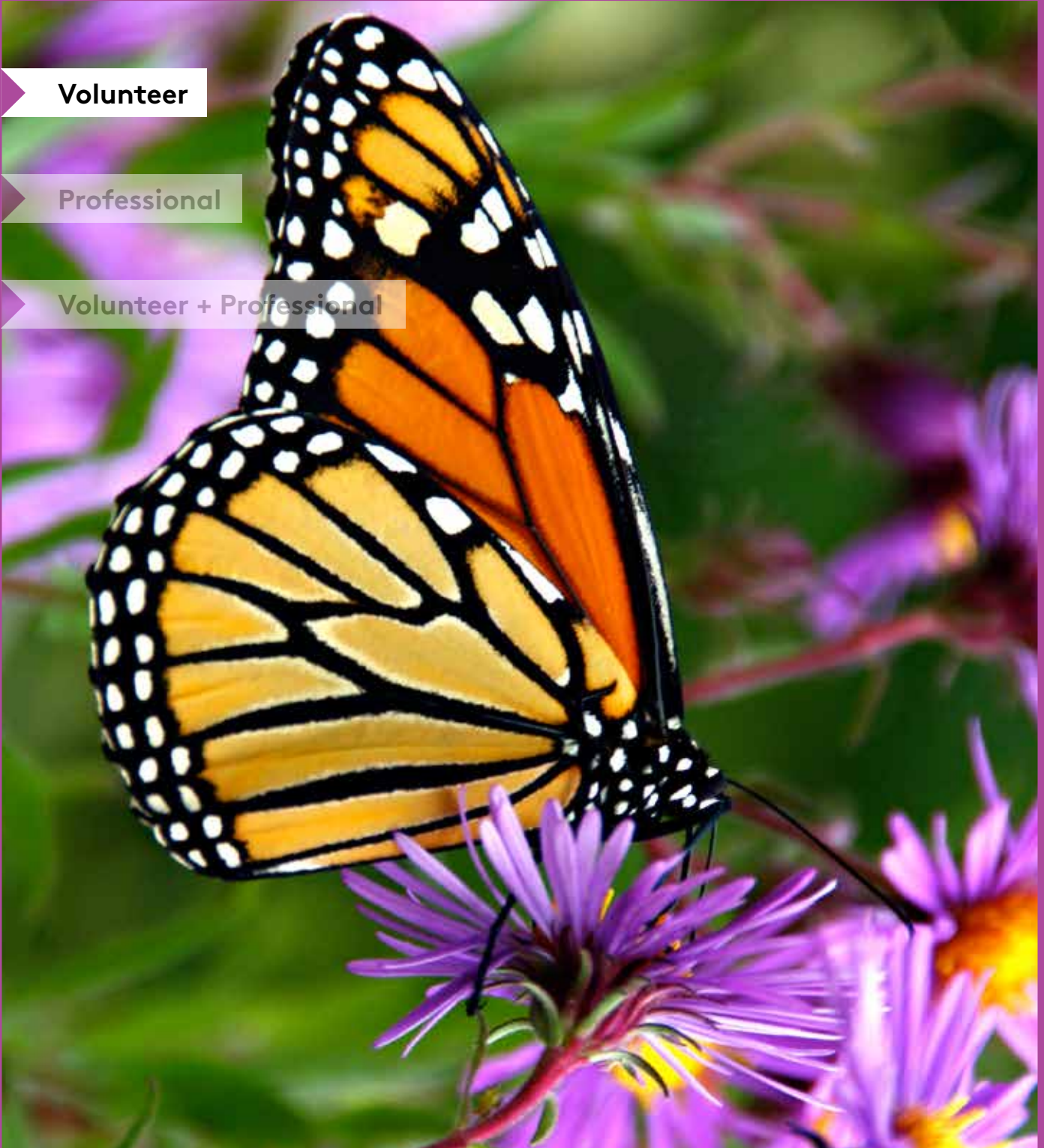


Volunteer

Professional

Volunteer + Professional



Native Butterfly Meadow

Image Source: Liz West, "Monarch." 16 September 2008 via Flickr, CC-BY-2.0



HELLO

MY NAME IS

Native Butterfly Meadow

The Native Butterfly Meadow is a Michigan native meadow designed for beautification, habitat creation and to attract pollinators, like the Monarch butterfly.

