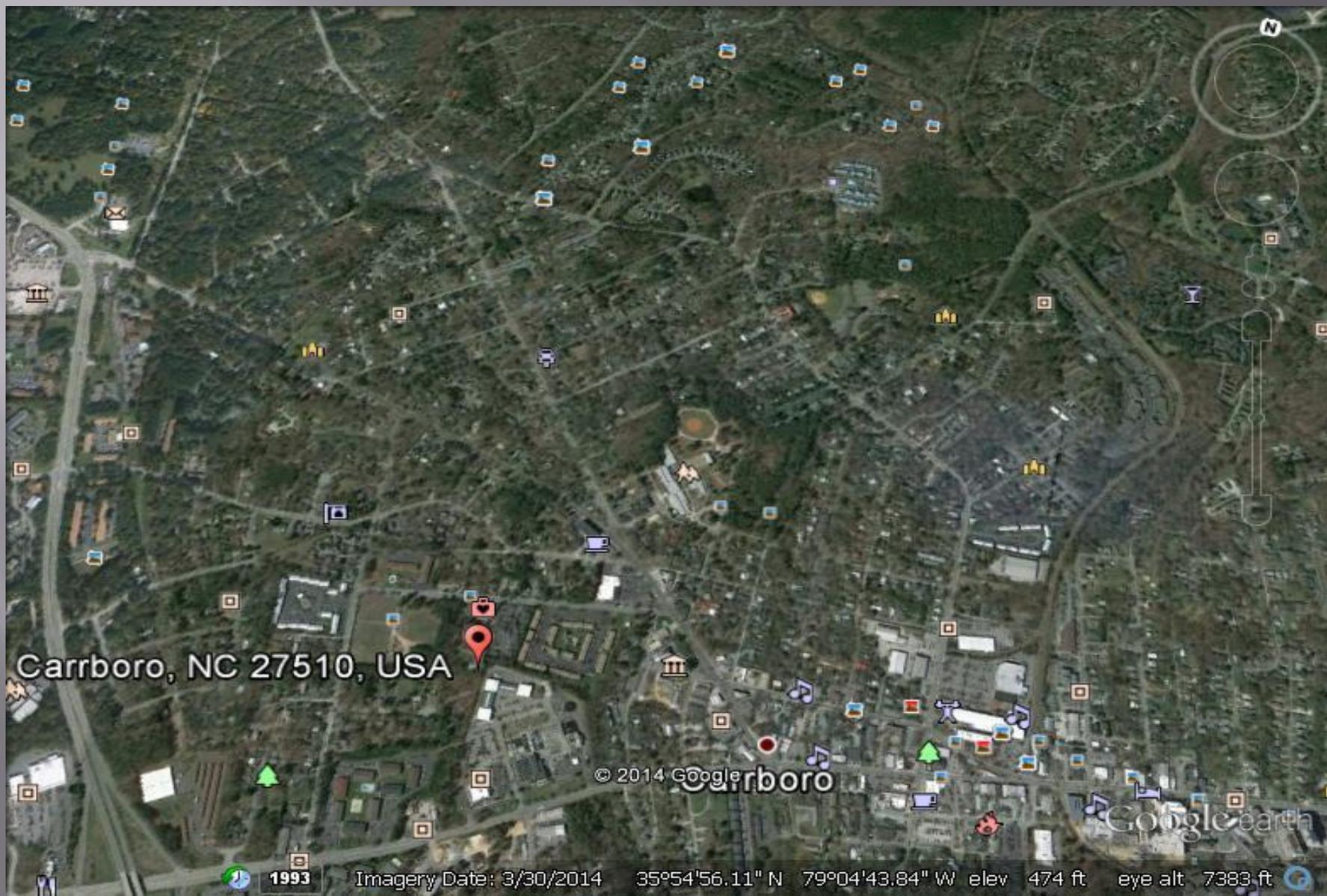


# Town of Carrboro Energy Forum

October 22, 2014



# Carrboro, north of Main Street



# Carrboro Neighborhood one mile north of downtown



© 2014 Google

