



Time-to-Lose-the-Lawn- and-Design-Other-Stuff- Seminar

Frank Niccoli

Inputs

✘ It is all about inputs versus outputs!



Grassland or Forest Structurally Complex Ecosystem



Turf

Structurally Simple Ecosystem



Turf vs. Lawn



Sustainable



Sustainable



Sustainable



Sustainable



Sustainable



Sustainable



Perennial Rye + ???



Perennial Rye + Drought tolerant plants



The Survey Says:



Bellis perennis



Achillea Millefolium



Trifolium fragiferum 'Fresa'



Trifolium repens



Galium verum



Prunella vulgaris



Perennial Rye + wet or shade tolerant



Glechoma hederacea



Ranunculus repens



Veronica filiformis.



Broad applications



Anthemis nobilis



Oxalis ssp.



Sustainable lawns need to

Blend well with other grasses and dicot plants.

Have the ability to persist over time.

Maintain adequate densities with modest inputs of water and fertilizer.

Survive significant drought stress.

Produce manageable amount of thatch.

We the People

insure domestic Tranquility, provide for the common Defence
and our Posterity, do ordain and establish this Constitution

Article 1

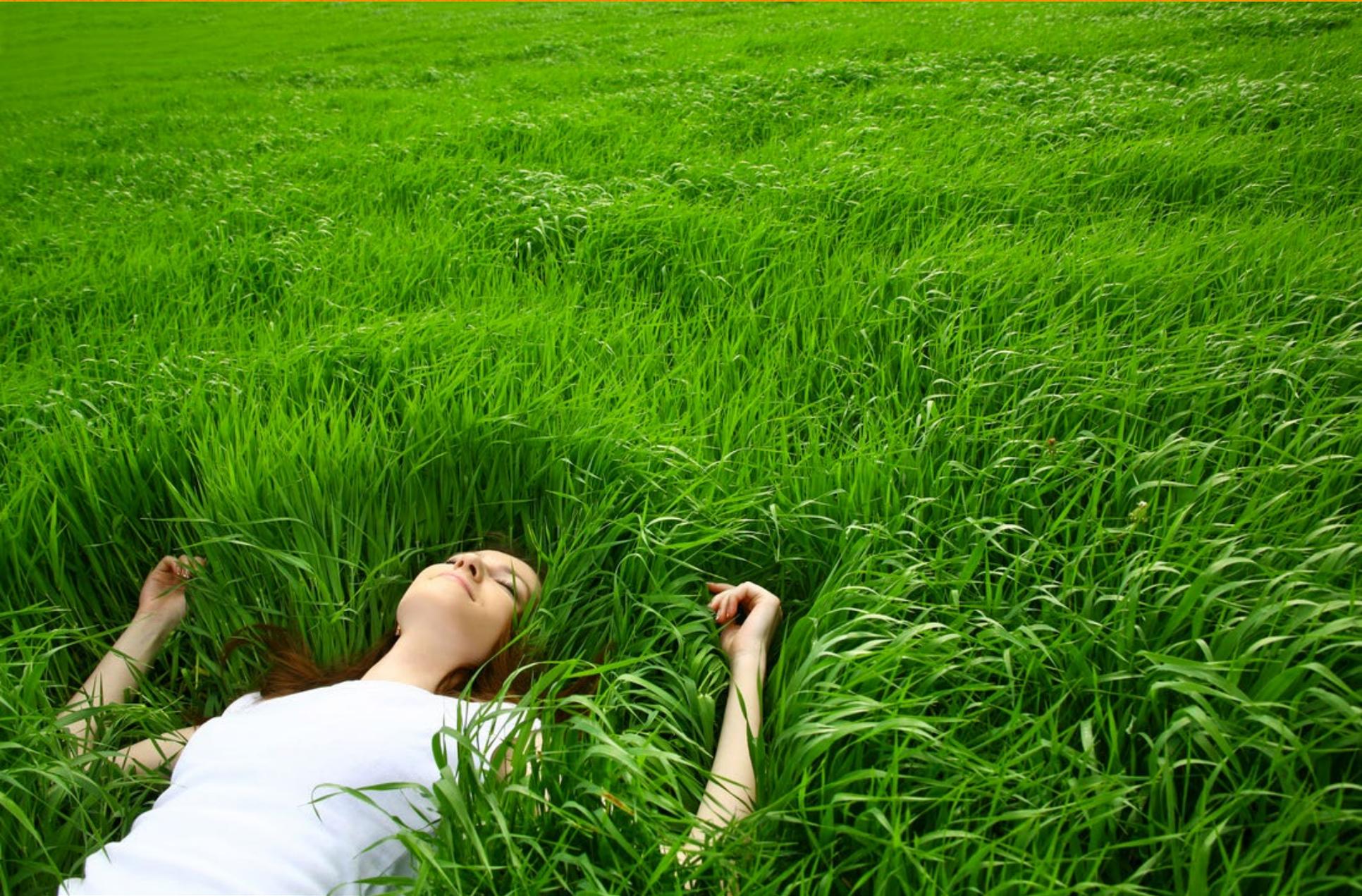
Section 1. All legislative Powers herein granted shall be vested in a Congress of the United States, which shall consist of a Senate and House of Representatives.

Section 2. The House of Representatives shall be composed of Members chosen every second Year by the People of the several States, and each State shall have Representatives in proportion to the Number of free Persons, including three fourths of the Number of free Persons, and all Male Persons shall be a Representative who shall not have attained to the Age of twenty five Years, and seven Years a Citizen of the United States, and who shall, when elected, be seven Years of Age.

Representatives and direct Taxes shall be apportioned among the several States which may be included within this Union according to their Numbers, which shall be determined by adding to the whole Number of free Persons, including three fourths of the Number of free Persons, and all Male Persons, not bound to Servitude or to Military Service, the Number of three fifths of the Number of free Persons in each State, as they shall be determined. The actual Enumeration shall be made within three Years after the first Meeting of the Congress, and within every subsequent Term of seven Years, in such Manner as they shall by Law direct. The Number of Representatives shall not exceed one for every thirty thousand Persons. But each State shall have at least one Representative, and until such Enumeration shall be made, the State of New York shall have the same Number of Representatives as the State of New York had at the first Enumeration. Representatives and direct Taxes shall be apportioned among the several States which may be included within this Union according to their Numbers, which shall be determined by adding to the whole Number of free Persons, including three fourths of the Number of free Persons, and all Male Persons, not bound to Servitude or to Military Service, the Number of three fifths of the Number of free Persons in each State, as they shall be determined. The actual Enumeration shall be made within three Years after the first Meeting of the Congress, and within every subsequent Term of seven Years, in such Manner as they shall by Law direct. The Number of Representatives shall not exceed one for every thirty thousand Persons. But each State shall have at least one Representative, and until such Enumeration shall be made, the State of New York shall have the same Number of Representatives as the State of New York had at the first Enumeration.

Section 3. The Electors in each State shall have the Qualifications requisite for Electors of the most numerous Branch of the State Legislature. No Person shall be a Representative who shall not have attained to the Age of twenty five Years, and seven Years a Citizen of the United States, and who shall, when elected, be seven Years of Age.





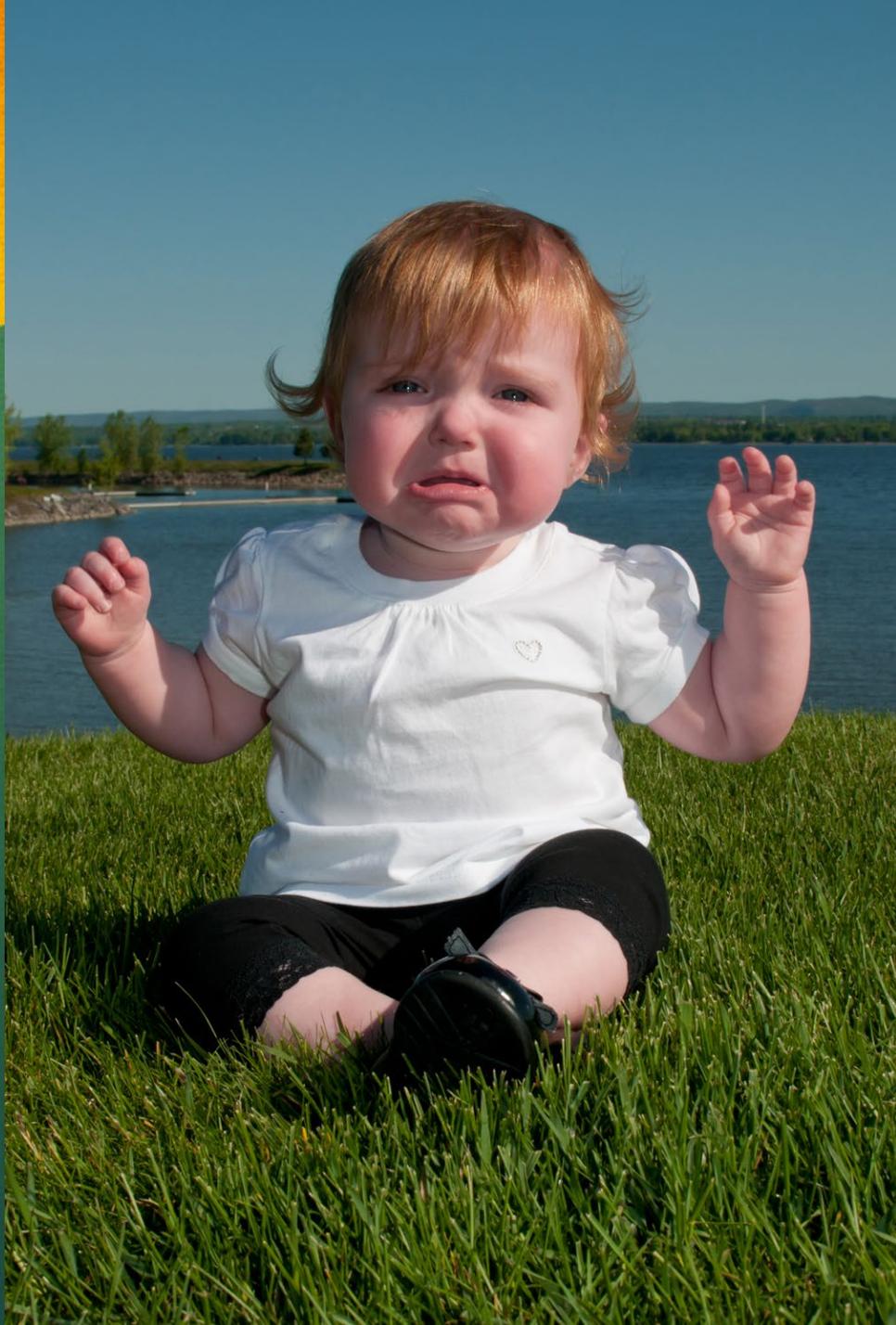
Misconception

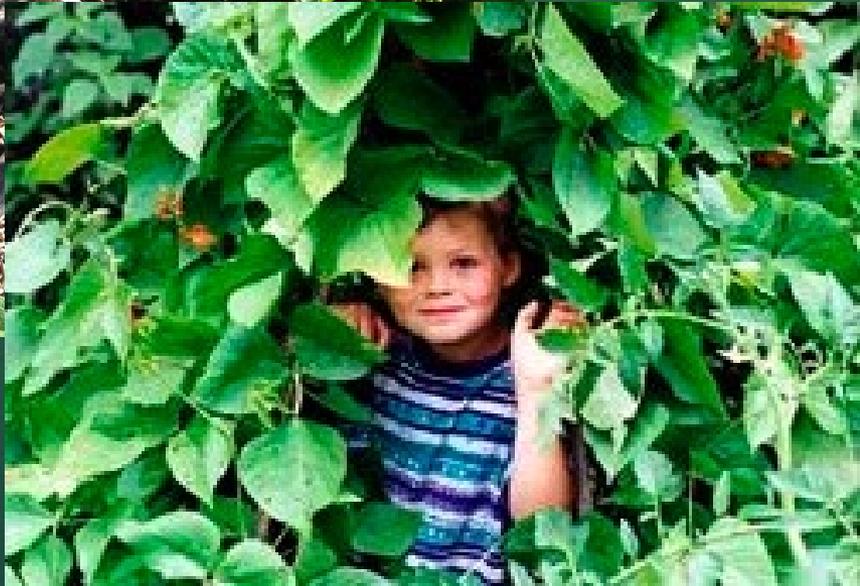




Misconception











Misconception





So much for the theory...here are

- × THE FACTS, and nothing but the Facts.

