Landscape Design

Creating outdoor spaces to be enjoyed by people and wildlife
across time that are functional, environmentally responsive
and beautiful

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Creating outdoor spaces to be enjoyed by people and wildlife across time that are functional, environmentally responsive and beautiful

Minimize cost
Minimize negative environment impact

Design Process

Program Requirements
(What the client wants)

Document Existing Conditions
(What exists now)

Explore what's possible with the site
(Bubble Diagrams)

Decide on the design that fulfills the requirements best

Convert the bubbles into actual plants

How to read a Site Plan

EXISTING SITE PLAN

SCALE: 1" = 10'

FACTORY STREET

HOWE STREET

N 16°47'00" E — 75.00'

95.84'

S 76°28'00" E

N 76°28'00" W

S 15°50'00" W — 74.94'

94.60'

204'

202'

SUGAR MAPLE

TWO-STORY HOUSE

TWO-STORY HOUSE

COVERED PORCH

PAVED DRIVEWAY

SIDEWALK

HEDGE

Utility Poles   North Arrow

N 16°47'00" E   75.00' 204'

Existing Plant

95.84'

204'

SUGAR MAPLE

S 76°28'00" E

Fence

STREET

SIDEWALK

Existing House

TWO-STORY HOUSE

Property Line with Bearing and Length

N 76°28'00" W

94.60'

Topography Line

COVERED PORCH

202'

202'

PAVED DRIVE

HEDGE

S 15°50'00" W   SIDEWALK   74.94'

Curb or line of Street

STREET

Drawing Number   1 SITE PLAN   Drawing Name

SCALE: 1" = 20'   Scale

Base Plan / Basic Survey

ROE STREET

N 72° 53' E

224.75'

N 4° 45' E

S 11° 8' E

Finish Floor
406.0'

Patio

Finish Floor
408.0'

Finish Floor
410.0'

Finish Floor
409.0'

100.2'

S 73° 28' W

38'

S 73° 28' W

N 16° 32' W

4'

108'

S 73° 28' W

S 16° 32' E

4'

116'

96'

Base Plan with Topography

ROE STREET

N 72° 53' E

N 4° 45' E

S 11° 8' E

224.75'

Vegetable Garden

Finish Floor
406.0'

Patio

Bee Yard

Finish Floor
408.0'

Finish Floor
410.0'

Finish Floor
409.0'

100.2'

96'

S 73° 28' W

38'

N 16° 32' W
4'

S 73° 28' W

108'

S 16° 32' E
4'

S 73° 28' W

116'

405.0'

410.0'

415.0'

420.0'

425.0'

Existing Conditions Plan

ROE STREET

N 72° 53' E

N 4° 45' E

S 11° 8' E

224.75'

Finish Floor 406.0'

Patio

Vegetable Garden

Bee Yard

Finish Floor 408.0'

Finish Floor 410.0'

Finish Floor 409.0'

100.2'

S 73° 28' W

38'

N 16° 32' W

S 73° 28' W

S 73° 28' W

108'

S 16° 32' E

116'

66'

405.0'   410.0'   415.0'   420.0'   425.0'

1 EXISTING SITE PLAN
SCALE: 1/8" = 1'-0"

WOODY PLANT KEY

Juglans nigra, Black Walnut

Quercus coccinea, Scarlet Oak

Quercus alba, White Oak

Rhus typhina, Staghorn Sumac

Hibiscus syriacus, Rose of Sharon

Betula papyrifera, Paper Birch

Acer Saccharinum, Silver Maple

Picea abies, Norway Spruce

Morus rubra, Mulberry

Juniperus virginiana, Eastern Redcedar

Pinus strobus, White Pine

Picea pungens, Colorado Blue Spruce

Syringa vulgaris, Lilac

Cornus florida, White Dogwood

Prunus serrulata 'Kanzan', Kanzan Cherry

Forsythia spp., Forsythia

Philadelphus spp., Mock-orange

Cotoneaster spp., Cotoneaster

Aronia melanocarpa, Chokeberry

Panicum virgatum, Switchgrass

Betula populifolia, Gray Birch

Cornus racemosa, Gray Dogwood

Spirea prunifolia, Bridal Wreath Spirea

Ilex x meservaea 'Mesog', China Girl Holly

Viburnum spp., Viburnum

Viburnum trilobum, Highbush Cranberry

Buxus spp., Boxwood

Juniperus horizontalis, Blue Rug Juniper

Ulmus americana, American Elm

Amelanchier arborea, Downy Serviceberry

Cercis canadensis, Redbud

Prunus virginiana, Chokecherry

Myrica pensylvanica, Bayberry

Malus spp., Crabapple

Field Measuring

Tools:

Tape Measure
String
Laser
Transit

Methods:

Triangulation
Alignment
String
Vertical Measurements

Triangulation

31'-0"