Google earth



1993

Imagery Date: 3/30/2014

35°55'24.04" N

79°05'08.98" W

elev

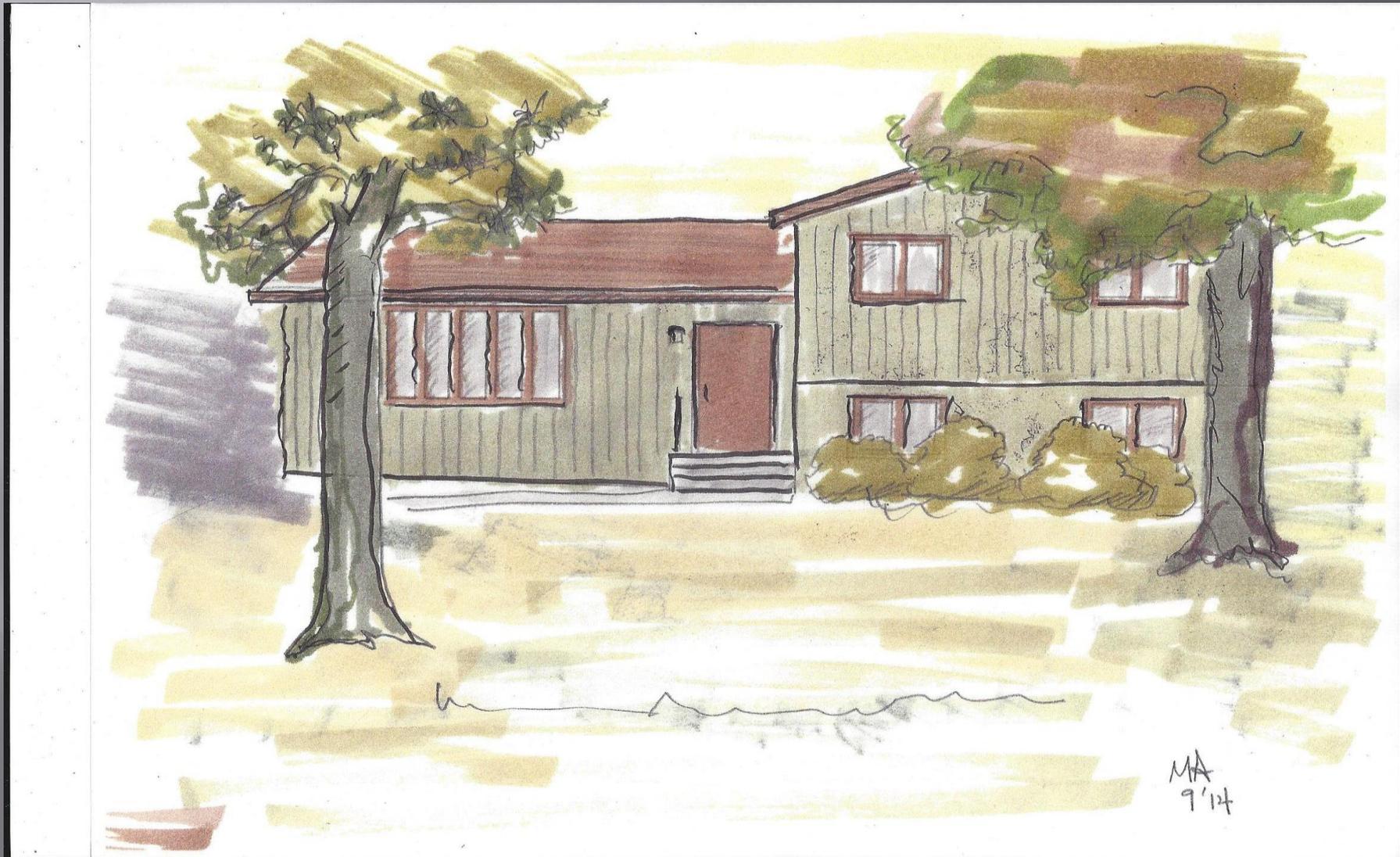
472 ft

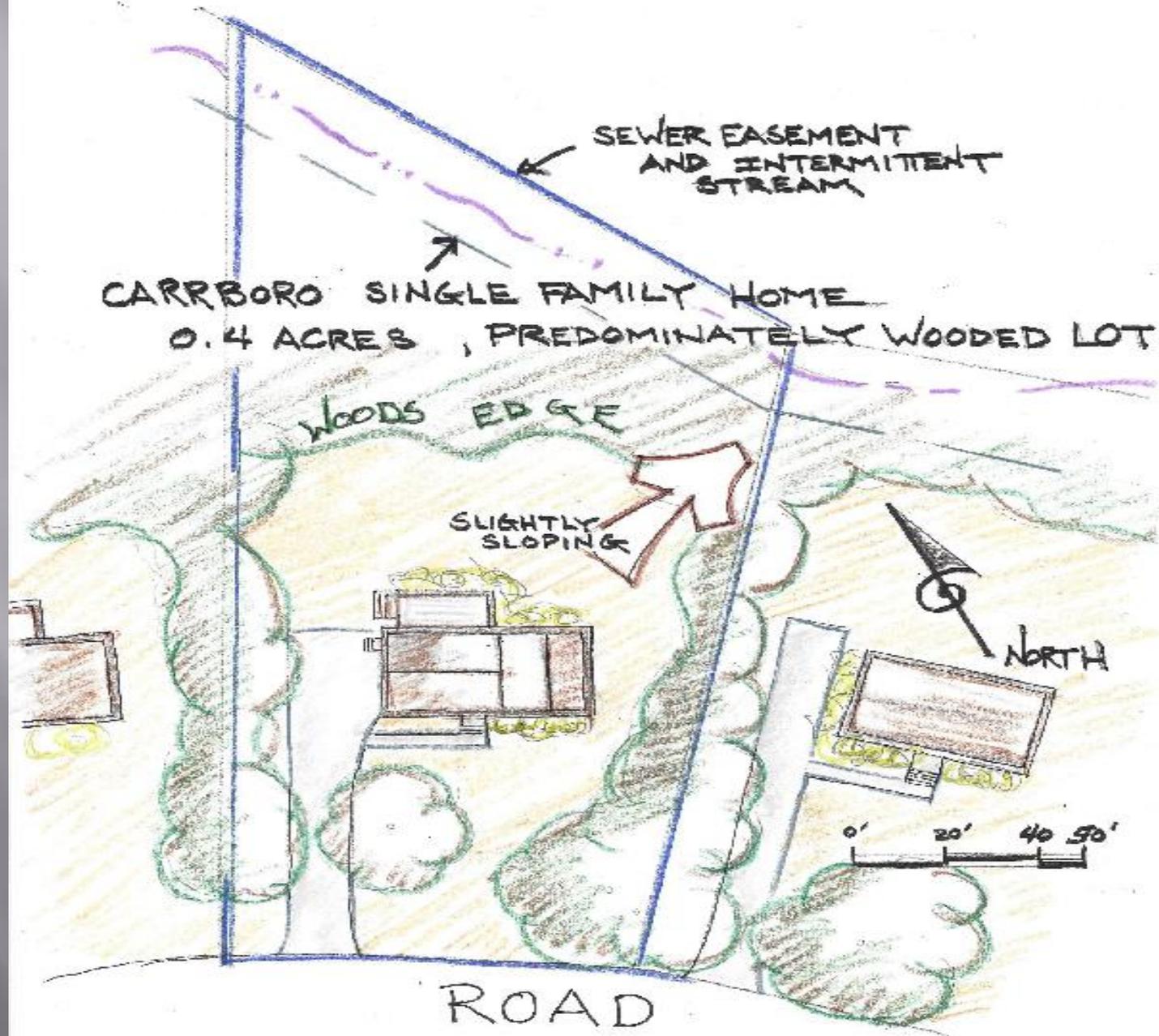
eye alt

1076 ft



# Carrboro Split Level House ca. 1979





SEWER EASEMENT  
AND INTERMITTENT  
STREAM

CARRBORO SINGLE FAMILY HOME  
0.4 ACRES , PREDOMINATELY WOODED LOT

WOODS EDGE

SLIGHTLY  
SLOPING

NORTH

0' 20' 40' 50'