Typical vs. Sustainable

× Water Usage

× Pests

× Diseases

Typical vs. Sustainable

- Definition and Characterizes
- Landscape Design
- Pests and Diseases
- Water Usage

Typical

- Typical is Defined as:
 - Plants that are customary or popular to include in the landscape
 - High maintenance
 - High water use
 - Optimum environmental conditions
 - More susceptible to insects and disease
 - Nonnative

Typical Plant List

- *Ajuga reptans*
- *Agapanthus orientalis*
- *Acuba japonica*
- *Choisya ternata*
- *Hibiscus*
- *Hydrangea*
- *Ilex cornuta*
- *Photinia*
- *Pittosporum*
- *Rhododendron*
- *Betula papyrifera*
- *Ginkgo biloba*
- *Ophiopogon japonicus*
- Annuals
- Turf

Sustainable

✘ Sustainable is Defined as:

- Plants that are native
- Lower maintenance
- Lower water use
- More sustainable
- Less susceptible to insects and disease

Sustainable Plant List

- *Arctostaphylos uva ursi*
- *Erigeron karvinskianus*
- *Heuchera micrantha*
- *Juncus patens*
- *Leymus condensatus*
- *Panicum virgatum*
- *Penstemon*
- *Phalaris arundinaceae*
- *Salvia*
- *Woodwardia fimbriata*
- *Ceanothus* sp.
- *Cistus*
- *Dendromecon*
- *Eriogonum giganteum*
- *Fremontodendron californicum*
- *Halimocistus wintonensis*
- *Lavendula*
- *Teucrium fruticans*
- *Cercis occidentalis*

Pest Comparison

- Typical- Total of 13 Plants
 - 11 out of 13 were susceptible to pests
 - 10 out of 13 were susceptible to disease
 - 13 pests & 6 diseases were identified for annuals
 - 10 pests & 14 diseases were identified for turf

Pest Comparison

Sustainable- Total of 20 Plants

- 5 out of 20 were susceptible to pests
- 5 out of 20 were susceptible to disease
- 14 out of 20 were resistant to both pests and diseases

Growth Conditions

- Growth Conditions Evaluated
 - Low Maintenance,
 - Low Water
 - Drought Tolerant
 - Easy to Grow
- Typical
 - 2 of 12 had one or more of these conditions
- Sustainable
 - 18 of 20 had one or more of these conditions

garden\garden Construction Cost

| | Sustainable Garden | Typical Garden |
|-----------------------------------|--------------------|------------------|
| <i>Design</i> | <i>\$1500</i> | <i>\$1500</i> |
| <i>Demolition</i> | <i>\$4100</i> | <i>\$2900</i> |
| <i>Soil Prep, Mulch</i> | <i>\$5100</i> | <i>\$3500</i> |
| <i>Irrigation</i> | <i>\$2400</i> | <i>\$3400</i> |
| <i>Boulders, Bender Board</i> | <i>\$3100</i> | <i>\$2800</i> |
| <i>Infiltration Pit</i> | <i>\$3900</i> | <i>None</i> |
| <i>Permeable Paving</i> | <i>\$2000</i> | <i>None</i> |
| <i>Total</i> | <i>\$22,100</i> | <i>\$14,100</i> |
| <i>Landscape Area</i> | <i>1998 ft.2</i> | <i>1879 ft.2</i> |
| <i>Cost per sq. ft.</i> | <i>\$11.06</i> | <i>\$7.50</i> |

O-O-O-O-O-H!



The Facts

Traditional Landscape



57,000 Gallons

WATER



670 Pounds

YARD WASTE



80 Hours

MAINTENANCE

O-O-O-O-O-O-O-O-H!



The Facts

Sustainable Landscape



6,000 Gallons

WATER



250 Pounds

YARD WASTE



15 Hours

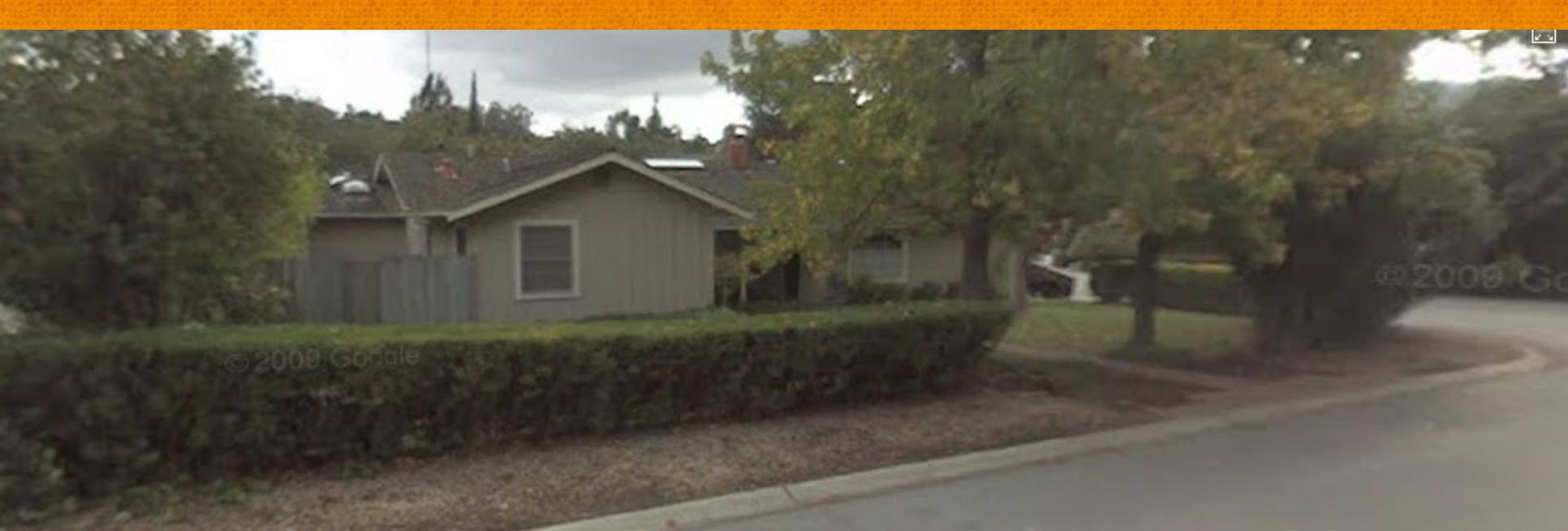
MAINTENANCE

Show me the Money!

| | Spray Heads | Drip System |
|---------------------------------------|---------------------------|---------------------------|
| Typical | 75402.88 gallons/year | 47881.36 gallons/year |
| Sustainable | 33830.27 gallons/year | 20974.77 gallons/year |
| Difference/gallons | 41572 gallons/year | 26907 gallons/year |
| You could save how much \$\$\$\$\$\$? | \$2088.60 | \$1345.35 |

Water at a nickel/gallon and about 2100 square feet of garden

Lawn Reduction

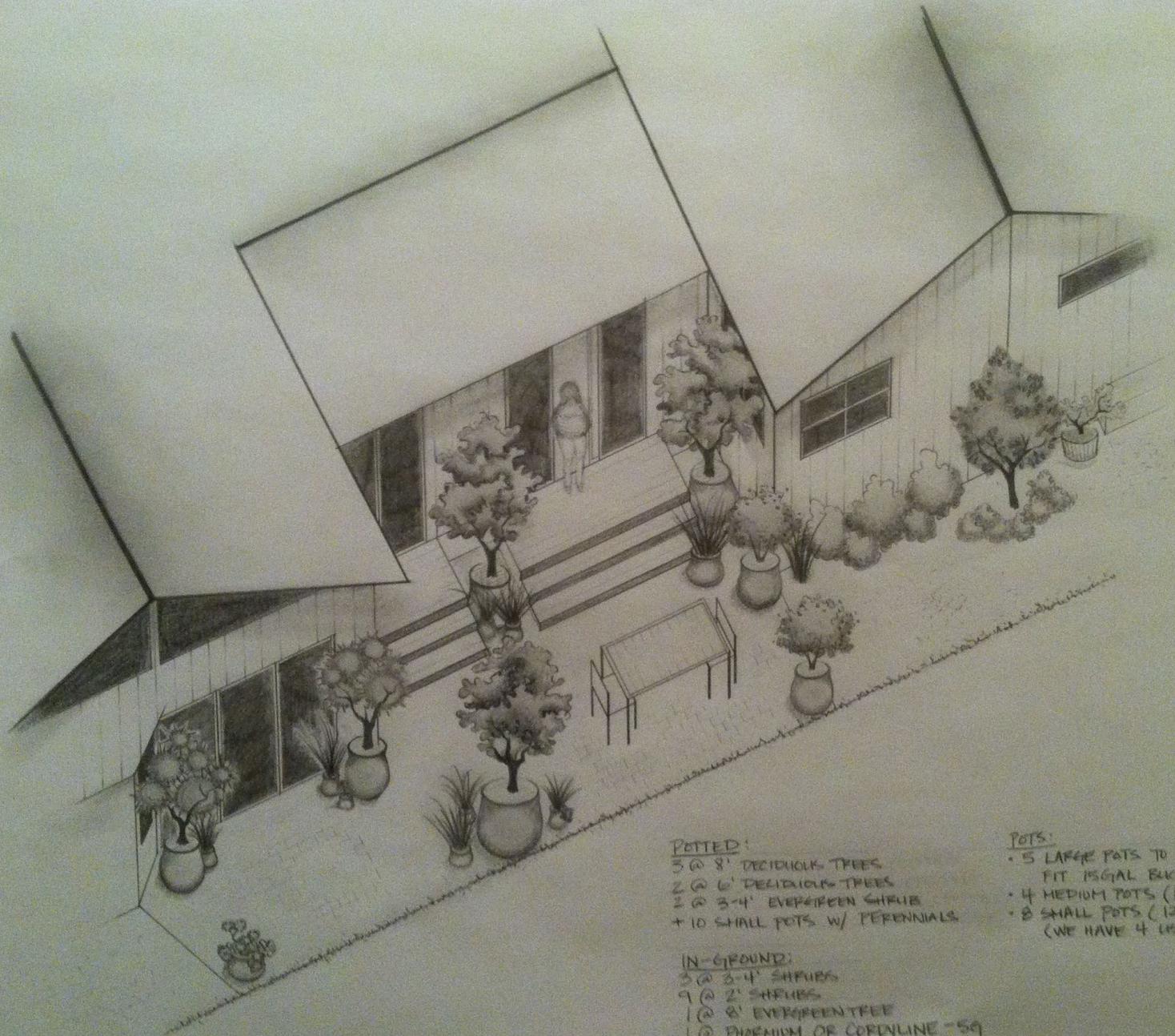












PRELIMINARY;
NOT FOR CONSTRUCTION

KATHEY HENLEY
JUNE 11, 2012

- POTTED:
- 3 @ 8' DECIDUOUS TREES
 - 2 @ 6' DECIDUOUS TREES
 - 2 @ 3-4' EVERGREEN SHRUB
 - + 10 SMALL POTS W/ PERENNIALS