DISTANCE A

Triangulation

33'-4"
DISTANCE B
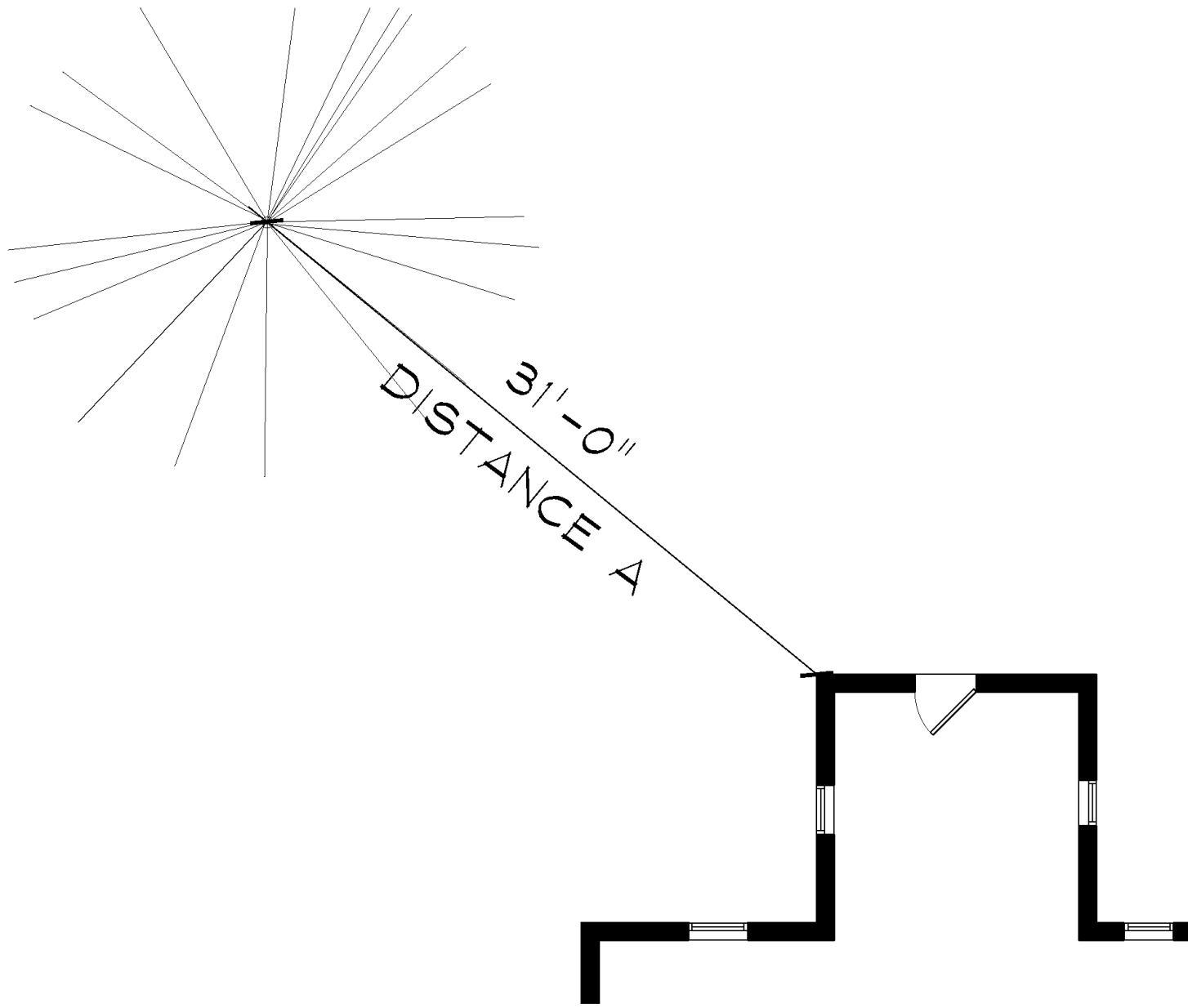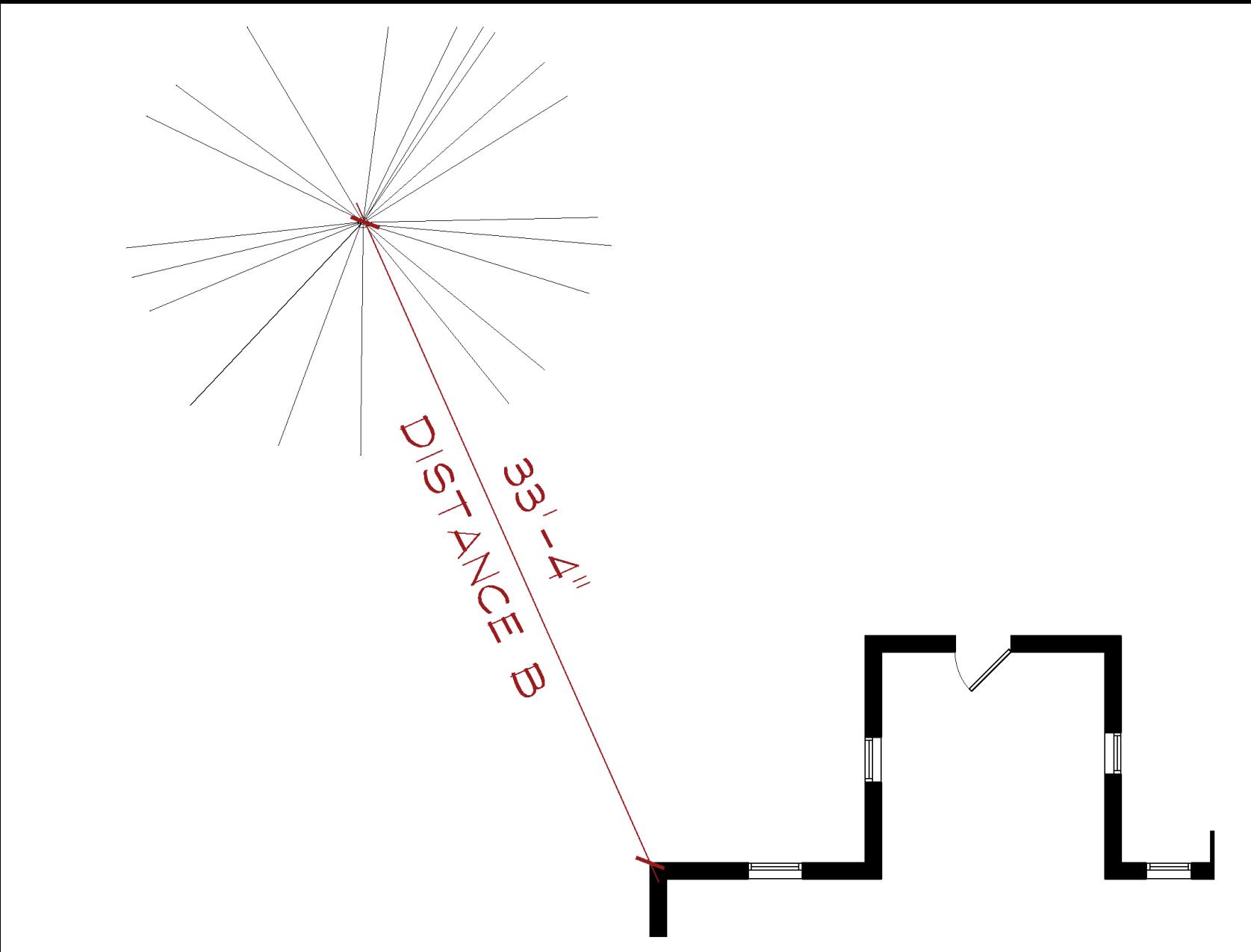
Triangulation
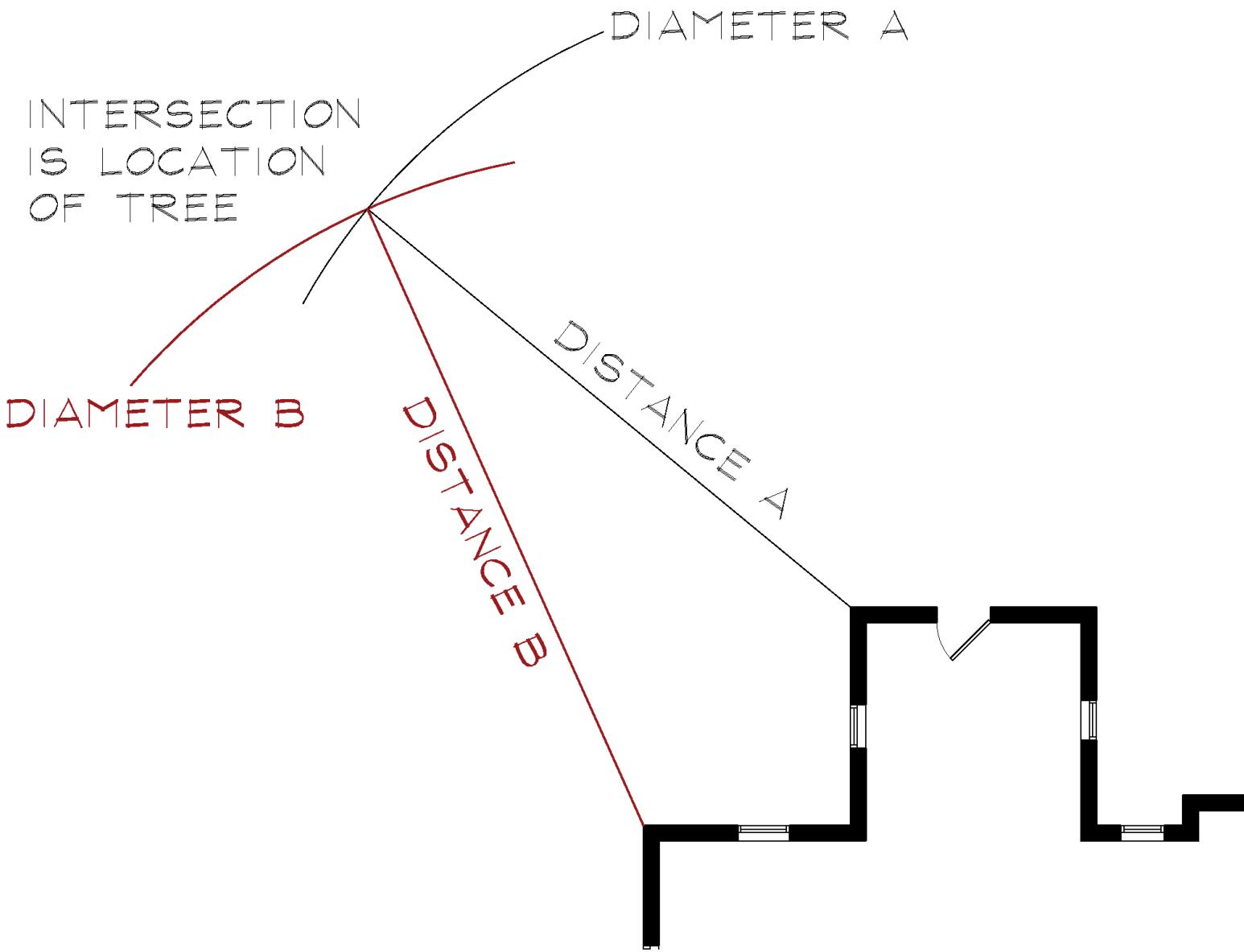
Site Analysis