The Monarch butterfly lays eggs exclusively on the milkweed plant and feeds on the nectar of Coneflower, Blazing Star and Goldenrod, all plants that are included in this lot design.

Bordered by a clean, perennial edge, this meadow offers a friendly addition to every neighborhood.

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 Native Butterfly Meadow is high (\$2,500–\$5,500) and based on utilizing volunteer labor, seed mix, and potted plants. To save money, you can buy smaller pots or plugs. 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 the meadow and perennial beds, particularly during the first two growing seasons while the plants establish themselves. The meadow should be mowed once a year in the late fall or early spring.

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. 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 the installation time of this lot design to be one full weekend with the help of at least three to five healthy adults or youth. The Field Guide assumes the lot is 'construction ready,' and all equipment and materials required for the lot design have been acquired and are ready to use.

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	Residential Side Lot in Full Sun or Part Sun			

Native Butterfly Meadow

Examples of Butterfly Meadows



1- Perennial Bed

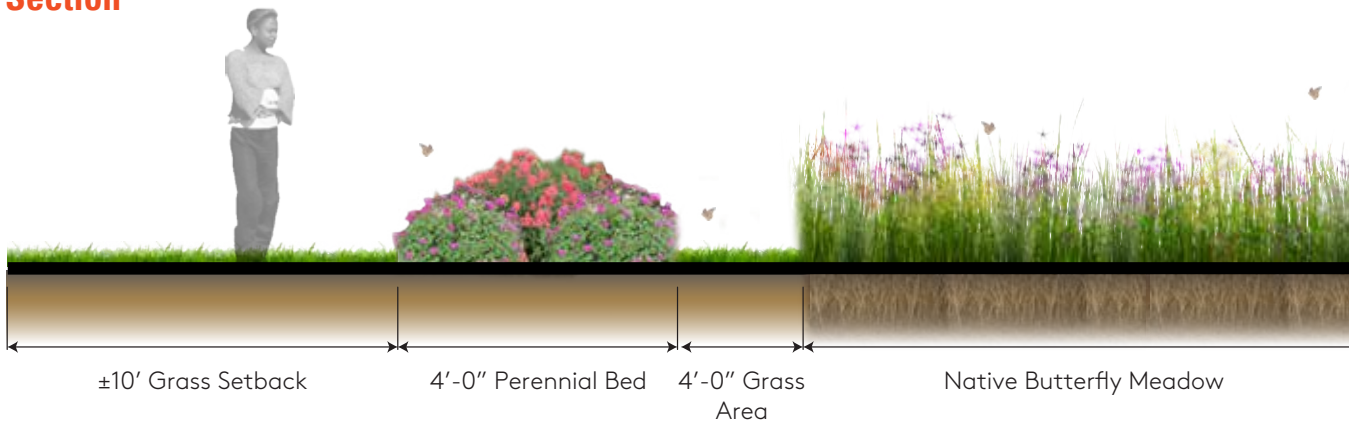


2 - Meadow with Coneflower

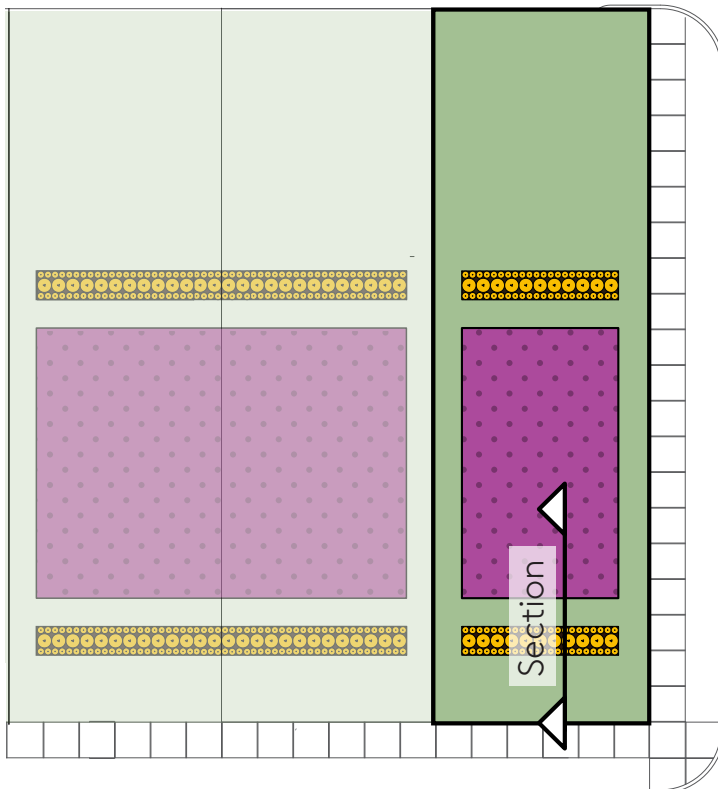


3 - Geranium

Section



Where Do I Grow?



The Native Butterfly Meadow can be installed on single, double, or multiple lots and is suitable for corner properties. The meadow area and perennial bed can be extended to cover two or more lots.

- Perennials
- Native Butterfly Meadow
- Mulch
- Grass or Optional Groundcover

Image Source: 1) Patrick Standish, "Perennial Border." 24 July 2009 via Flickr, CC BY 2.0; 2) Rachel James, "Coneflowers in the Butterfly Meadow." 03 August 2008 via Flickr, CC BY-NC-SA 2.0; 3) Dave Govoni, "April Garden: Wild Geranium." 28 April 2011 via Flickr, CC BY-NC-SA 2.0