- POTS:
- 5 LARGE POTS TO FIT 15 GAL BUCKETS
 - 4 MEDIUM POTS (18"-21")
 - 8 SMALL POTS (12") (WE HAVE 4 USABLE)

- IN-GROUND:
- 3 @ 2-4' SHRUBS
 - 9 @ 2' SHRUBS
 - 1 @ 8' EVERGREEN TREE
 - 1 @ PHORMIUM OR CORDYLINE - 59





SOLD

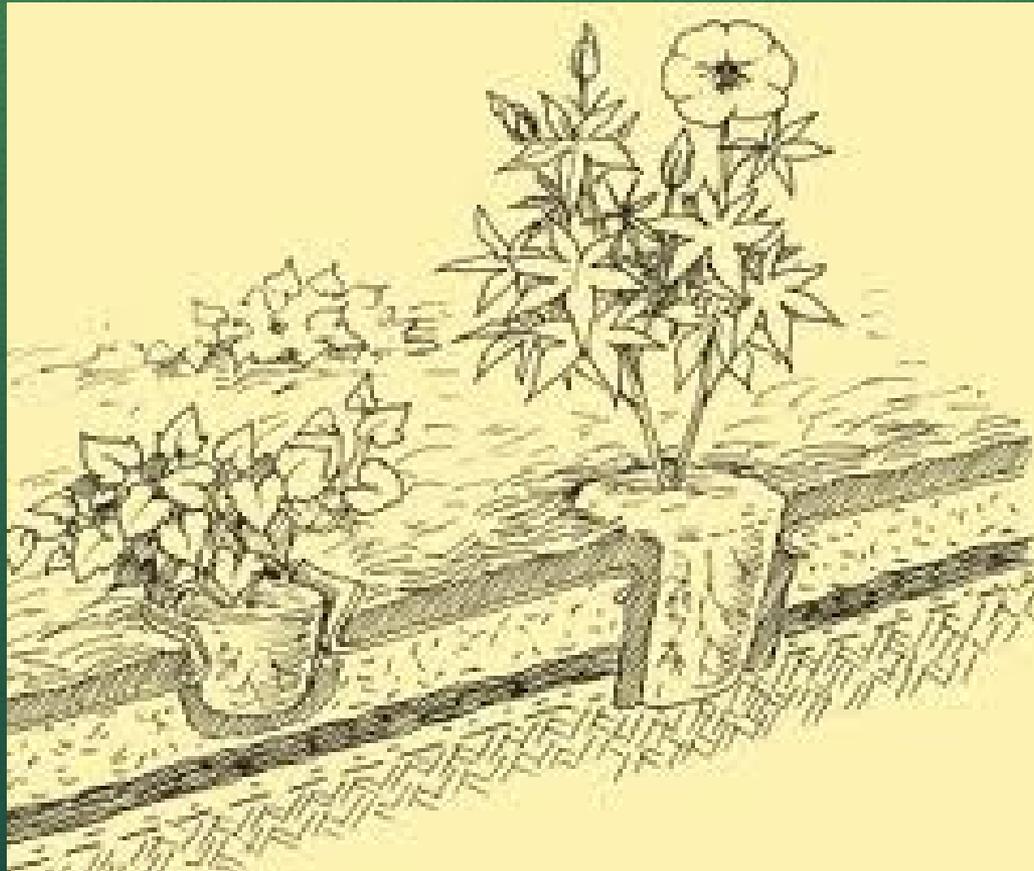
Sheet Mulching



Sheet Mulching



Sheet Mulching

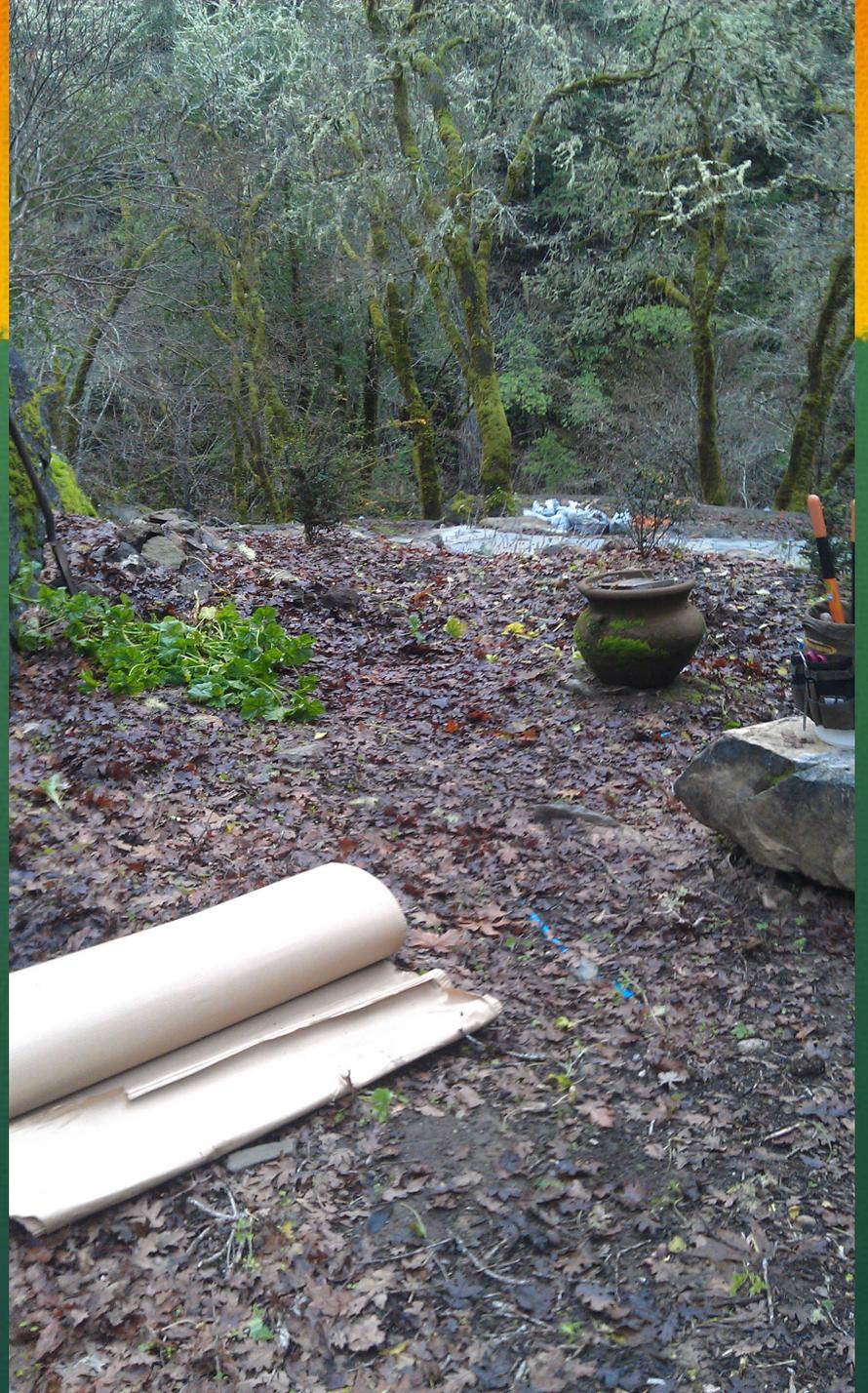
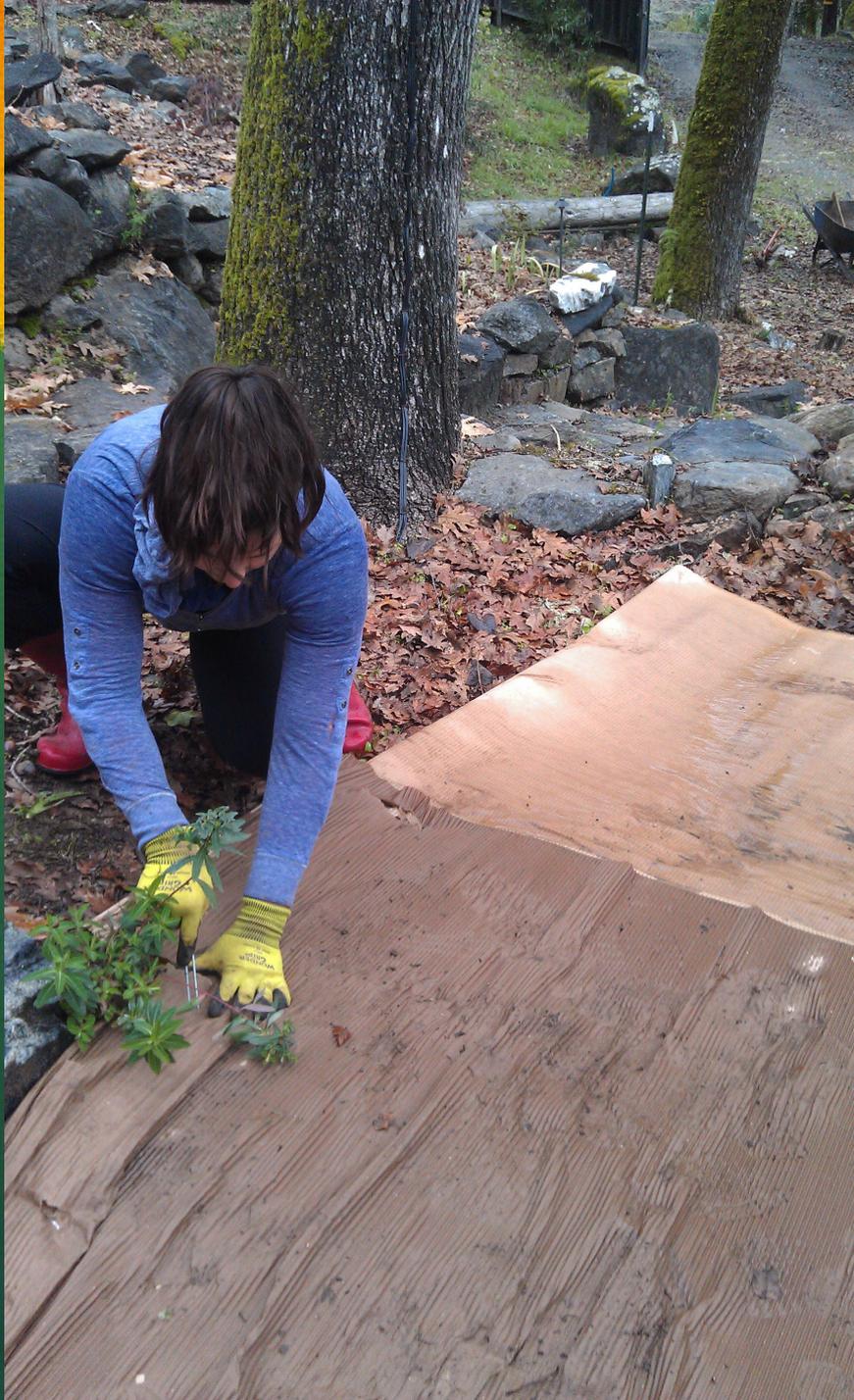