Site Analysis

Shade

Sun

Water/Wet spots

Soil

Undesirable Views

Wind

Noises

Site Analysis

- Shade
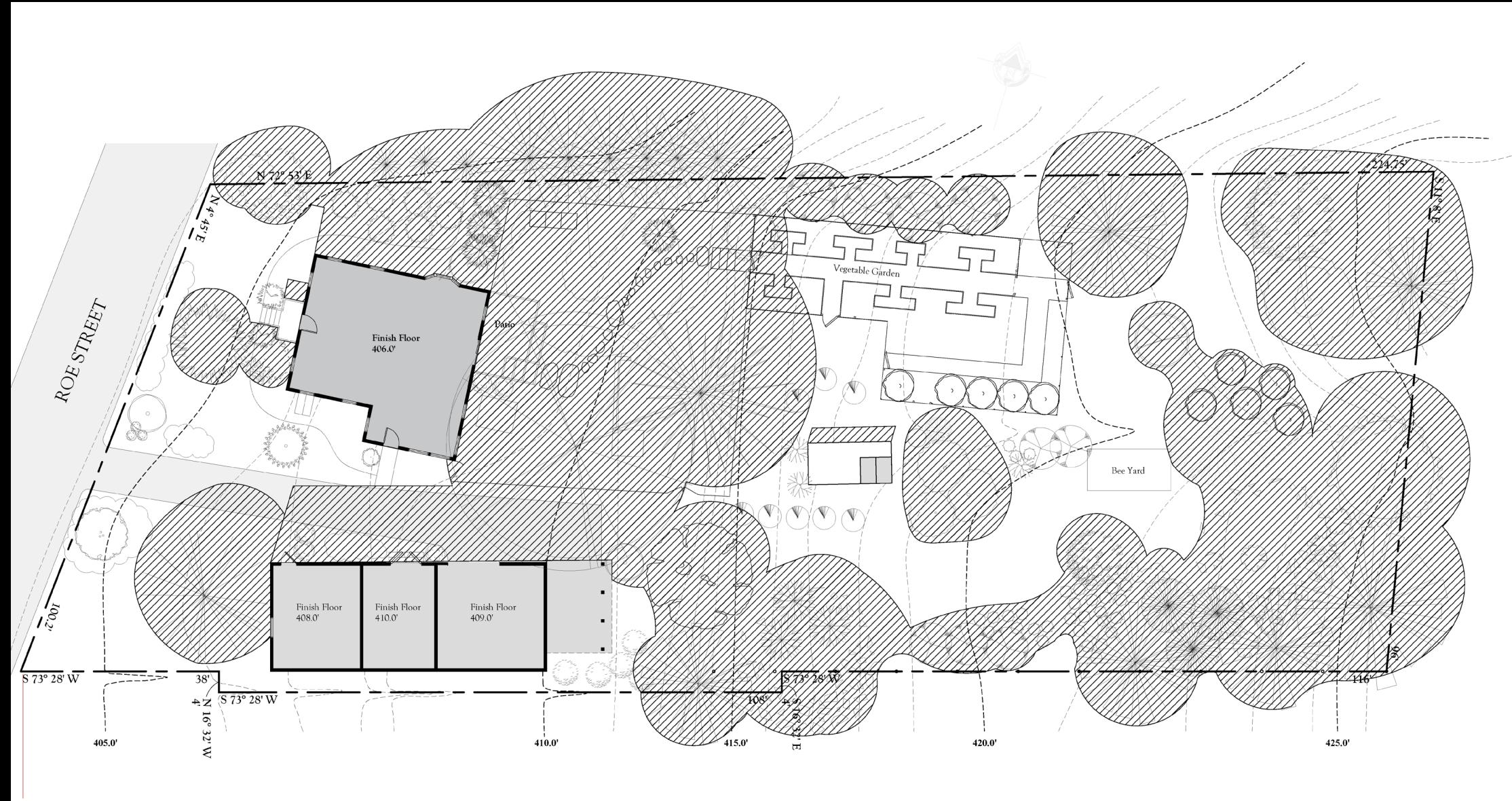
Site Analysis

- Sun
- Shade
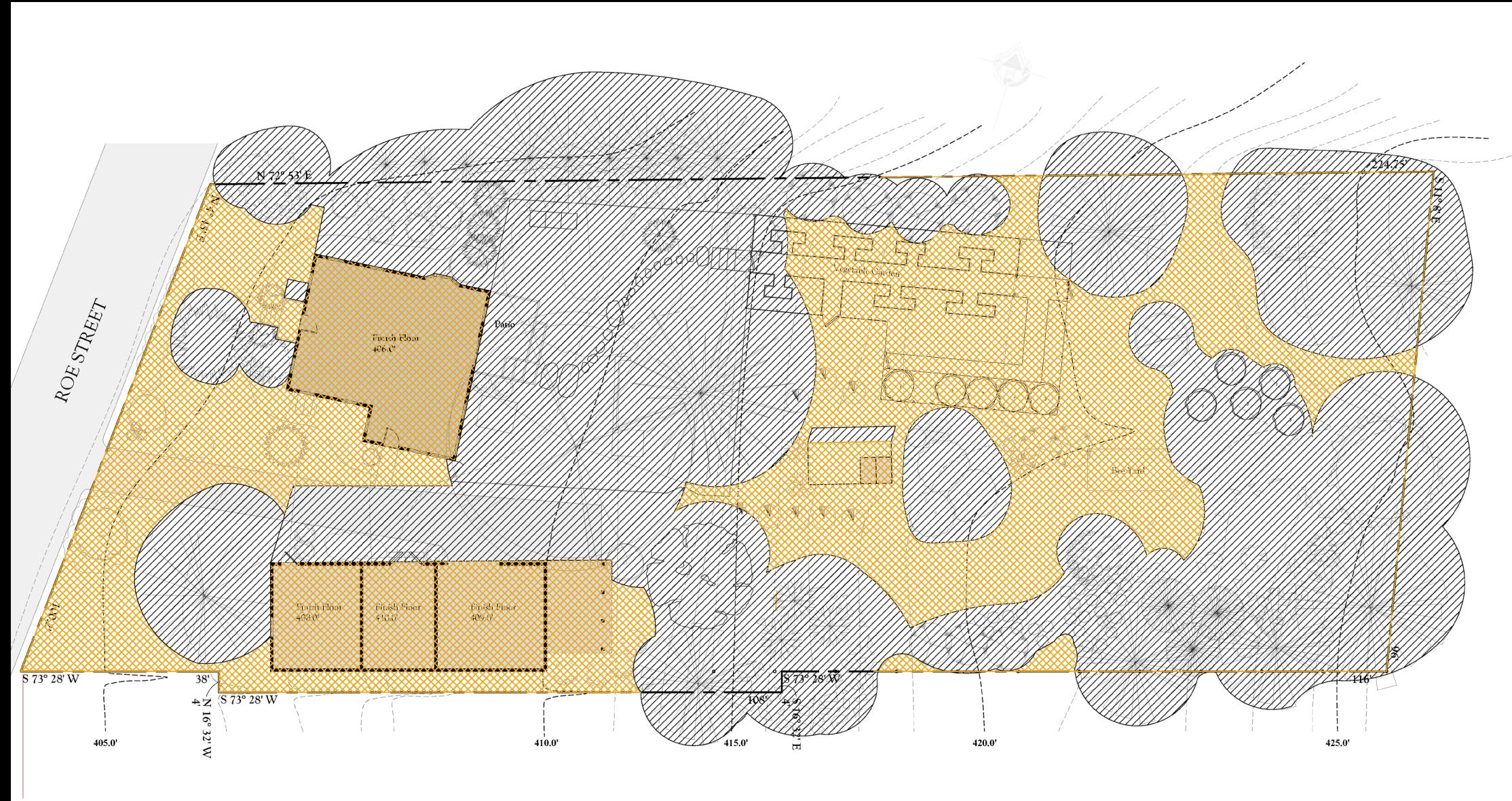
Site Analysis
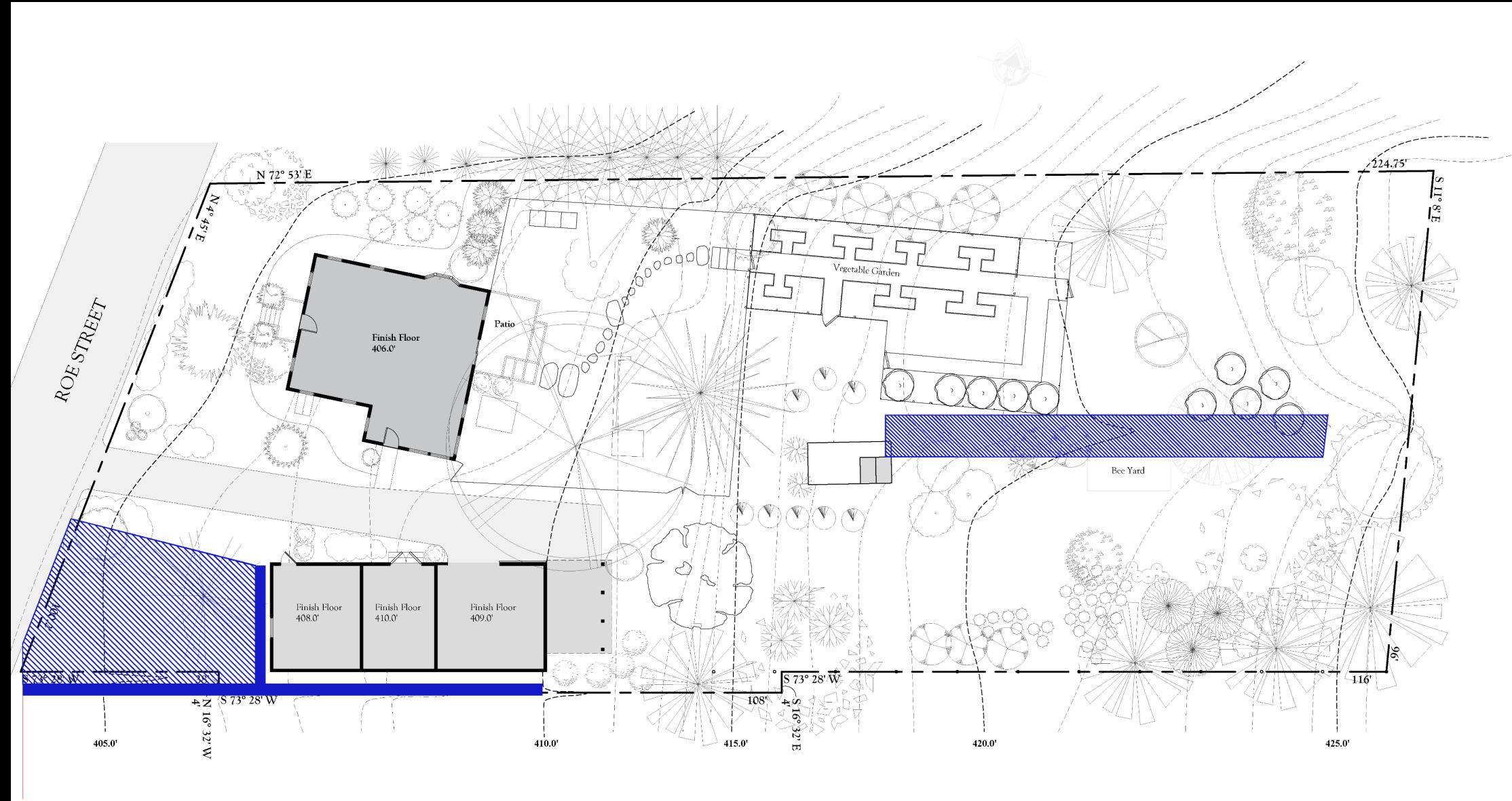
Site Analysis