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 single lot (30 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
- **Tiller**, 6 inch depth (optional)

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**
- **Perennials + Grasses Planting Detail**
- **Bulb Planting Detail**

Materials List

Materials

- **Mulch or Wood Chips**, 1 cubic yards
- **Germination Blankets**, 1 roll (8 by 112.5 feet), used for the meadow area

Planting

- **Butterfly Garden Mix seed mix**, 5 ounces of seed
- **Annual Cover Crop seed mix**, 8 ounces of seed
- **Wild Geranium**, 88 pots
- **Yarrow**, 10 pots
- **Common Daylily**, 12 pots

Remaining Lot (Optional)

Groundcover

- **Low-Maintenance Fescue Mix**, 10 pounds of seed
- **Germination Blanket**, 3 rolls (8 by 112.5 feet)

Native Butterfly Meadow Step-By-Step

Let's Start

Want to create the Native Butterfly Meadow 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
- Sow Meadow
- Plant Perennials
- Maintain Your Lot Design
- Sow Remaining Lot

! Annual Cover Crop is used to establish the Butterfly Garden Mix and does not require annual re-seeding.

Prepare Your Lot

Select the best location for your meadow. Use marking paint and a tape measure to map out the size, shape, and dimensions of your design. **The Field Guide recommends a 22 by 38 foot (836 square feet) meadow with two 22 by 4 foot (88 square feet per bed) perennial beds.**

Sow Meadow

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.

Seeding should take place in either spring (mid-May to mid-June) or fall (mid October to end of November). Michigan Wildflower Farm's Native Butterfly Garden Mix and Annual Cover Crop seed mix are good options for the Native Butterfly Garden; similar mixes are available from other suppliers.