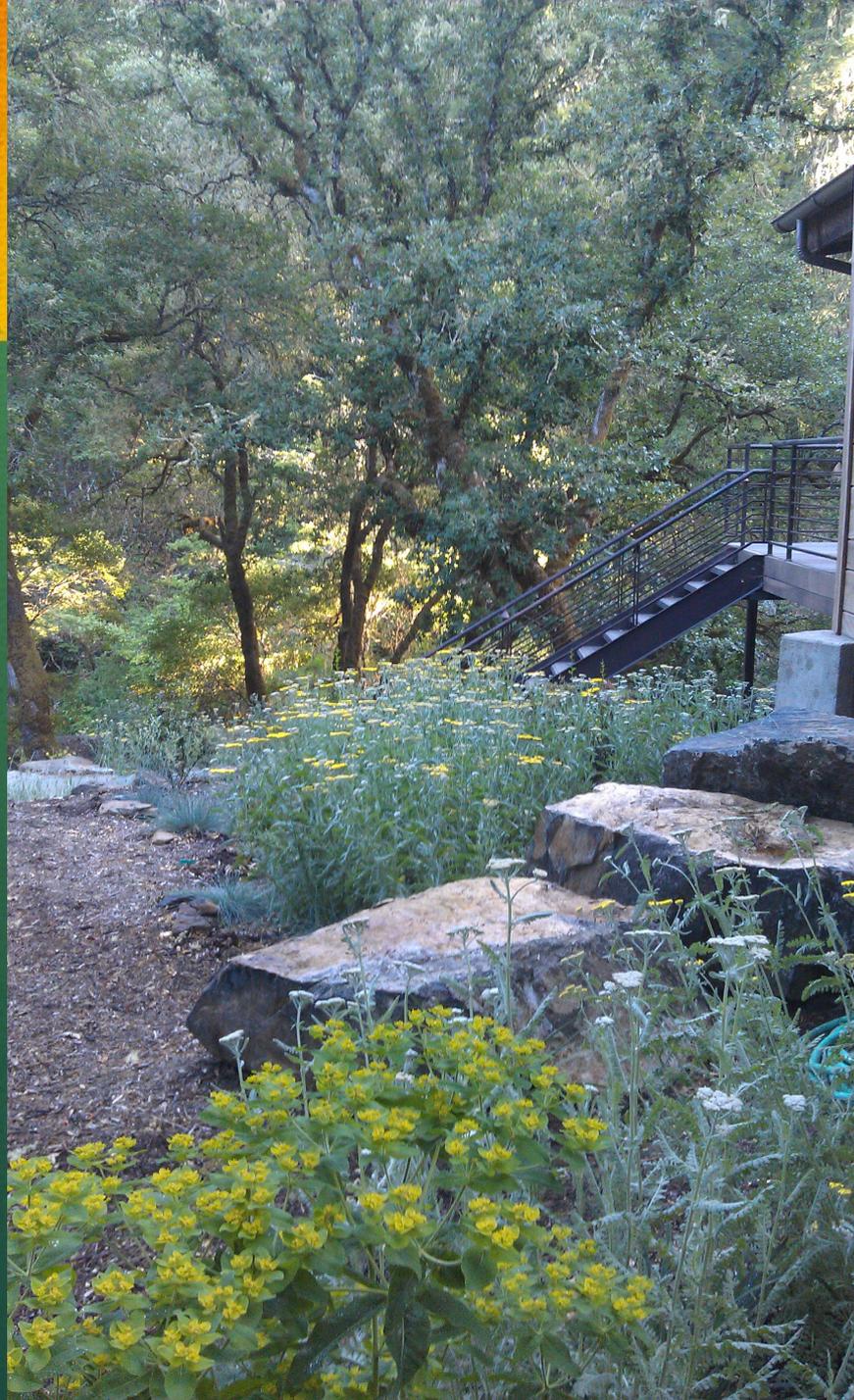




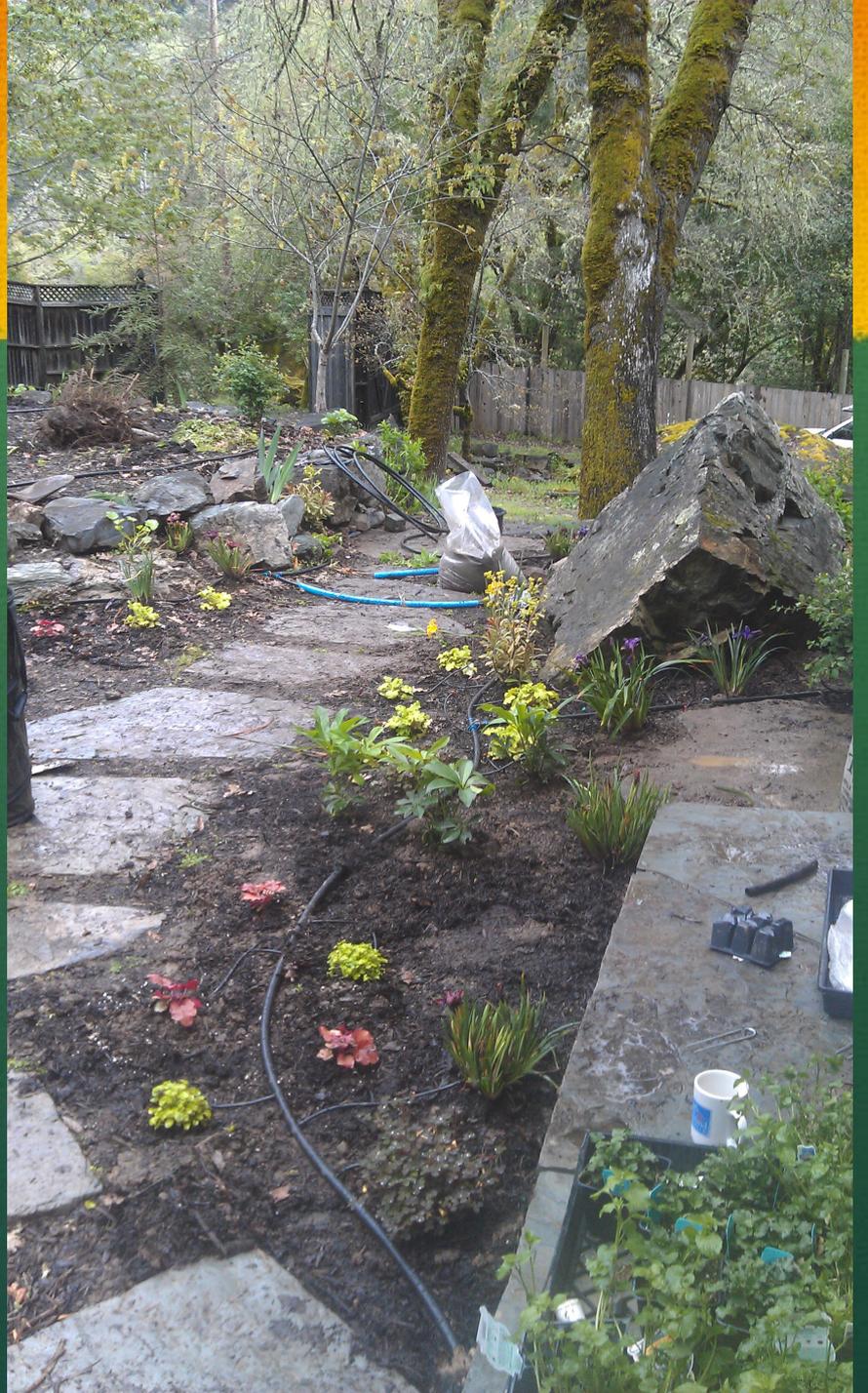


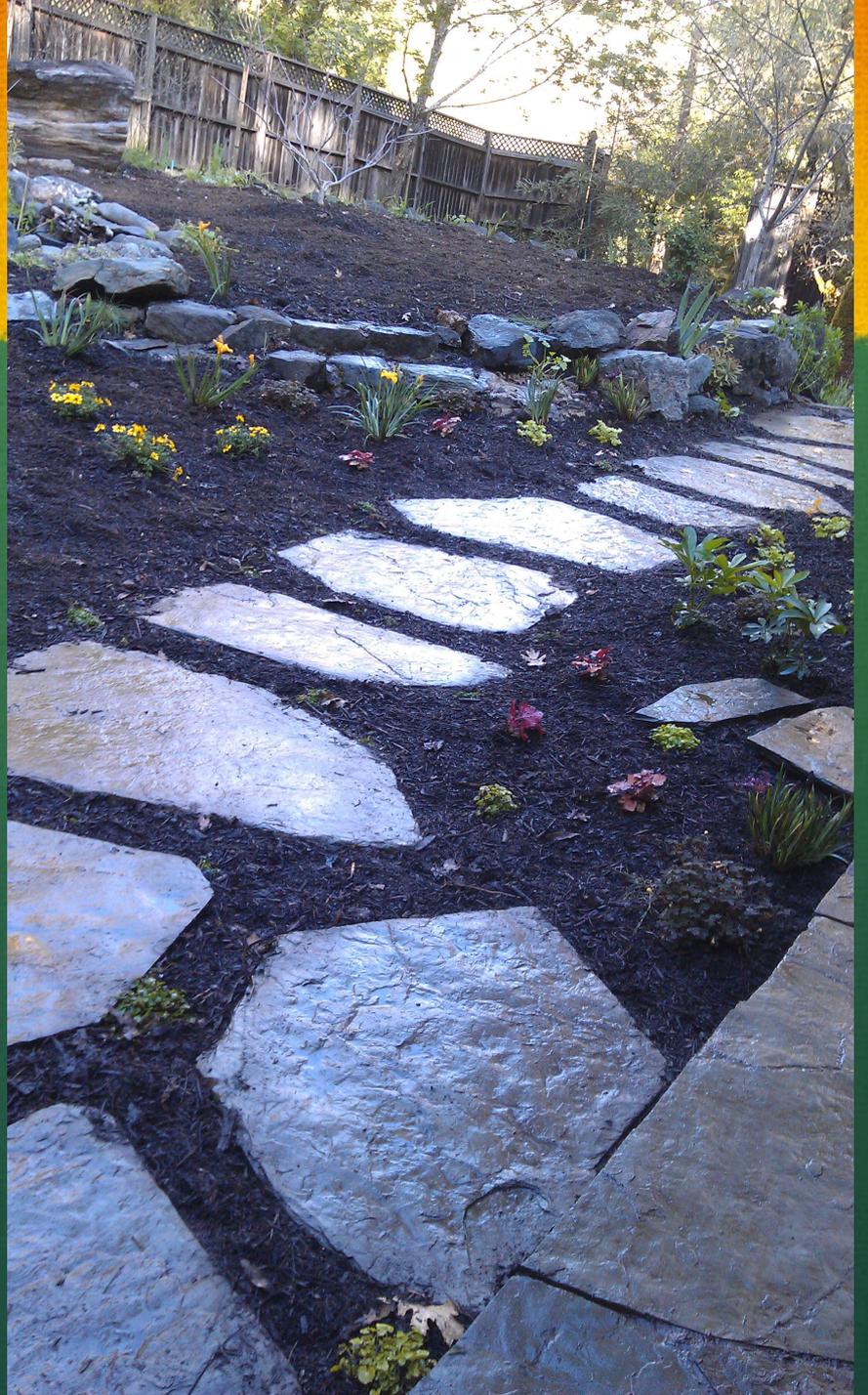
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