- Views from Neighbors
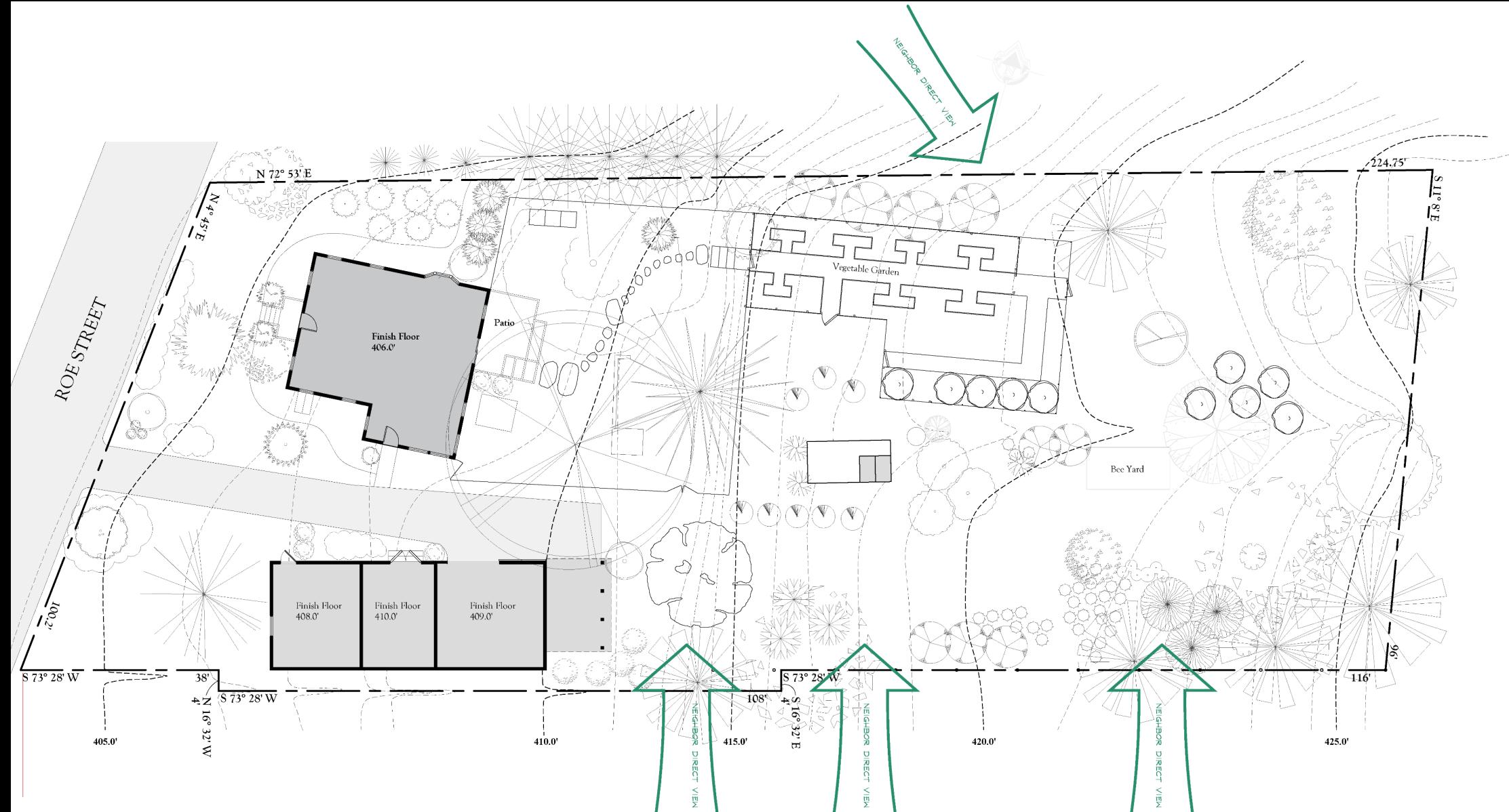
Site Analysis

- Wind
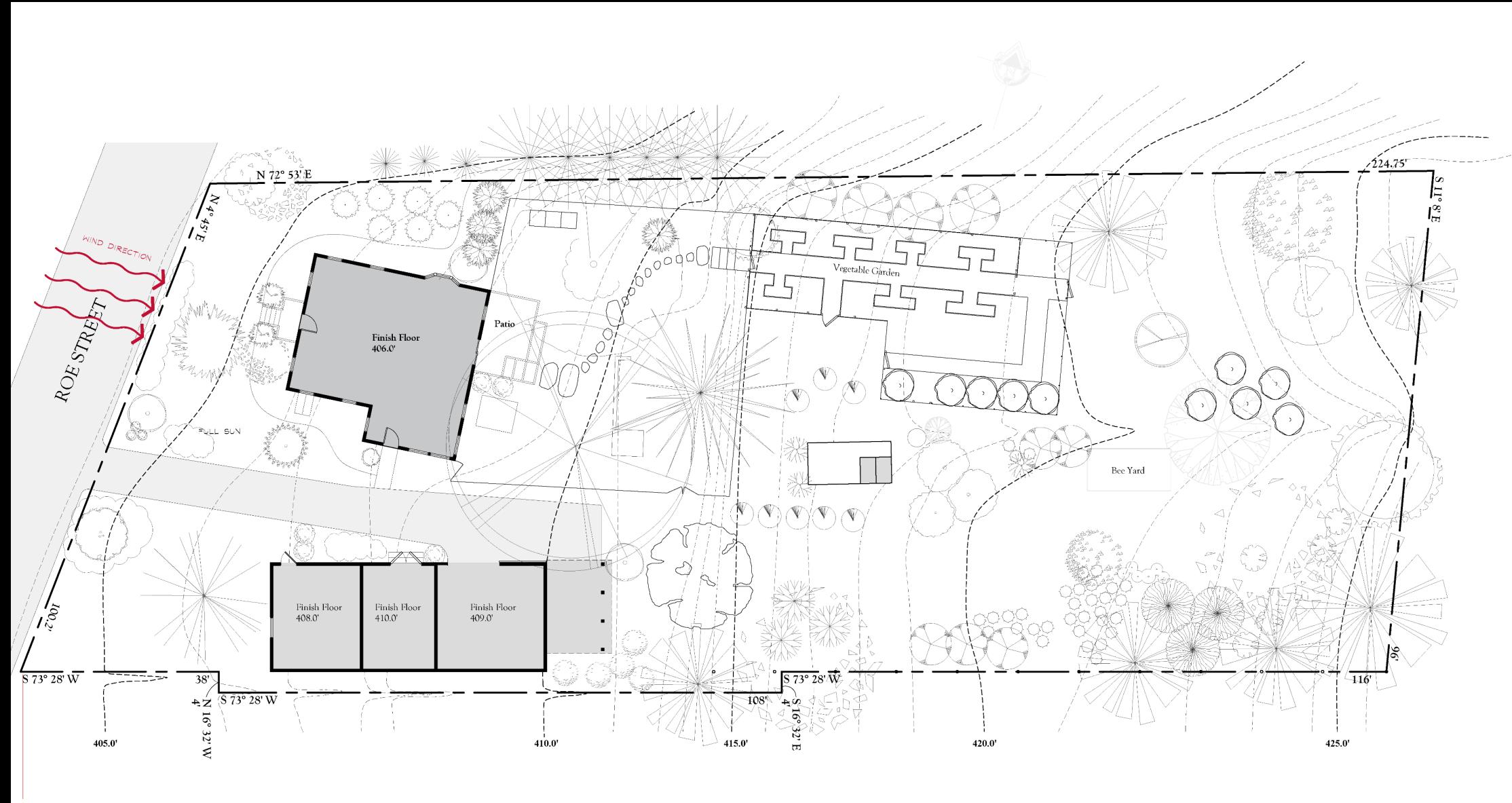
Site Analysis

- Sun
- Shade
- Water
- Views from Neighbors
- Wind
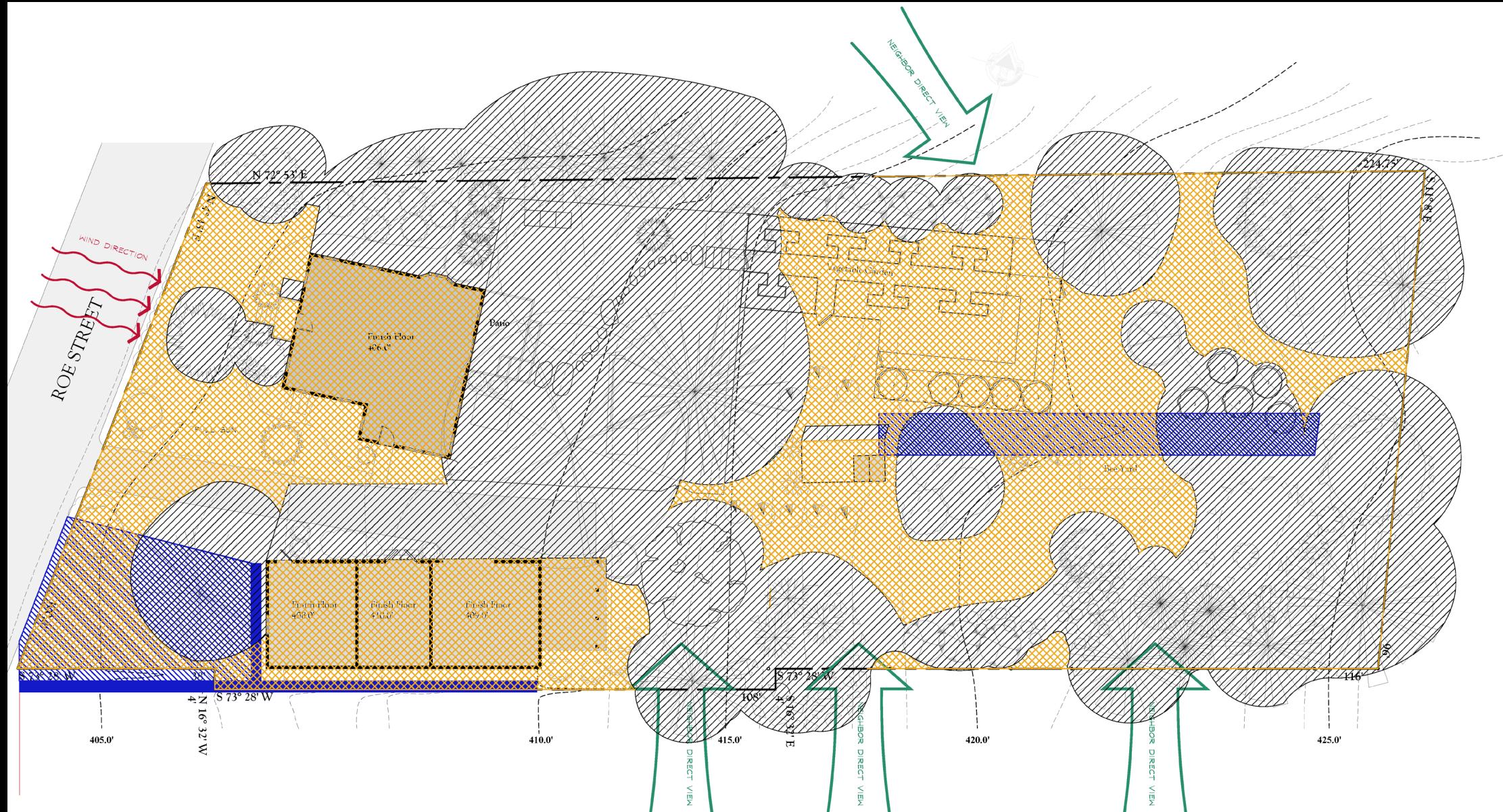
Preliminary Design: Program Requirements

Permaculture / Natural / Wildlife Garden
Edible Landscape
Xeriscape
Mushroom Yard
Bee Yard
Continuous Blooms throughout 3 seasons
Increase biodiversity
Pets: Dogs, cats
Limited outdoor entertaining
Avid Gardeners
Block Views from Neighbors

Bubble Diagram

Program Requirements
Explore Relationships between Program parts
Try different arrangements