Michigan Wildflower Farm suggests five ounces of Butterfly Garden Mix seed mix mixed with eight ounces of Annual Cover Crop seed mix per 1,000 square feet. **The Field Guide recommends five ounces of Butterfly Garden Mix seed mix and eight ounces of Annual Cover Crop seed mix for the meadow area, even though area is less than 1,000 square feet.**

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

Native Butterfly Meadow Step-By-Step

○ Plant Perennials

Sunny to partly-sunny plantings are recommended for the perennial beds. If your lot is in shade, seek alternate planting options.

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

The Field Guide recommends adding **three inches (1 cubic yard) of wood chips or mulch over each perennial bed**. Adding wood chips or mulch will help suppress weeds.

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

○ Maintain Your Lot Design

A meadow require care and maintenance to thrive. The Native Butterfly 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. This will keep the meadow at its best. It will take about three years for the meadow to establish.

Perennial beds are low-maintenance; however, watering and weeding plants regularly is still required, especially during the first two years. The mulch or wood chips areas should be replenished or top-dressed annually.

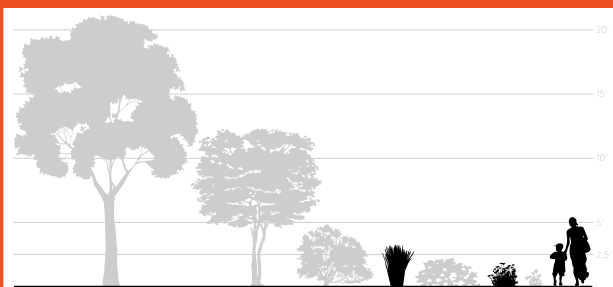
Meadows are a work in progress. If you feel your meadow needs more color, it is okay to add additional native seed mixes and plants. Be creative and make it your own!

Native Butterfly Meadow Step-By-Step



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



Grasses and Perennials

○ Sow Remaining Lot

If you are seeking a lower maintenance alternative to a traditional lawn, the Field Guide recommends a fescue seed mix. **If you follow the Native Butterfly Meadow lot design you will need approximately ten pounds of fescue seed mix for the remaining lot (1,988 square feet) and three 8 by 112.5 foot rolls of single net germination blankets.**

This family of floppy grasses is drought-resistant and requires one cutting (in August or September) per year. 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).

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. Apply seed mix to a damp lot.

Sow seed across the remaining lot by using a seed spreader or by hand. A seed rate of five pounds per 1,000 square feet is recommended. 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. Germination blankets or straw can be purchased at most nurseries and garden stores.