ROAD

*Movement through the landscape*

# ZONES

SEWER EASEMENT  
AND INTERMITTENT  
STREAM

CARRIED

HOME

III

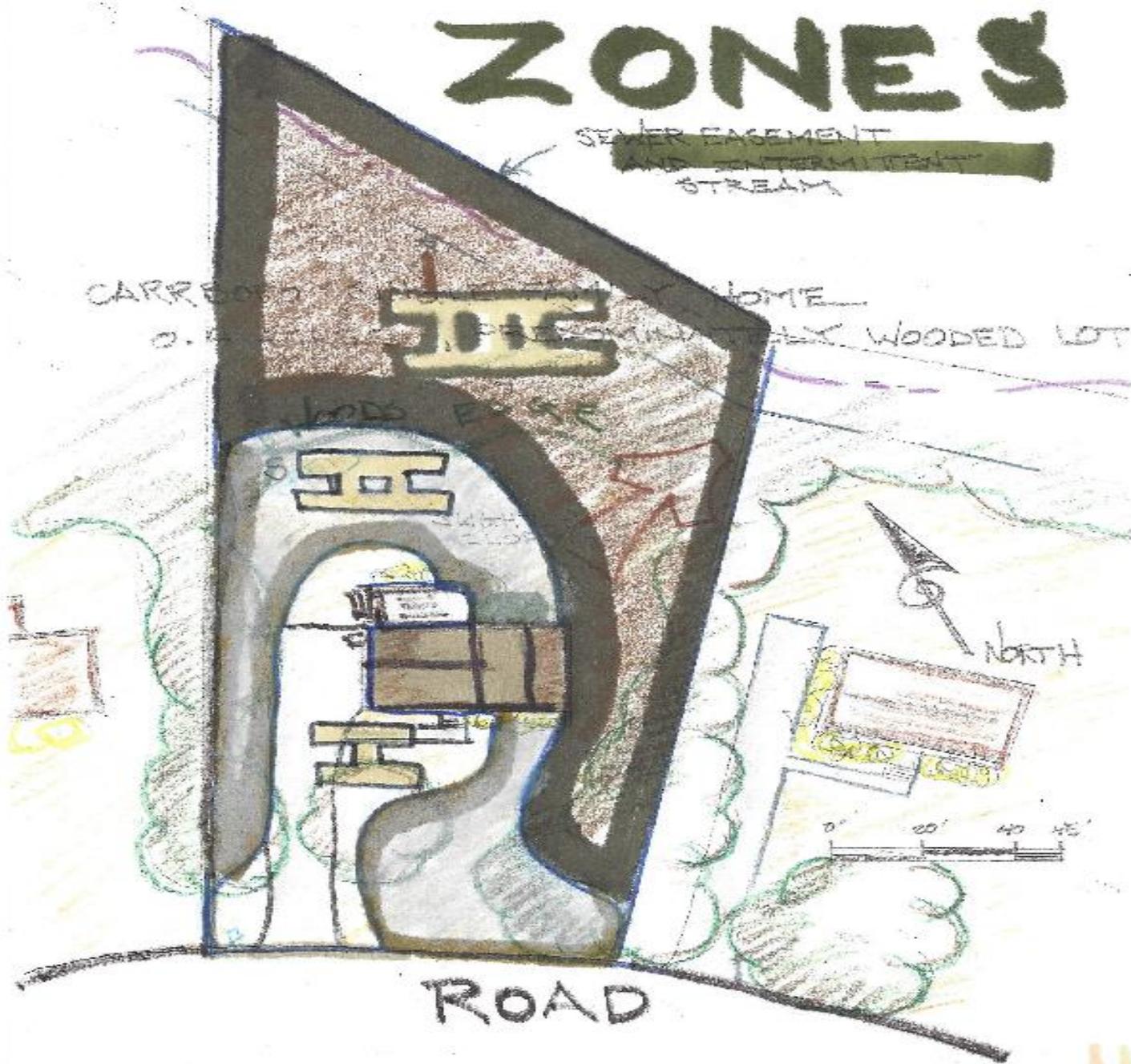
WOODED LOT

WOODS EDGE

II

NORTH

ROAD



# Zone I - Active Use Zone

- ▣ Frequency of Use: Daily
- ▣ Car parking to house, back deck
- ▣ Lawn, active play for children under five years
- ▣ BBQ grill, Deck and Patio
- ▣ Landscape Plantings: conventional foundation shrubs, flowering tree(s)
- ▣ Amend soils for improved plant growth
- ▣ Budgeted Resources:  
65% of personal energy and money expenditures.



# Zones of Your Property - Zone II

- ▣ Frequency of Use: Weekly Visits
- ▣ Laundry-line, Compost bin, extended play area, storage shed,
- ▣ Landscape Plantings: Mature trees with understory plantings, or sunny yards with vegetables or mixed perennials.
- ▣ Amend soils for improved plant growth
- ▣ Budgeted Resources:  
25% of personal energy and money.

# Screening Between Garden and Shed/Stuff



# Zones of Your Property - Zone III

- ▣ Frequency of Use: Monthly Visits
- ▣ No mowing, blowing or raking.
- ▣ Natural areas with some additional plantings and soil amending, natural mulch (leaf-litter, pine needles)
- ▣ Retreat space (hammock or comfy outdoor chair)
- ▣ Budgeted Resources:  
7% of personal energy and money.



# Zones of Your Property - Zone IV

- ▣ Frequency of Use: Rarely Visit
- ▣ Nature is primary manager.
- ▣ Control invasive plants, otherwise leave alone.
- ▣ Seek pleasure in what nature provides
- ▣ Budgeted Resources:  
3% of personal energy and money.

# Environmental Gain

- ▣ Diminish the size of the human footprint on your property and put more land into naturalized areas will
  - ▣ increase water infiltration into the soil,
  - ▣ improve plant growth ,
  - ▣ absorb CO-2 gases and sequester carbon into the soil.
- ▣ Select native plants that support the birds and bees and butterflies .