Design Development: Bubble Diagram
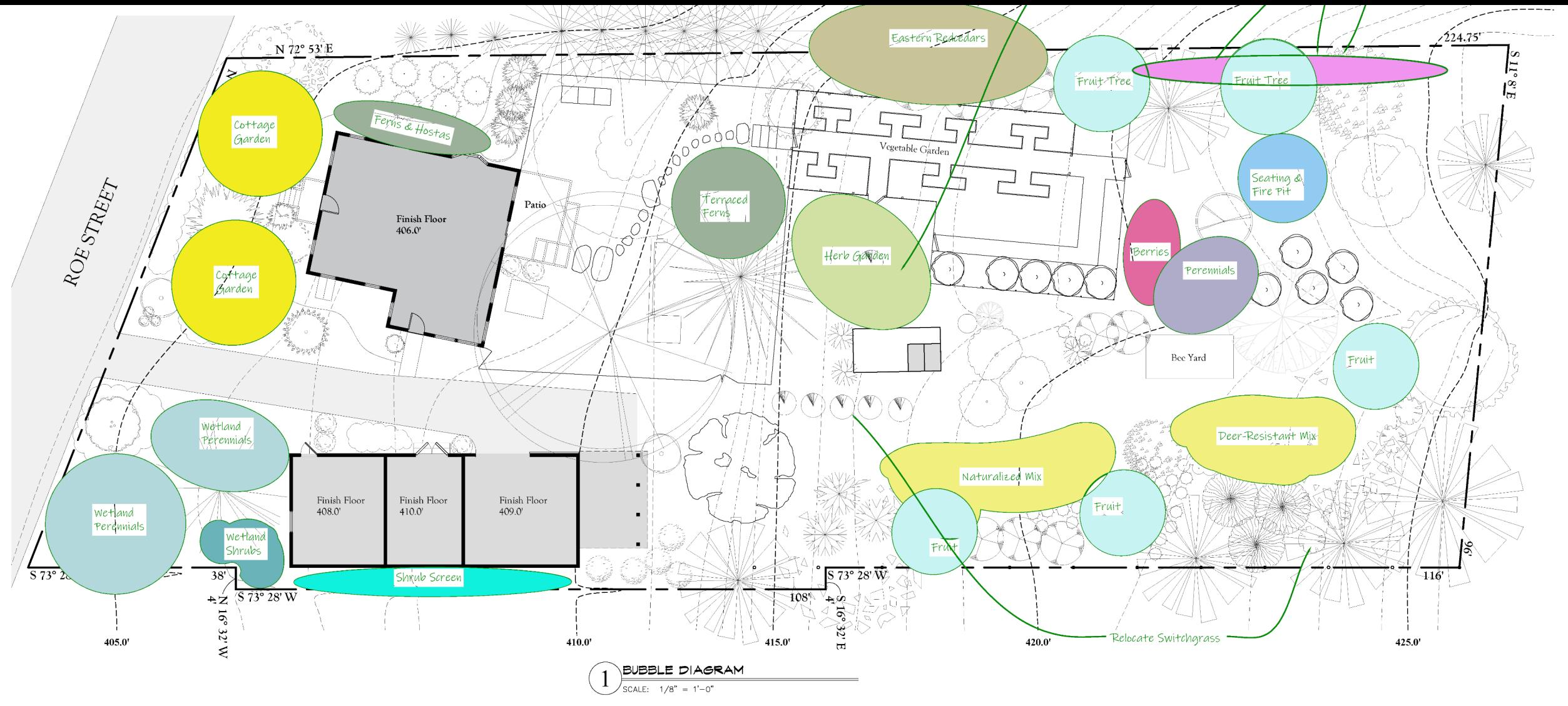
Planting Plan

Choose plants that satisfy both site and program requirements

Group plants

Highlight Specimen plants

Follow Design principles
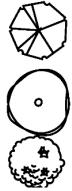
Prunus maritima, Beach Plum

Alnus incana subsp. rugosa, Speckled Alder

Physocarpus opulifolius, Prairie Ninebark

Asimina triloba, Common Paw Paw

Juniperus virginiana, Eastern Redcedar

Ptelea trifoliata, Wafer Ash

ROE STREET

N 72° 53' E

N 4° 45' E

224.75'

S 1° 8' E

Vegetable Garden

Finish Floor
406.0'

Patio

Bee Yard

Yellow Shrubroot

Finish Floor
408.0'

Finish Floor
410.0'

Finish Floor
409.0'

100.2'

S 73° 28' W

38'

N 16° 32' W

S 73° 28' W

108'

S 73° 28' W

S 16° 32' E

96'

116'

405.0'

410.0'

415.0'

420.0'

425.0'
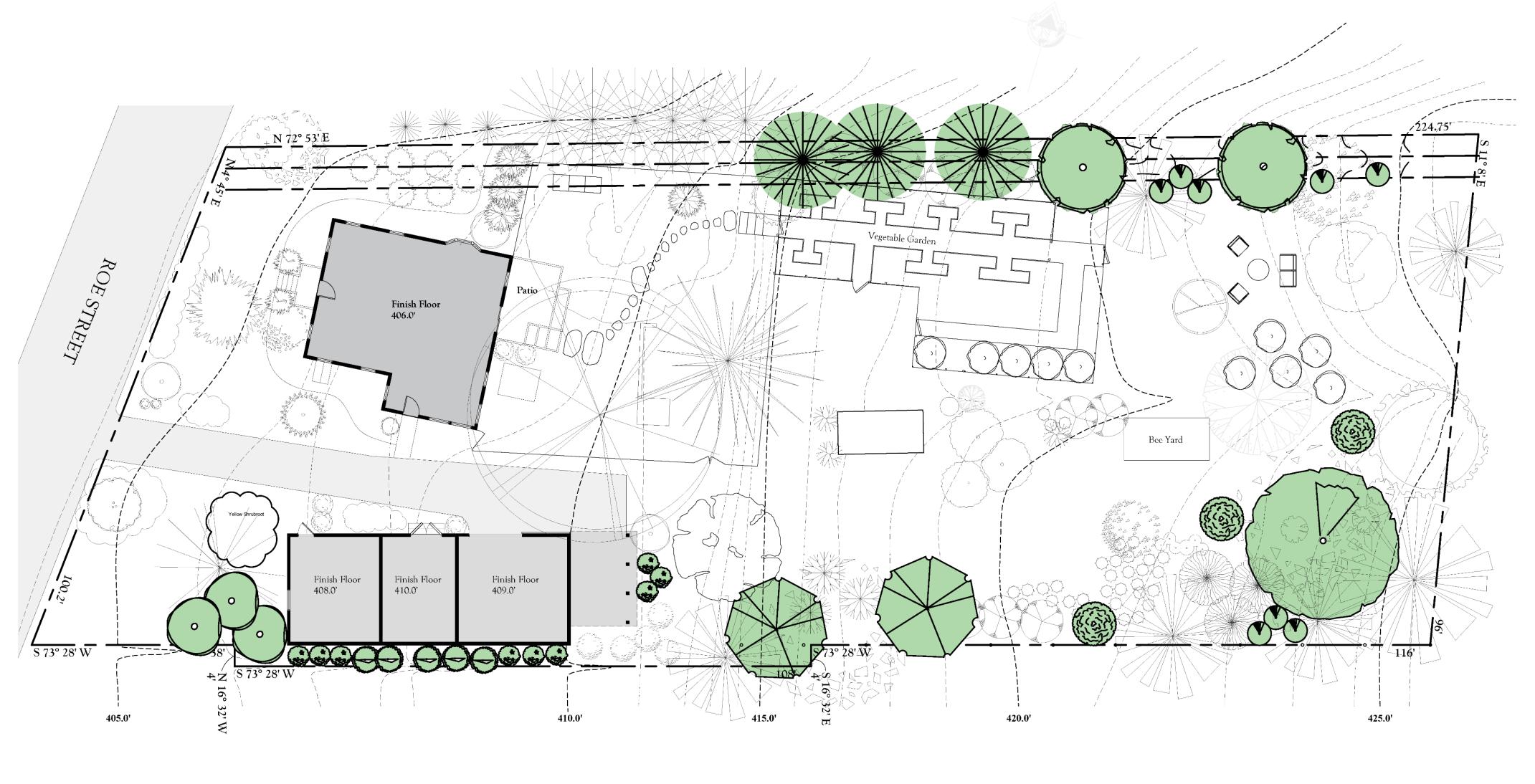
Choosing Plants

Cornell Woody Plants Database
http://woodyplants.cals.cornell.edu/home

University of Connecticut Plant Database
http://hort.uconn.edu/

Grow Native Plant Picker
https://grownative.org/native-plant-info/plant-picker/

Audubon Native Plants Database
https://www.audubon.org/native-plants

USDA Plant Database
https://plants.sc.egov.usda.gov/java/

Lady Bird Johnson Wildflower Center
https://www.wildflower.org/plants/

National Wildlife Federation Native Plant Finder
https://www.nwf.org/NativePlantFinder/About

Homework

Choose one scenario

Analyze the site

Explore program requirements with bubble diagrams

Try different design principles to relate the bubbles to one another

Create bubble diagram, identifying each program requirement

Extra Credit:

Develop a Planting Plan

Student Name

Scenario #   **Overall Grade**

Site Analysis	(20 points possible)

Components of analysis to be graded are ability tyo read a site plan (8 points), ability to understand grade/topograpghy (7 points), understand the way the sun moves across the site (5 points)

	Total	

Program Requirements	(20 points possible)

Each program requirement for the Scenario chosen will count as one item to be graded i.e., if there are 5 program requirements, each item will be worth 4 points

	Total	

Design Principles Used	(10 points possible)

Did you use any design principles in the bubble diagram? Using any of the design principles in the moodle materials or in the handouts will result in credit. The more principles you use, the more credit you will receive

	Total	

Plant Selections	(10 Bonus points possible)

Bonus points for selecting plants - the only way to lose bonus points is to choose invasive plants or choose plants inappropriate to the location

	Total	

Comments

An opportunity for me to point out the things I see in your design and suggest areas you may want to develop a little more

S 46°59'35" E

ADJACENT SHED

100.00'