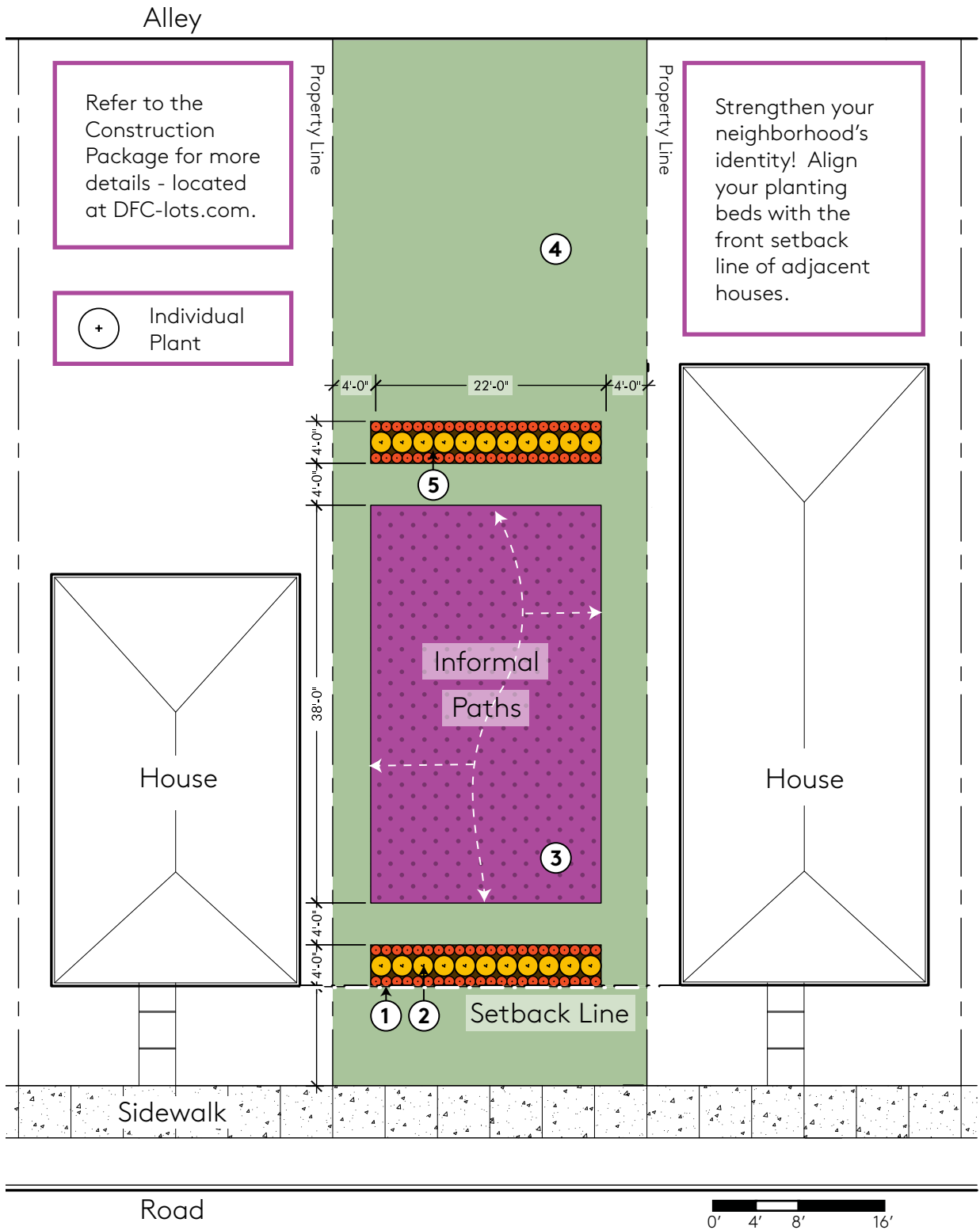
Once established, grass will not require supplemental watering except during unusually dry periods. Eco-Turf Low Maintenance Fescue Mix is one recommended seed mix and can be purchased through the Michigan Wildflower Farm.

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

Next Level: If you would like to bring additional color to your grass, you can plant bluebells, crocuses and/or daffodils to create a decorative show in spring. Bulbs should be planted in the fall.

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

Native Butterfly Meadow Lot Design



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

⊕ Individual Plant

Strengthen your neighborhood's identity! Align your planting beds with the front setback line of adjacent houses.

- 1 Perennial (Geraniums)
- 3 Native Butterfly Meadow
- 5 Mulch
- 2 Perennial (Yarrow & Daylily)
- 4 Grass or Optional Groundcover

Planting: Full Sun to Part Sun



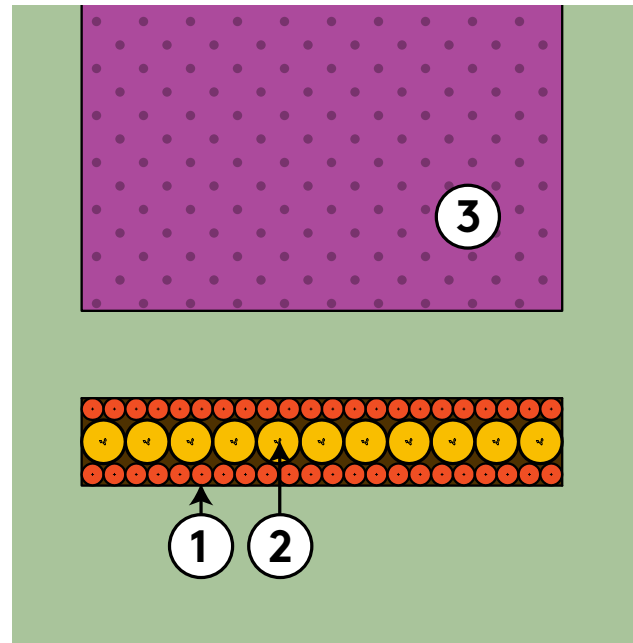
Wild Geranium¹
Geranium maculatum^{*}
 12" Height x 12" Width
 Blooms May - June
Quantity: 88 pots