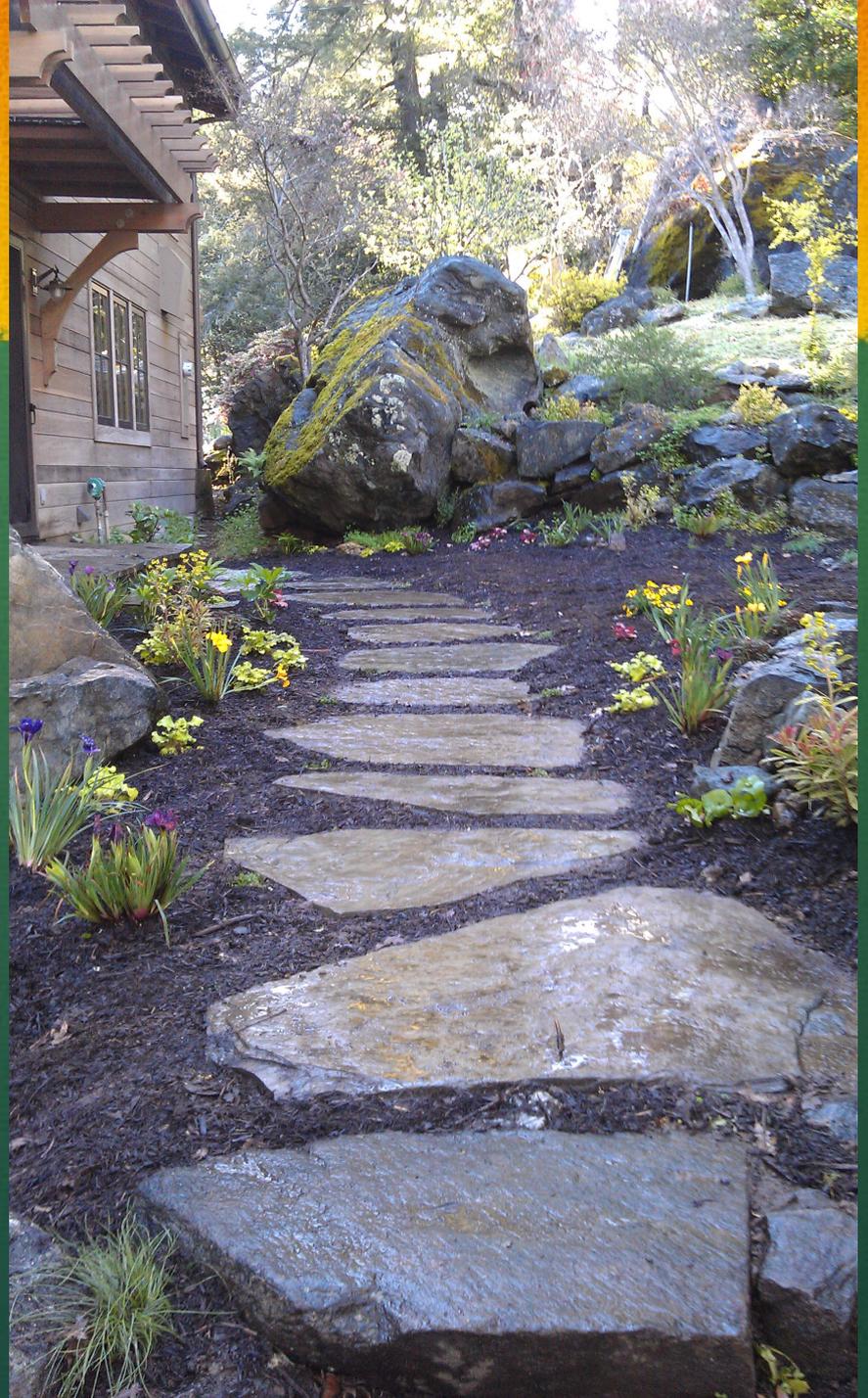




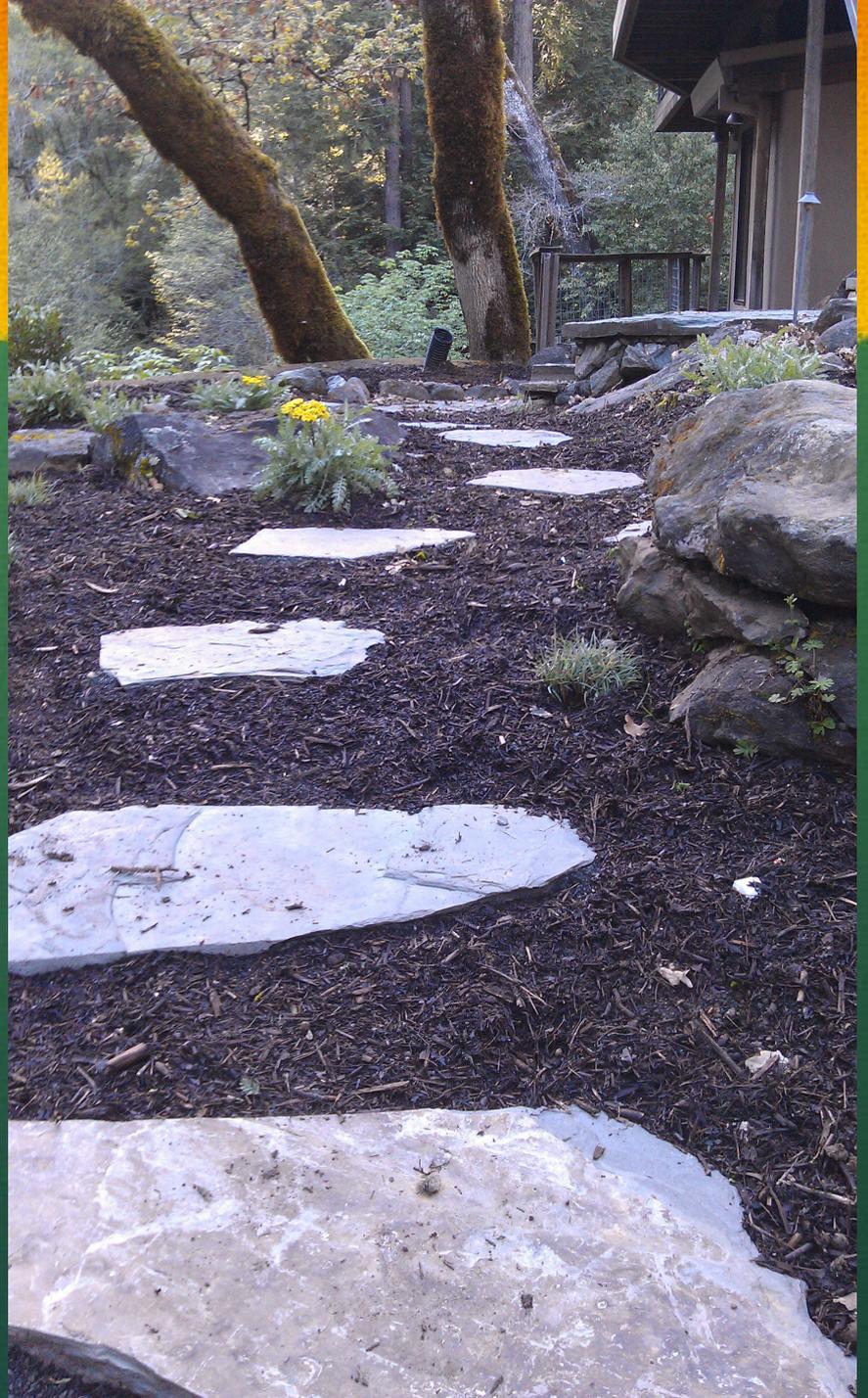
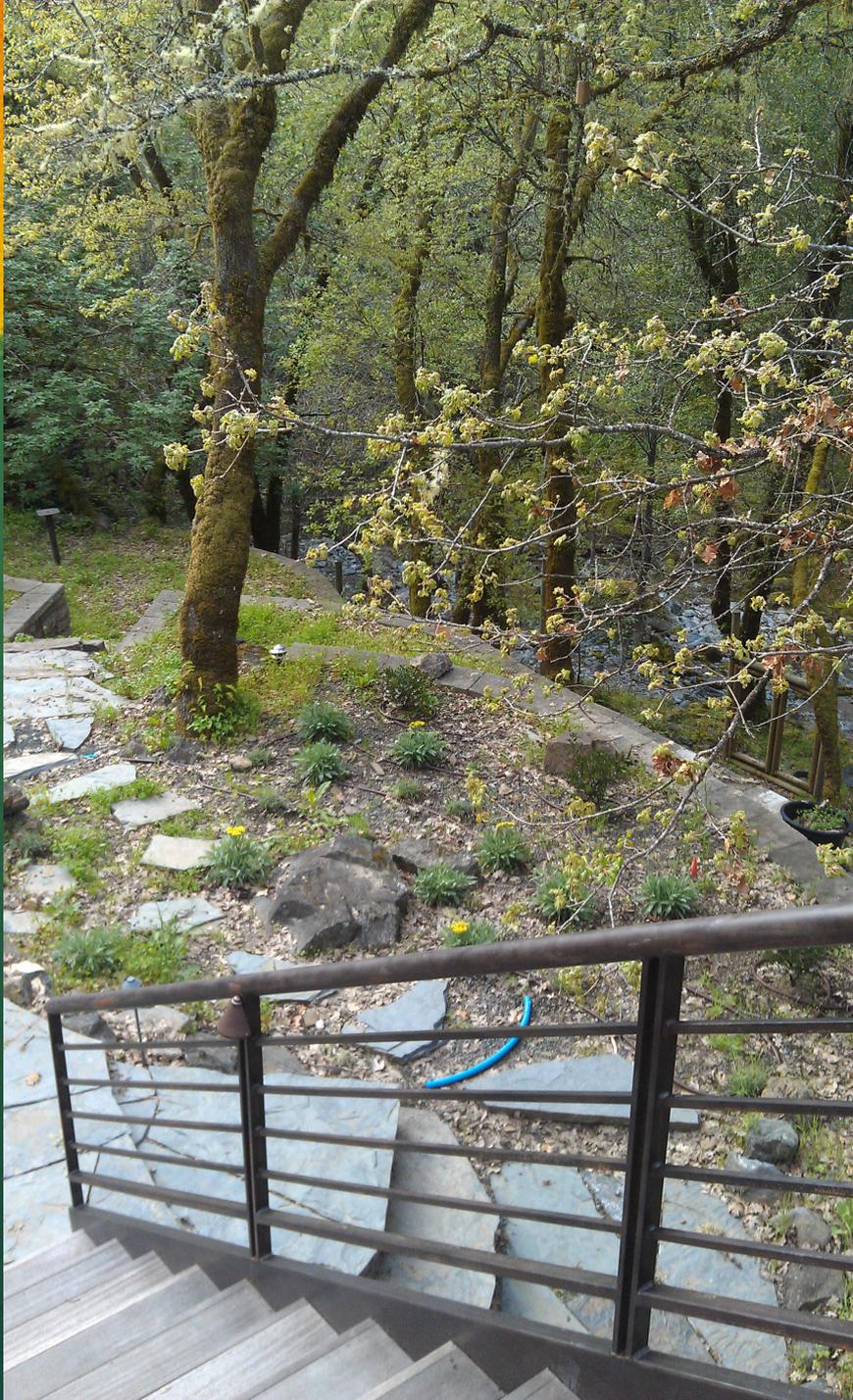