SUGAR MAPLE

398'

210.00'

210.00'

NORWAY SPRUCE

NORWAY SPRUCE

NORWAY SPRUCE

GARAGE

ALLEY

TWO-STORY HOUSE

400'

S 46°59'35" E

N 42°00'00" E

402'

N 46°59'35" W

100.00'

CONCRETE SIDEWALK

STREET
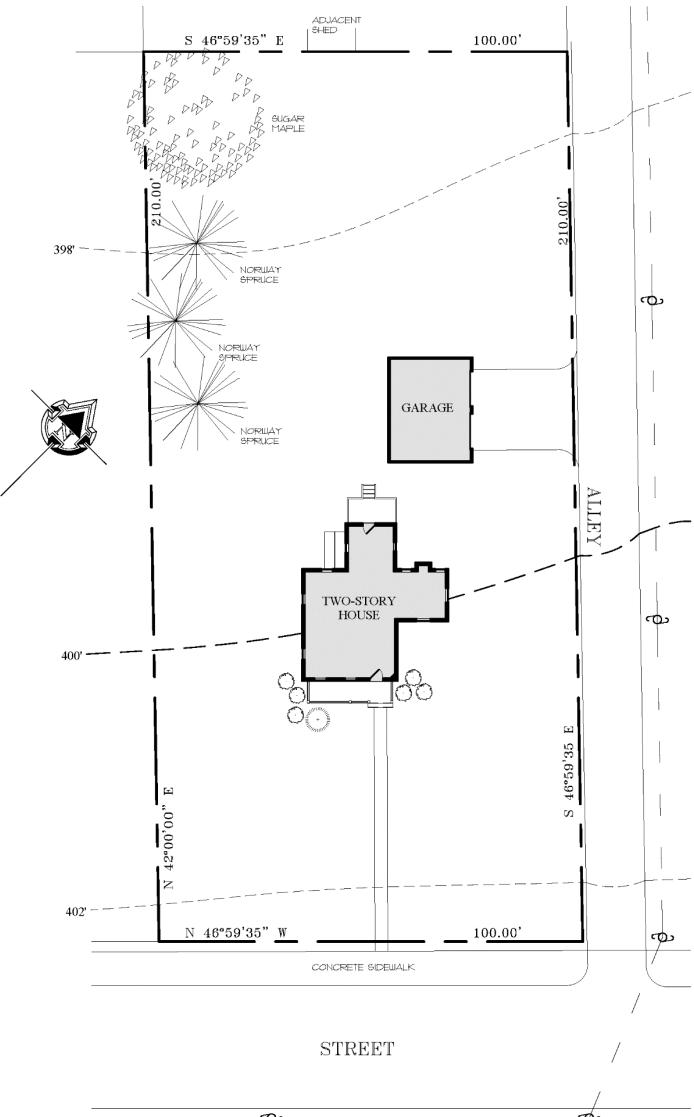
① EXISTING SITE PLAN

SCALE: 1" = 20'

SCENARIO 1

BACKGROUND:	WANT:
YOUNG FAMILY, 2 ADULTS, 3 SMALL CHILDREN SUBURBAN SETTING COLONIAL STYLE HOUSE MODERATE INCOME SUNNY VIEWS OF UTILITY POLES	PLAY AREA FOR CHILDREN CHILDREN'S GARDEN PATIO AREA WITH GRILL VEGETABLE GARDEN POOL RAIN GARDEN TO COLLECT STORM WATER RUNOFF

STREET

452'

N 38°-45' E   N/F PUCCIO   491.00'   50.00'

340.00'

S 51-15' E
87.82'

EXISTING DRIVEWAY

450'

GARAGE   EXISTING WELL

TWO-STORY
HOUSE

R=100.00'
L=83.24'

262.86'

LINE OF 50' WIDE RIGHT-OF-WAY

WETLANDS RESTRICTION LINE

N 56°-15' W

S 3°-33'-25" E

448'

446'

DITCH

S 38°-45' W   234.28'   444'

SCENARIO 2

① EXISTING SITE PLAN

SCALE: 1" = 50'

BACKGROUND:	WANT:
COUPLE IN THEIR MID FORTIES WITH 2 TEENAGE CHILDREN	VEGETABLE GARDEN
OLDER STYLE FARM HOUSE	COMPOSTING AREA
COUNTRY SETTING	HERB GARDEN
SUNNY LOCATION	OUTDOOR LOUNGING AND SITTING AREA
WINDS FROM THE WEST	BLOCK THE WINTER WINDS
MODERATE INCOME	GRASSY AREA FOR KIDS TO PRACTICE SOCCER
AVID GARDENERS	

N 75°00'00" E   458.45'

440.66'   419.85'

378'

380'

382'

384'

        TWO-STORY
          HOUSE

386'

388'

N 42°00'00" W

R = 400'   CUL-DE-SAC   L = 419.00'   S 8°00'00" E
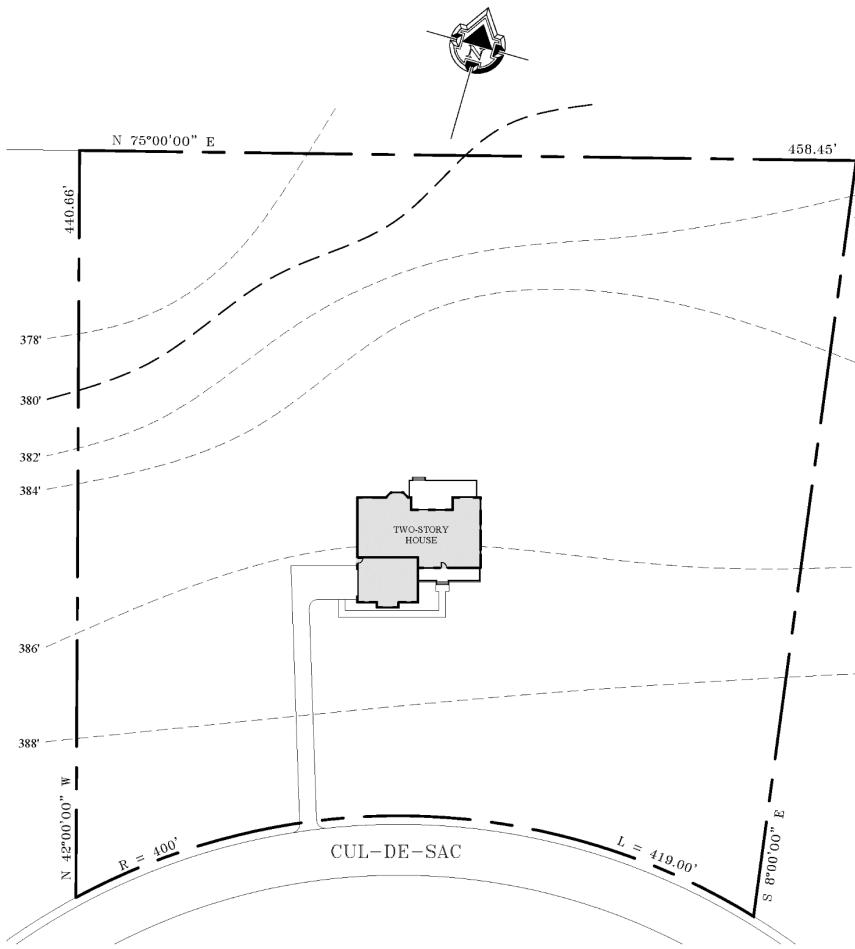
(1) EXISTING SITE PLAN

SCALE: 1" = 50'

SCENARIO 3

BACKGROUND:	WANT:
COUPLE IN MID-FORTIES WITH 2 YOUNG CHILDREN	PERENNIAL BEDS
SUBURBAN SETTING	MIXED SHRUB BORDERS
McMANSION TYPE HOUSE	OUTDOOR KITCHEN AND DINING AREA
HIGH INCOME, WILL HIRE A GARDENER	POOL
SUNNY	PLAY AREA FOR CHILDREN
UGLY VIEW OF NEIGHBOR'S HOUSE AND YARD	PRIVACY
	AREA FOR PETS

WOODED
AREA

596'

594'

592'

590'

588'

586'

522.86'

HOUSE

GAR.