Yarrow²
Achillea millefolium
 24" Height x 24" Width
 Blooms June - September
Quantity: 10 pots



Common Daylily³
Hemerocallis fulva^{*}
 28" Height x 24" Width
 Blooms June - July
Quantity: 12 pots



Key

- 1 Wild Geranium**
 (Space approximately one foot apart.)
- 2 Yarrow & Common Daylilies**
 (Space approximately three feet apart and mix evenly.)
- 3 Native Butterfly Meadow**
 (Five ounces Butterfly Garden Mix with eight ounces Annual Cover Crop seed mix spread over meadow area.)

Plant Sizes

Pots: Plants can be purchased in one to five gallon pots. Size of pots can change based on availability.

Image Source: 1) Dave Govoni, "April Garden: Wild Geranium." 28 April 2011 via Flickr, CC BY-NC-SA 2.0; 2) Stefano, "Achillea millefolium." 29 June 2012 via Flickr, CC BY-NC-SA 2.0; 3) Stefano, "Hemerocallis fulva." 29 June 2012 via Flickr, CC BY-NC-SA 2.0.

Planting: Full Sun to Part Sun

Butterfly Garden Mix

Mixing five ounces of Butterfly Garden Mix with eight ounces of Annual Cover Crop seed mix is recommended for the Native Butterfly Meadow lot design.

You can buy these seeds premixed at Michigan Wildflower Farm.

Wild Columbine, *Aquilegia canadensis* (4% of mix)

Common Milkweed, *Asclepias syriaca* (2% of mix)

Butterflyweed, *Asclepias tuberosa* (2% of mix)

New England Aster, *Aster novae-angliae* (4% of mix)

Coreopsis Lanceolata, *Lanceleaved coreopsis* (3% of mix)

Showy Tick Trefoil, *Desmodium canadense* (2% of mix)

Purple Coneflower, *Echinacea purpurea* (3% of mix)

Rough Blazing Star, *Liatris aspera* (2% of mix)

Bergamot, *Monarda fistulosa* (3% of mix)

Horsemint, *Monarda punctata* (2% of mix)

Yellow Coneflower, *Ratibidua pinnata* (2% of mix)

Blackeyed Susan, *Rudbeckia hirta* (4% of mix)

Stiff Goldenrod, *Solidago Rigida* (2% of mix)

Golden Alexandra, *Zizia Aurea* (3% of mix)

Canada Wild Rye, *Elymus canadensis* (15% of mix)

Indian Grass, *Sorghastrum nutans* (30% of mix)

Little Bluestem, *Schizachyrium scoparius* (15% of mix)



Urban Meadow

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.