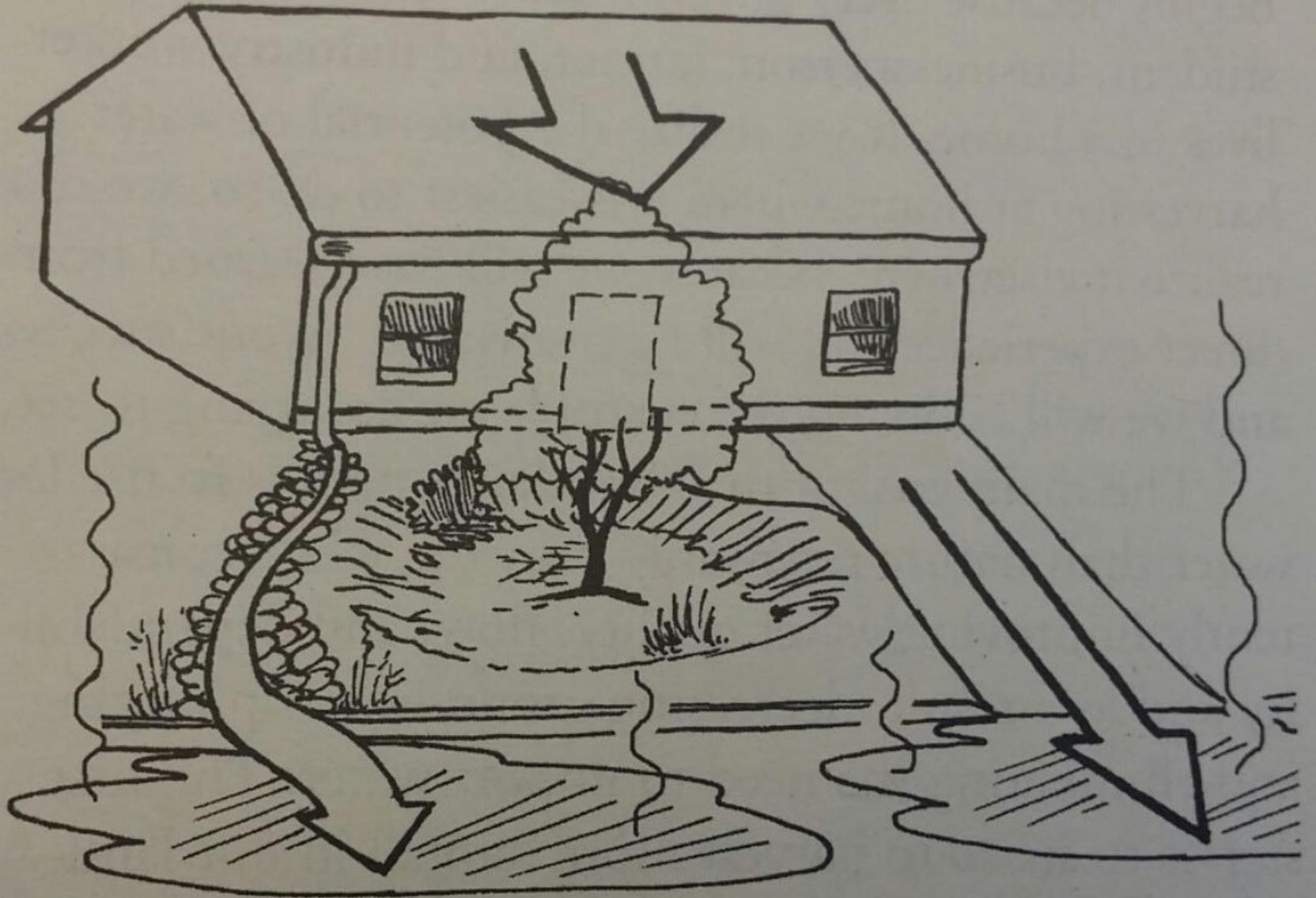






Rain Garden

Misconception





Eye Care
832-EYES
Eye Exams • Sales • Eyewear

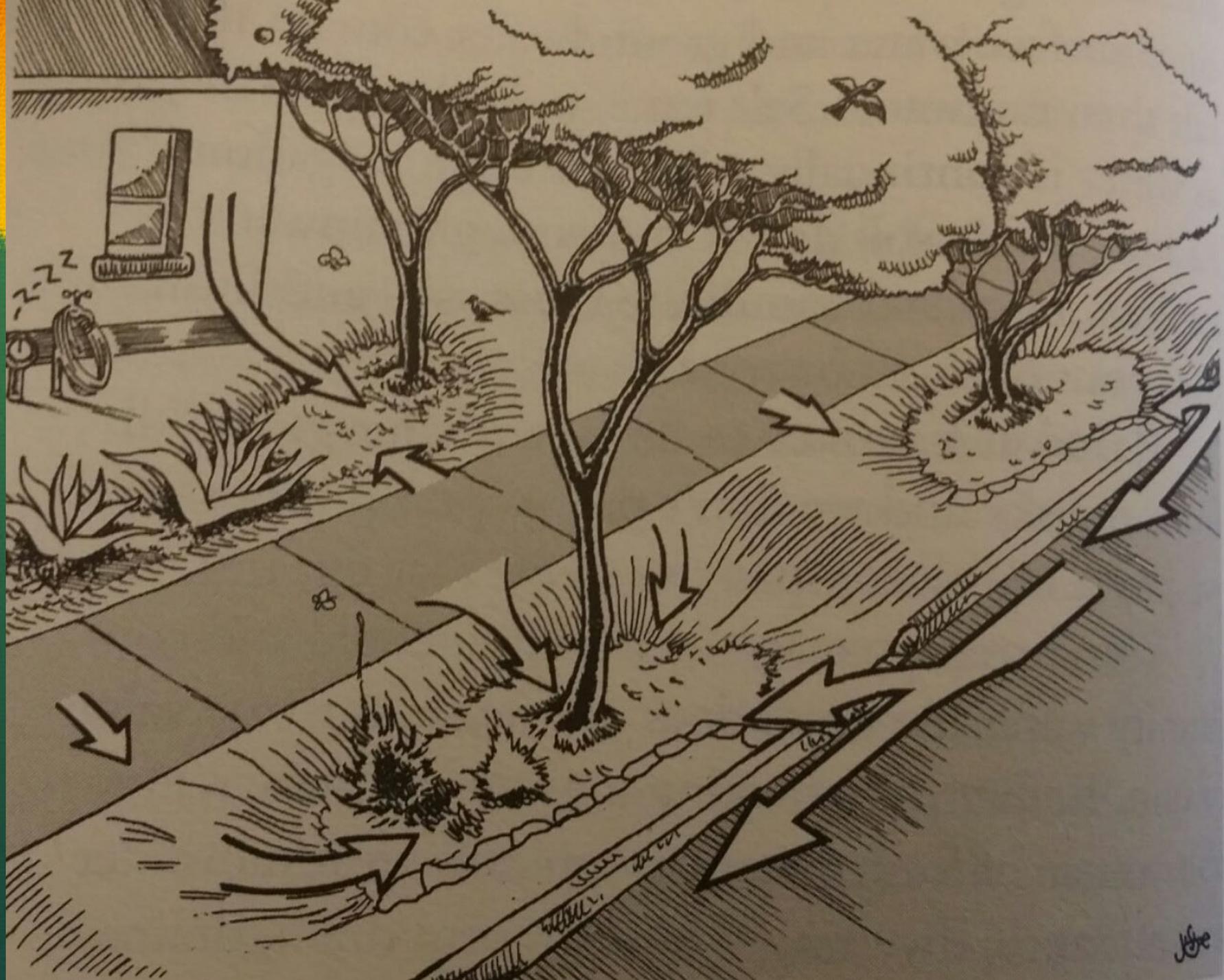
STARBUCKS COFFEE

NOAH'S NEW YORK BAGELS
LAKESHORE

YIELD TO SIDE

Handicapped parking permit
is required. Vehicles with
plates issued by persons with
physical disabilities may
be parked in this area.
Other vehicles may be restricted at
certain times.

Posh







One Step Further...