SHAGBARK
HICKORY

RED
MAPLE

336.11'

810.77'

WHITE
PINES

CHURCH ROAD

S 73°00'00" E
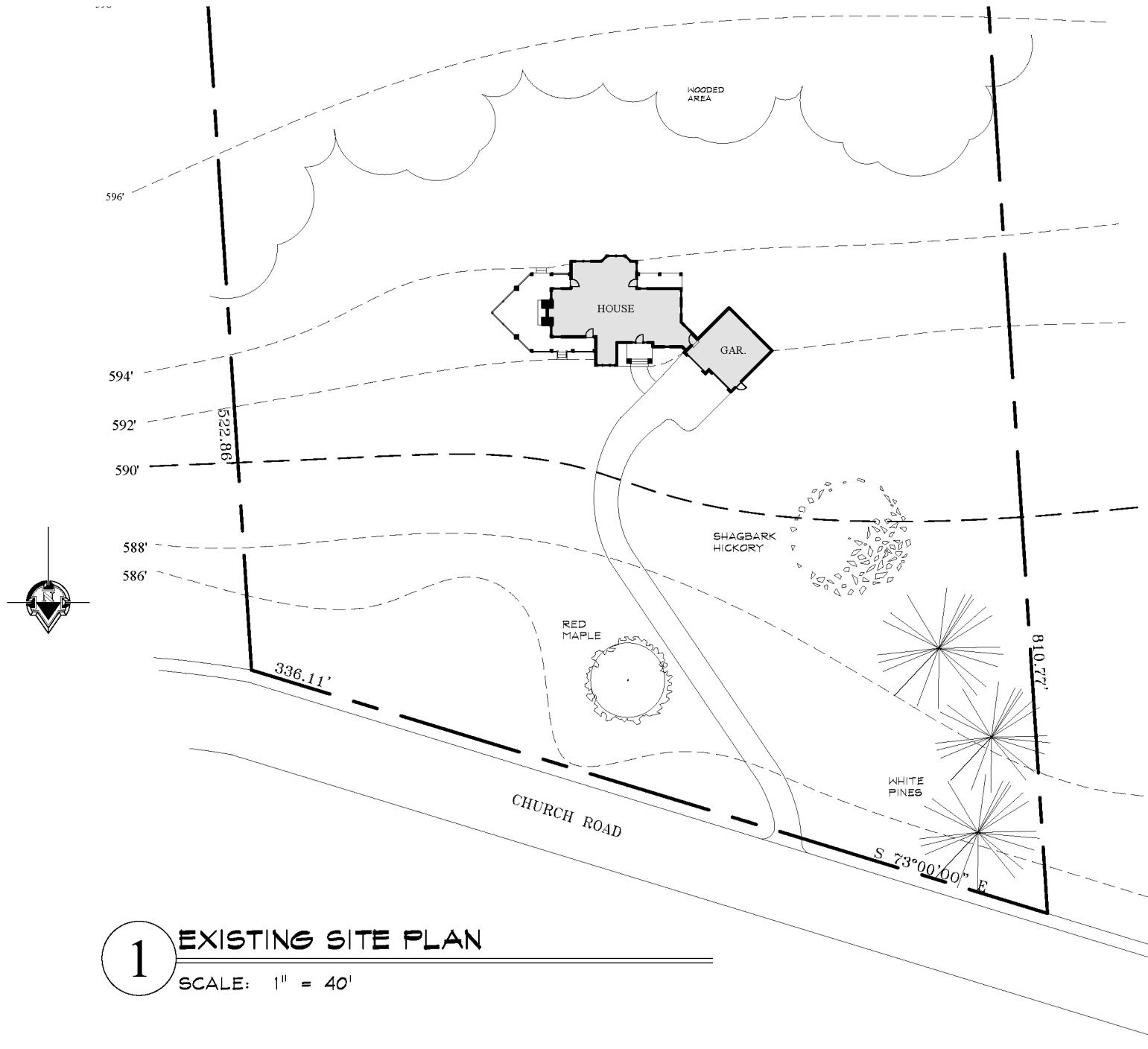
SCENARIO 4

BACKGROUND:

COUPLE IN MID-FIFTIES, NO CHILDREN LIVING AT HOME
CRAFTSMAN STYLE HOUSE
COUNTRY SETTING
MEDIUM TO HIGH INCOME
WOODED AREA IN BACK YARD, SHADED
LOW MOIST ARE IN FRONT YARD, SUNNY
LIKE GARDENING AND WILL SPEND WEEKENDS IN YARD

WANT:

NATURAL LOOK AND FEEL
WATER GARDEN
PATIO AREA FOR OUTDOOR LIVING
VEGETABLE GARDEN
AREA TO STORE WOOD FOR FIREPLACE
MIXED SHRUB BORDER

1 EXISTING SITE PLAN

SCALE: 1" = 40'

TWO-STORY HOUSE

N 16°47'00" E   75.00'   204'

95.84'

SUGAR MAPLE

S 76°28'00" E

FACTORY STREET

SIDEWALK

TWO-STORY HOUSE

TWO-STORY HOUSE

94.09'

N 76°28'00" W

202'

PAVED DRIVEWAY

HEDGE

S 15°50'00" W   SIDEWALK   74.94'

HOWE STREET
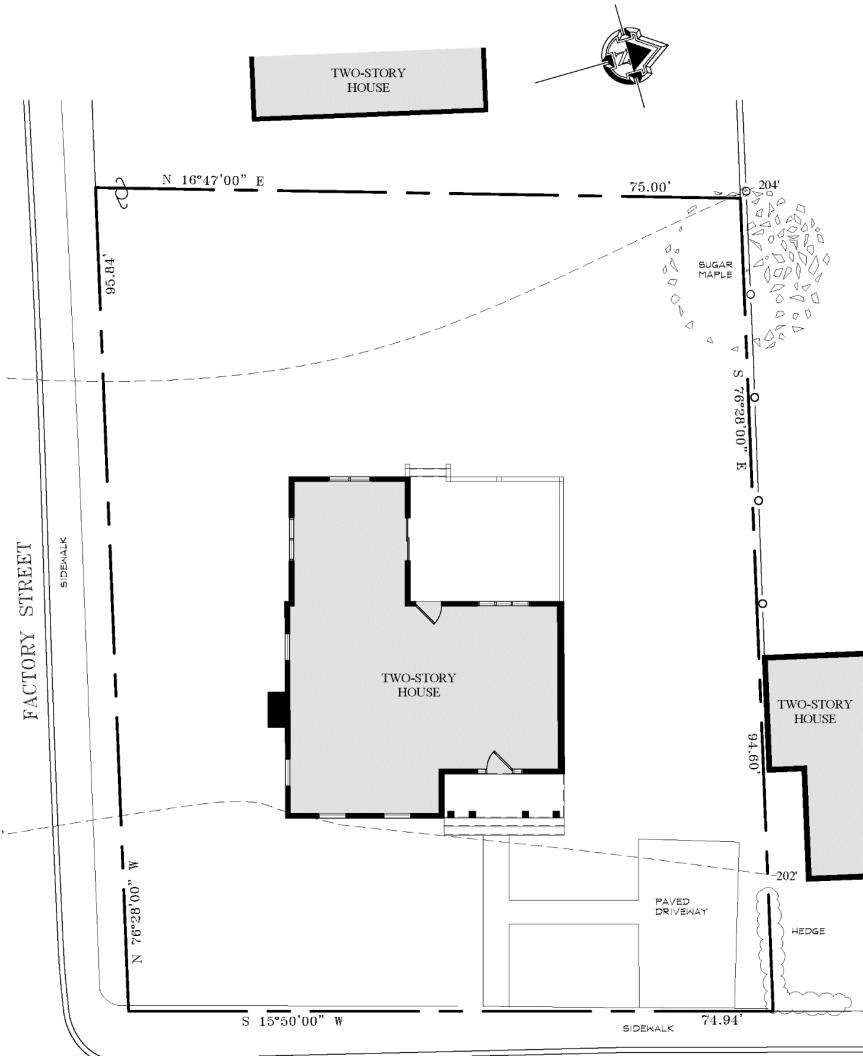
(1) EXISTING SITE PLAN

SCALE: 1" = 10'

SCENARIO 5

BACKGROUND:	WANT:
COUPLE IN MID-SIXTIES, NO CHILDREN CITY HOUSE RELATIVELY SMALL YARD SUNNY HIGH INCOME REAR NEIGHBOR CAN LOOK DIRECTLY INTO YARD	FORMAL GARDENS ENTERTAINING AREA LOW MAINTENANCE SMALL WATER FEATURE LIKE A FOUNTAIN PRIVACY