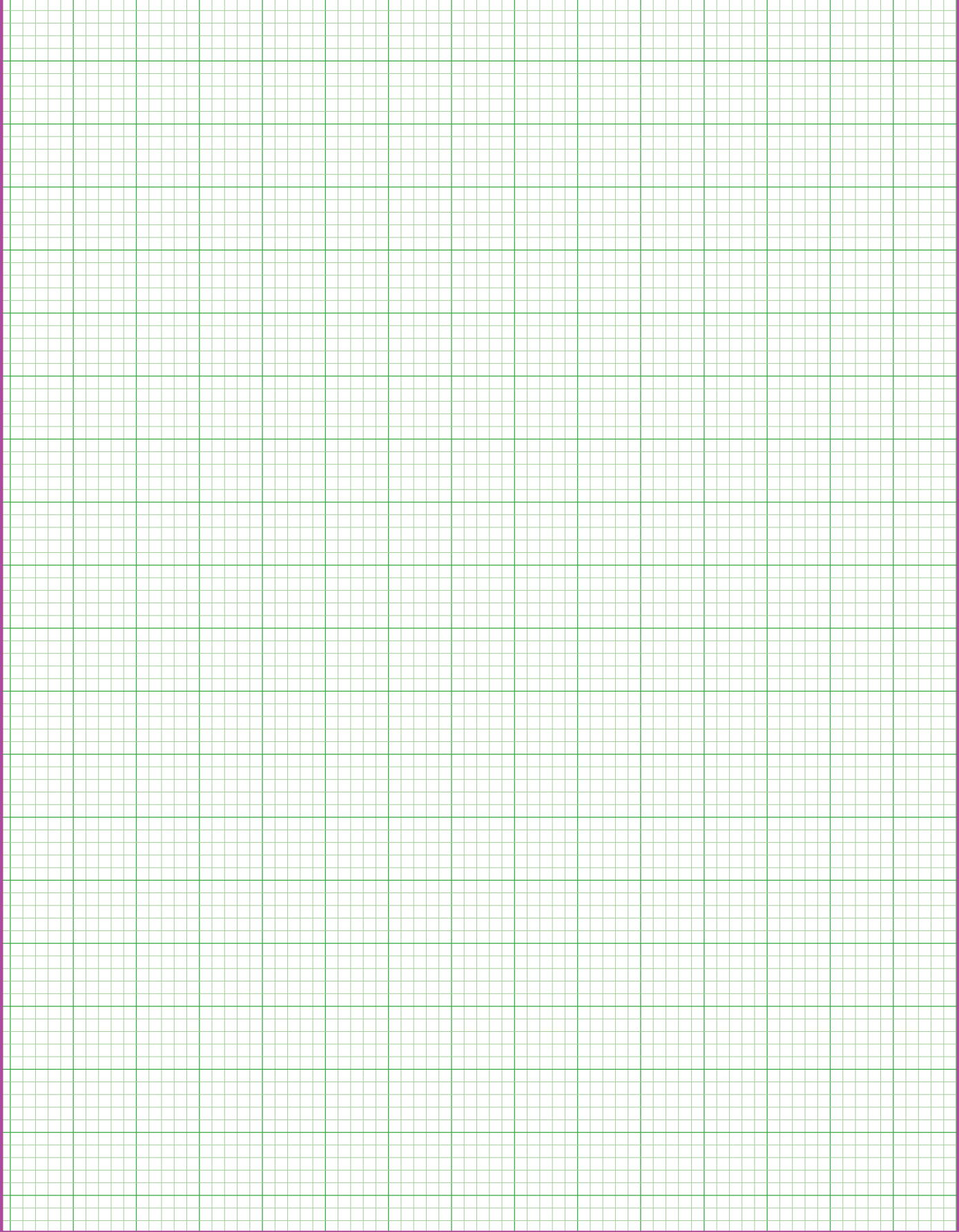
Helpful Facts

- The plants recommended for this lot design attract Monarch butterflies and other Detroit pollinators.
- Native plants have deep roots that help capture, hold, and slowly release stormwater.
- Native perennials and meadows help create a colorful garden.

Planting Tips

- Call ahead to be sure the nursery or garden store has the plants you need for your lot design.
- An alternative seed mix is a Butterfly and Hummingbird Garden Mix, such as ERNMIX-179 or equivalent.
- The best time to plant is in spring or fall.
- Do not plant in extreme heat.
- Water after planting and as needed. Do not let plants dry out.
- Weed weekly or as needed.

Draw Your Lot





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**working
with lots**
A FIELD GUIDE

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

Image Source: JR P., "Cardinal Flower and Ironweed in a Meadow near Floyd, Virginia." 07 August 2010 via Flickr CC BY-NC 2.0.