Rocks & Berms







digitalschick

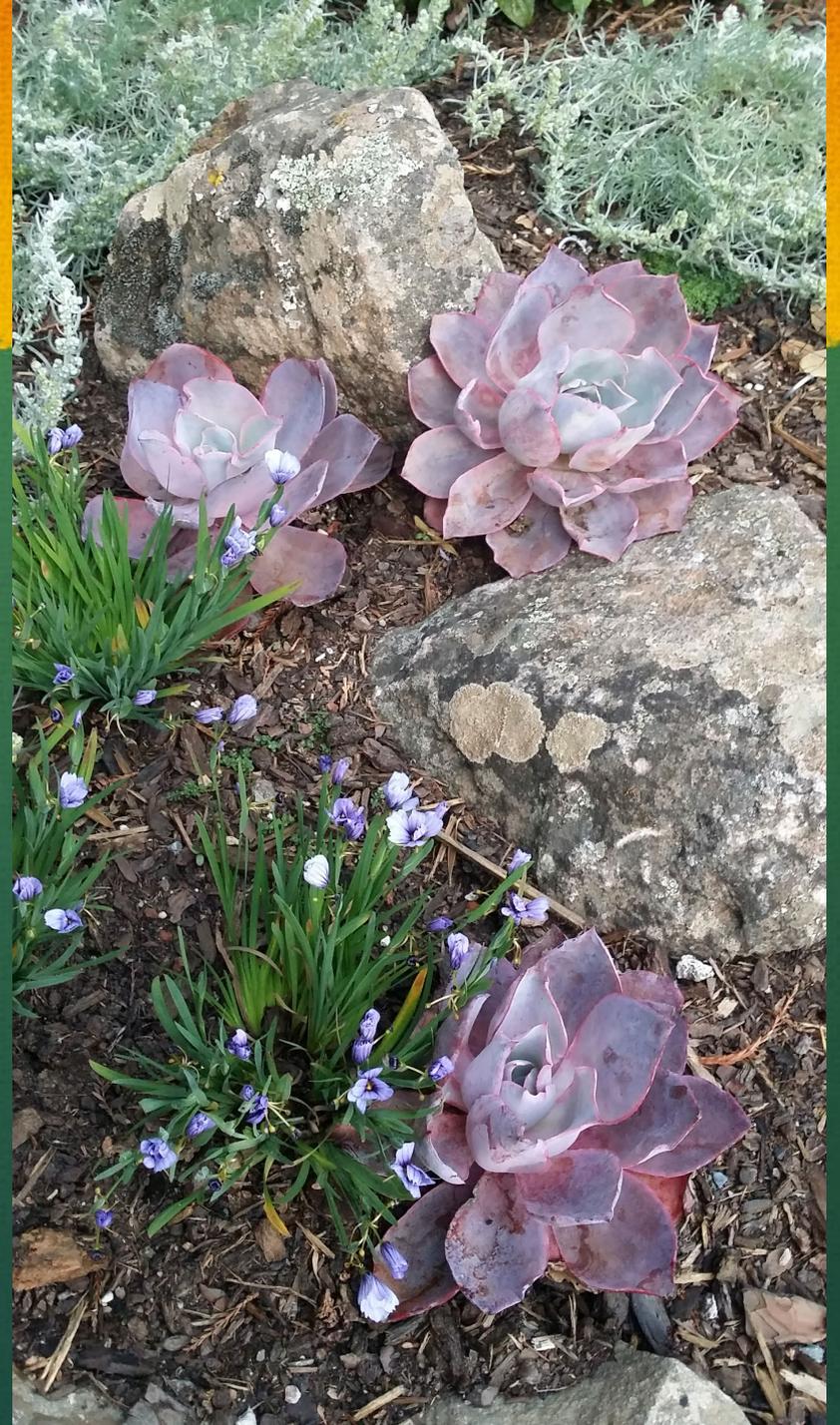
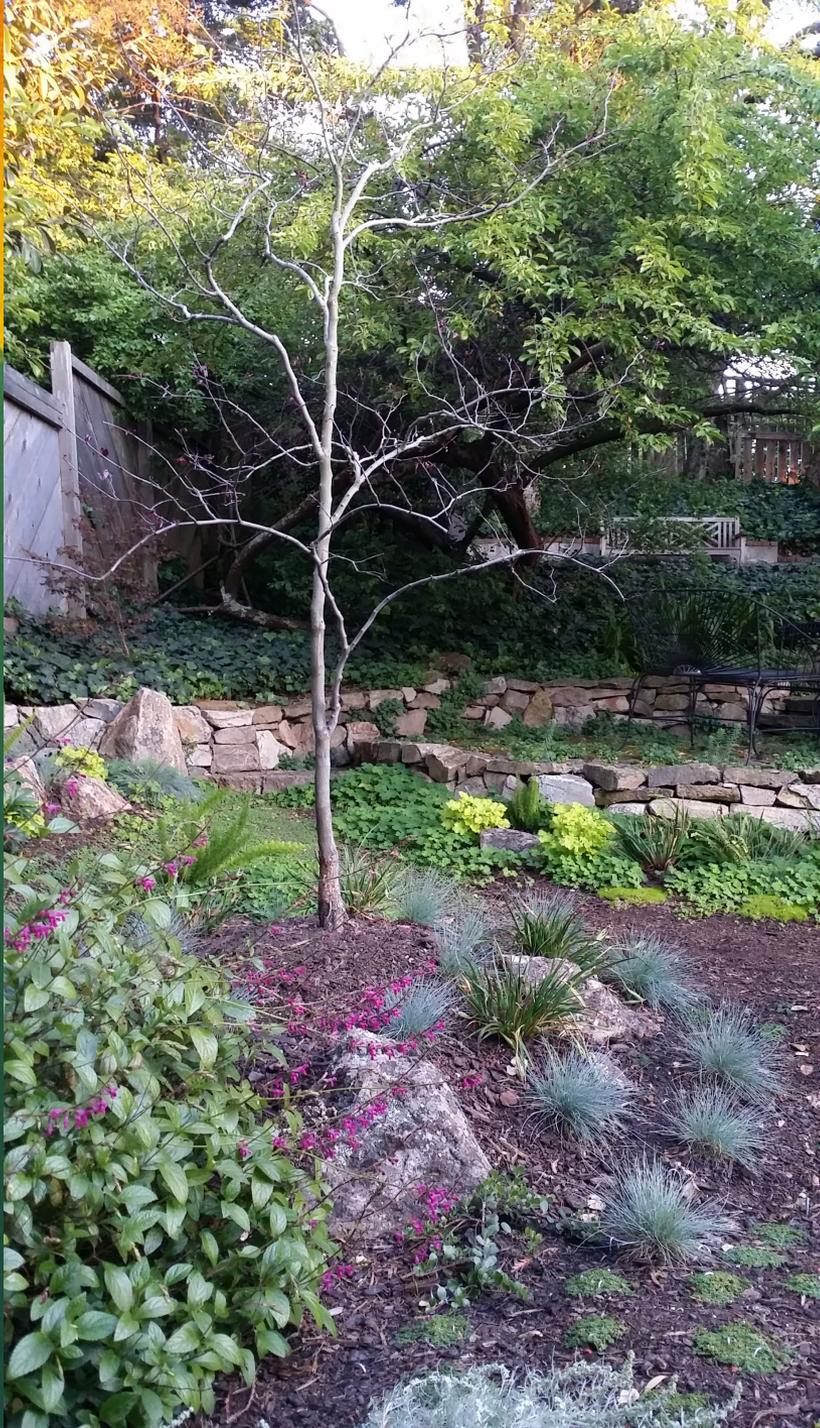






