# Our Piedmont Soils

- ▣ Often Degraded with Little or No Topsoil.
- ▣ Compacted and Poorly Drained
- ▣ Lacking in Organic Matter
- ▣ Seasonally high water table

# Before and After



# Increase Soil Organic Matter !

- ▣ Improve Water Infiltration
  - ▣ Increase Microbial Life of the Soil
  - ▣ Increase Supply of Plant Nutrients
  - ▣ Improve Plant Growth
- 
- ▣ More Plant Growth means More Roots and More Leaves
  - ▣ Increase Carbon Sequestration and CO-2 Absorption



# How To Increase Your Soil's Organic Matter Content

- ▣ Compost your Weeds and Kitchen Scraps.
  - ▣ Incorporate Compost into the Soil for New Beds, or  
Topdress Existing Beds and Plants with One Inch of Compost then Mulch on Top.  
Do this Every Year.
- ▣ Save Your Leaves.
  - ▣ Use them as mulch in your shrub and flower beds or natural areas.
  - ▣ Use Reclaim Leaves from Carrboro's Municipal Leaf Pile, or  
Buy Shredded Leaves from JV Brockwell, in Calvander

# Amending Soils in a Zone II Planting Area



# Fertilizers

- ▣ Low pH - Acidic soils
  - Lime is inexpensive and natural.
    - ▣ Lime will make soil nutrients available for plants
    - ▣ Use Dolomitic Lime, at a rate of 40#/1000 square feet broadcast, or 100#/1000 sq. feet incorporated.
  - ▣ Test your Soils Before using Fertilizers.  
Boxes and forms available at Southern States,  
Cooperative Extension Service, NC Botanical Gardens
  - ▣ Lawn Fertilizing must be done with the correct amounts and the correct time of the year.
  - ▣ Remove all fertilizers from walks and streets and get them into the beds, not down stormdrains.

# Meadow in the Fall



# Gardening for Life

## 20 most valuable woody and perennial genera in terms of supporting biodiversity in the mid-Atlantic region

Woody Plants			Perennials		
Plant Genus	Common Name	# of Lepidoptera species supported	Plant Genus	Common Name	# of Lepidoptera species supported
<i>Quercus</i>	oak	534	<i>Solidago</i>	goldenrod	115
<i>Prunus</i>	black cherry	456	<i>Aster</i>	asters	112
<i>Salix</i>	willow	455	<i>Helianthus</i>	sunflower	73
<i>Betula</i>	birch	413	<i>Eupatorium</i>	joe pye, boneset	42
<i>Populus</i>	poplar	368	<i>Ipomoea</i>	morning glory	39
<i>Malus</i>	crabapple	311	<i>Carex</i>	sedges	36
<i>Vaccinium</i>	blueberry	288	<i>Lonicera</i>	honeysuckle	36
<i>Acer</i>	maple	285	<i>Lupinus</i>	lupine	33
<i>Ulmus</i>	elm	213	<i>Viola</i>	violets	29
<i>Pinus</i>	pine	203	<i>Geranium</i>	geraniums	23
<i>Carya</i>	hickory	200	<i>Rudbeckia</i>	black-eyed susan	17
<i>Crataegus</i>	hawthorn	159	<i>Iris</i>	iris	17
<i>Picea</i>	spruce	156	<i>Oenothera</i>	evening primrose	16
<i>Alnus</i>	alder	156	<i>Asclepias</i>	milkweed	12
<i>Tilia</i>	basswood	150	<i>Verbena</i>	verbena	11
<i>Fraxinus</i>	ash	150	<i>Penstemon</i>	beardtongue	8
<i>Rosa</i>	rose	139	<i>Phlox</i>	phlox	8
<i>Corylus</i>	filbert	131	<i>Monarda</i>	bee balm	7
<i>Juglans</i>	walnut	130	<i>Veronica</i>	veronica	6
<i>Fagus</i>	beech	126	<i>Schizachyrium</i>	little bluestem	6
<i>Castanea</i>	chestnut	125	<i>Lobelia</i>	cardinal flower	4

Dr. Doug Tallan  
 Dept. Entomology  
 Univ. of Delaware



# Resources

Piedmont Environmental Landscaping and Design.

Matthew Arnsberger

[www.Piedmont-Environmental.com](http://www.Piedmont-Environmental.com)

Mulch, Shredded Leaves, Compost and Topsoil:

JV Brockwell Trucking, 919-942-3001

Southern States, Carrboro, 919-942-3857

Orange Regional Landfill, 919-932-2989

Leaves:

Town of Carrboro, 919-918-7431



**Thanks !**