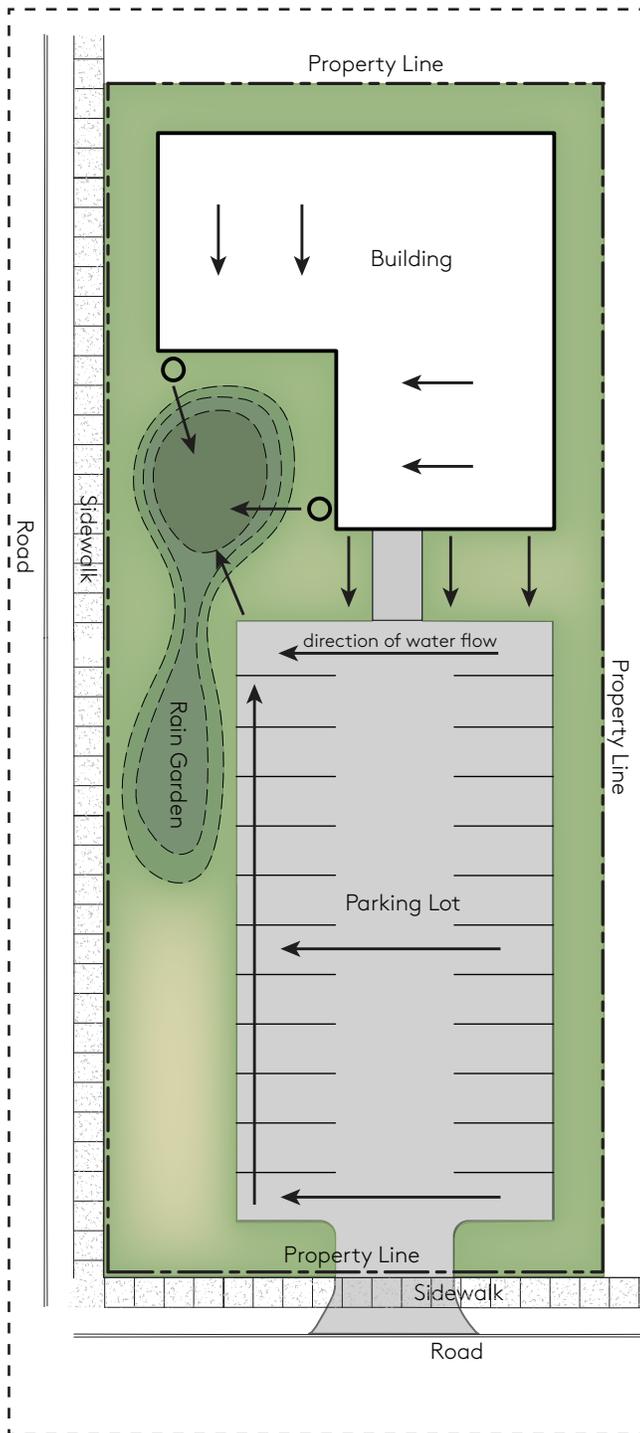
**working
with lots**
A FIELD GUIDE

**Visit DFC-lots.com
#DFClots**

Image Source: Georges Jansoone JoJan, "Plantanus Orientalis." 22 April 2007 via Wikimedia, Public Domain

E

LOT DESIGN: STORM SOAKER



Do you want to install one of Detroit's best bioretention practices?

GRANT AMOUNT UP TO: \$10,000

The Storm Soaker is a high performing, large rain garden that manages stormwater runoff from commercial and other non-residential properties. The size and details can be modified to suit existing site conditions. The planting design brings beauty to your site, while providing stormwater performance and ecological benefits. The plant palette incorporates perennial flowers, grasses and shrubs for colorful and textural interest throughout the year, while also making plant ID easier to help with weeding!

DETAILS:

- Anticipated installation: Spring 2021
- You will need to hire a professional engineer and landscape contractor to implement this project
- The landscape contractor should be open to including a workforce development component in the project installation

REQUIREMENTS:

- Site must have the ability to redirect stormwater runoff from an adjacent impervious surface into the stormwater practice

IDEAL FIT:

- A building that is currently occupied by an operating business
- A project that is aligned with a local neighborhood plan for green stormwater infrastructure
- Ideal for managing runoff from sites with 2,000- 10,000 sqft of building roofs, parking lots, or other impervious surfaces.

ADDITIONAL REQUIRED RFP QUESTIONS: STORM SOAKER

Please answer in a separate document and upload to Submittable with your proposal (.doc or .pdf file format).

1) Upload a basemap showing the outline of your building, indicating the location of external downspouts (and internal, if applicable), parking lots, additional impervious surfaces, and the property line.

2) Does your building have any internal roof drains? If so, what portion of your roof drains internally? Please show this on your basemap. (Due to costs of rerouting drains, if your building has only internal drainage, your site may not be a good fit for this lot design.)

3) Using the DWSD Parcel Viewer (found on DWSD's Drainage Charge page <https://detroitmi.gov/departments/water-and-sewerage-department/drainage-charge>) indicate your total current acreage and total impervious acreage according to DWSD.

4) If planning fees or construction expenses exceed the grant amount, or if a larger practice could be built with more funds, would you be able to contribute financial resources to the project? If so, up to how much?

5) Have you already participated in consultation with DWSD and/or a site assessment request from DWSD?

6) Have you already consulted with a private engineer or landscape architect regarding a stormwater practice on your site? (No problem if you haven't already)

If you haven't already, all applicants should start the process to request a DWSD site assessment here: <https://app.smartsheet.com/b/form/c4b7f6eb0af548d486eb18425210bcee>

More information is available here: <http://www.detroitmi.gov/drainage>