510

Boulders



Boulders



Mounds and Low Points

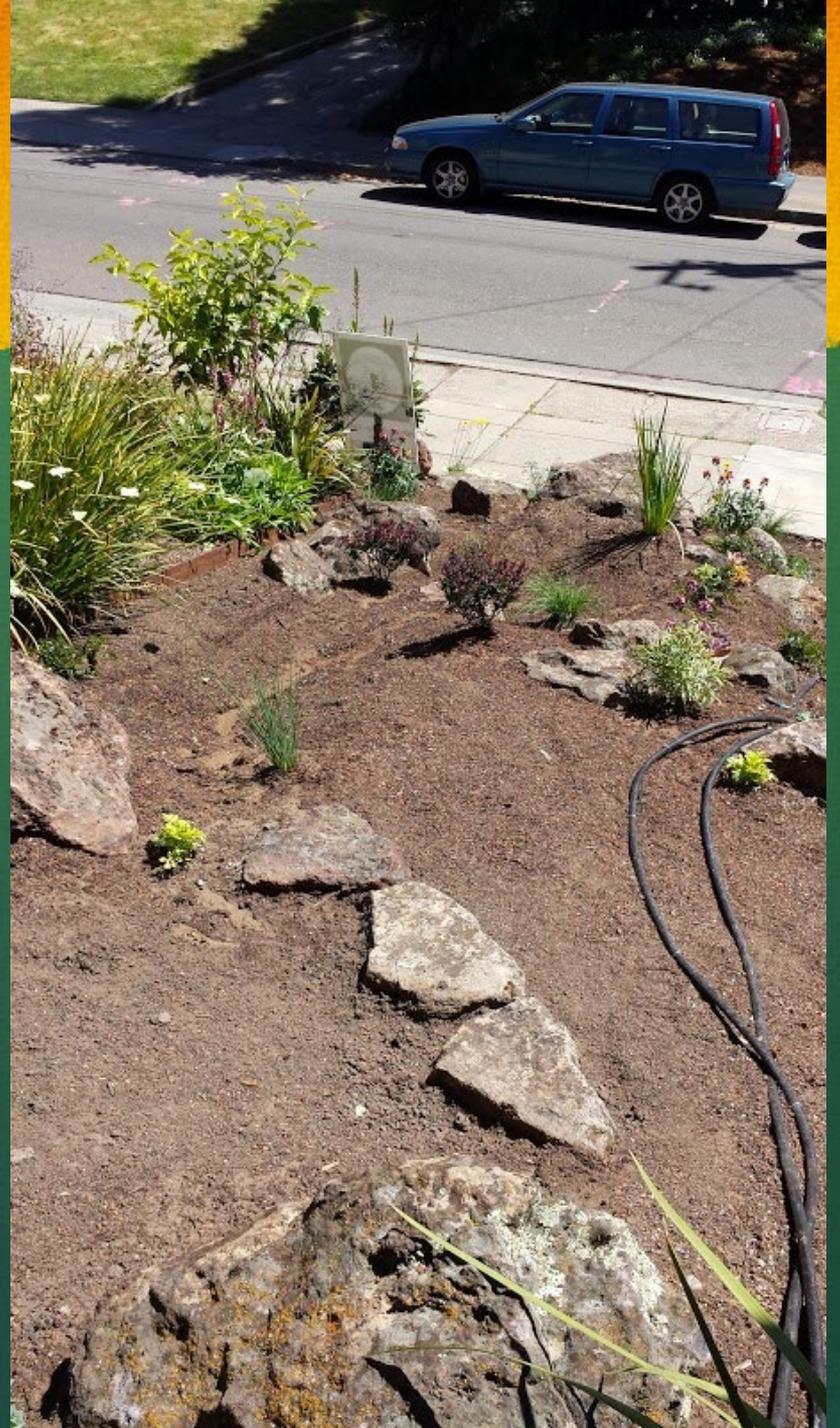




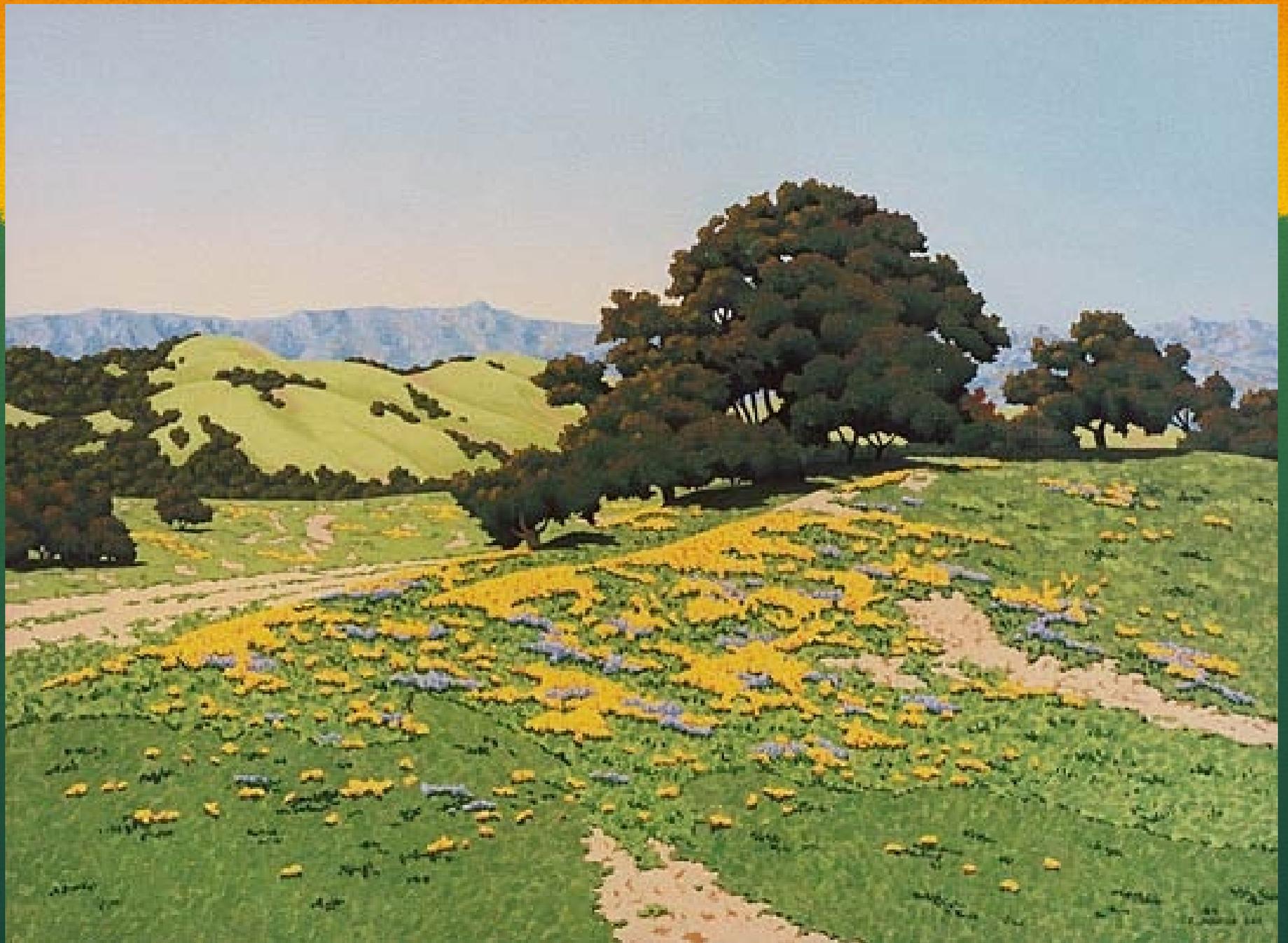
Trees















The Works

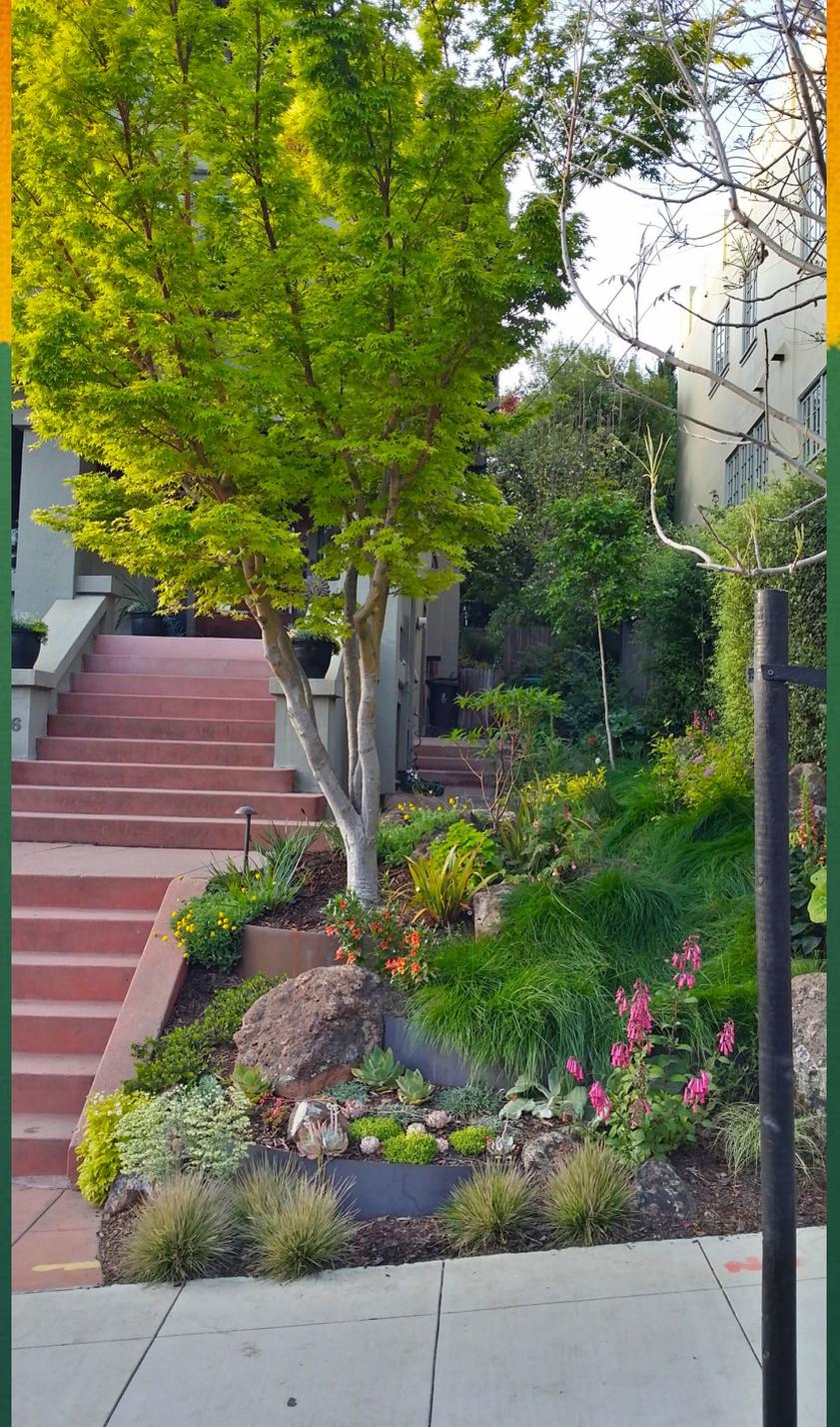


516

516



516



Rain Swale







Low-Water Plantings









Permeable Paving





Stone, Metal



No-Mow Meadow



Boulders

























5306







3109

















LAWN TO VEGGIES

FREEDOM LAWNS



FREEDOM LAWNS



FREEDOM LAWNS



CALIFORNIA NATIVES





CLARKIA AMONEA



✕ SUN WITH WATER

✕ SMALL UNDER 3'

ERIGERON GLAUCUS



GILIA CAPITATA



PACIFIC COAST NATIVE IRIS



LUPINES



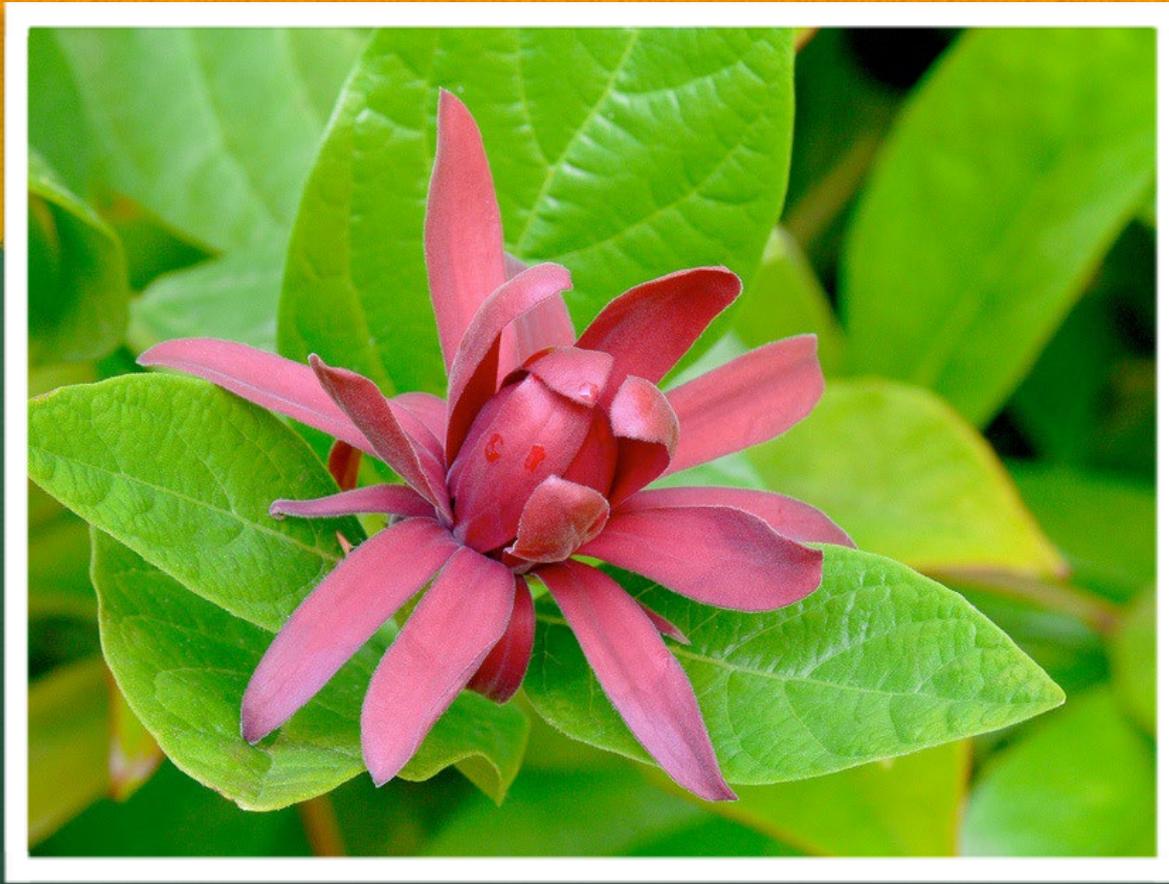
MIMULUS GUTTATUS



SISYRINCHIUM
CALIFORNICUM



BERBERIS AQUIFOLIUM



CALYCANTHUS
OCCIDENTALIS



CARPENTERIA
CALIFORNICA



CERCIS OCCIDENTALIS



GALVESIA SPECIOSUM



RHAMNUS CALIFORNICA



RIBES AUREUM



RIBES SANGUINEUM



TRICHOSTEMMA
LANATUM



LONICERA INVOLUCRATA



RHUS OVATA



ARCTOSTAPHYLOS



BACCHARIS PILULARIS



CEANOTHUS GRISEUS



ERIOGONIUM GIGANTEUM



ERIOGONUM GRANDE



PENSTEMON
HETEROPHYLLUS



SALVIA LEUCOPHYLLA



SISYRINCHIUM BELLUM



**ZAUSCHNERIA
CALIFORNICA**



DENDROMECON
HARFORDII



OENOTHERA HOOKERI



ROMNEYA COULTERI



SALVIA CLEVELANDII



AESCULUS CALIFORNICA



ARBUTUS MENZESII



FREMONTODENDRON
CALIFORNICUM



AQUILEGIA FORMOSA



DICENTRA FORMOSA



VACCINIINIUM OVATUM



ARISTOLOCHIA
CALIFORNICA



**HETEROMELES
ARBUTIFOLIA**



PRUNUS ILICIFOLIA



PRUNUS LYONII



ARTEMESIA CALIFORNICA



DODECATHEON
HENDERSONII



MIMULUS AURANTIACUS



HOLODISCUS DISCOLOR



LEPICHINIA CALYCINA



RIBES SPECIOSUM



**SYMPHORICARPUS
RIVULARIS**



GARRYA ELLIPTICA

Sustainability

