# FLATS ON 46 PUD OUTLINE PLAN



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## **Table of Contents**

Overview	3
Existing Zoning and Property Size	3
Proposed Zoning	3
Proposed Uses	4
Illustrative Plan	4
Buffer Area	4
Open Space	5
Development Standards	5
Landscape Standards	5
Road and Access Standards	5
Sanitary Sewer	6
Water Service	6
Storm Water Management	6
Lighting	6
Schedule	7
Development Standards	8
Landscape Requirements	g

## The Flats on 46 Planned Unit Development Outline Plan Statement

## Overview

The site is located on the north side of State Road 46, west of the North Smith Pike/Centennial Drive intersection in Ellettsville, Indiana. This project will be located on Lot 1 and 2 of the proposed 17.53-acre Ellis-Ridge Subdivision. The property has been vacant and is a gateway property to the Ellettsville community. This is an in-fill site and is ideal for development to contemporary uses consistent with the future growth of Ellettsville. The project is located along a main roadway, designed to accommodate traffic flow and adequately meet the needs of a multifamily development. Adequate utility infrastructure will be in place with construction of the Ellis-Ridge Subdivision to meet the needs of the development. Existing access points are present on the north and south of the site connecting through the proposed subdivision of which the site is a part. The property is underutilized and needs to be redeveloped to create a first impression of Ellettsville for those traveling along State Road 46 from State Road 37 and the I-69 corridor. Redevelopment of the property as a Multi-Family Planned Unit Development is appropriate use for the property from both a development and tax base standpoint. A unified development with good visibility, new and architecturally pleasing buildings, good access and a complete landscape package will make the appropriate first impression on those traveling to and those currently living in the Ellettsville area.

## **Existing Zoning and Property Size**

The existing property is approximately 6.36 acres and is part of the proposed 17.53-acre Ellis-Ridge Subdivision. The property is currently zoned C-3 Commercial which includes multifamily as a special exception. The adjacent land to the north and south will be part of the proposed Ellis-Ridge Subdivision and will maintain the C-3 zoning. The adjacent property to the east is within Monroe County Jurisdiction and is zoned LR (Light Duty Residential, 3 units per acre) and the adjacent property to the west is zoned R-1 (lot size of 10,000 sf or 4.35 units per acre).

## **Proposed Zoning**

The proposed zoning of the property is PUD (Planned Unit Development). The PUD will include 168 apartment units consisting of 48 studio apartments, 72 one-bedroom units and 48 two-bedroom units. The studio units will be 415 square foot, one-bedroom units will be two sizes:

562 square feet and 612 square feet, and the two-bedroom units will also be two sizes: 915 square feet and 890 square feet. In addition, there will be a management office, club house and park/greenspace area.

## **Proposed Uses**

The proposed use of the property is multi-family residential apartments and associated uses such as management and maintenance facilities and park/greenspace. The mix of units and their size are intended for occupancy by young professionals working in the area. There is a need for these apartments at a rent that is consistent with the income of early career professionals. Attraction and retention of these tenants is important to the economic development of Ellettsville and the region. The petitioner has developed a similar project on the north side of Tapp Road, east of I-69 interchange and the experience with occupancy of that project confirms the need. The units in that project are renting as they become available and the tenants are the type sought for the proposed project in Ellettsville. The unit size and type are attractive to young, employed professionals desiring a comfortable, mature and convenient neighborhood.

#### **Illustrative Plan**

An illustrative Plan has been prepared showing how the site could be developed based on permitted land uses and development standards. The key components are access location, buffer area and general lot layout. The illustrative plan shows a concept plan for the property but is not intended to be a detailed plan for development. A more detailed plan will follow at the Development Plan approval stage of the project.

#### **Buffer Area**

The existing wooded area located at the eastern and southern edge of Lot 2 will be preserved and maintained as a buffer area to the greatest extent possible. This wooded area is approximately 0.25 acres in size and shall serve as a buffer area between the development and the neighborhood to the east.

The existing wooded area located at the western edge of Lot 1 will be preserved and maintained as a buffer area to the greatest extents possible. This wooded area is approximately 0.14 acres in size and shall serve as a buffer area between the development and the neighborhood to the west.

Additional trees or buffering (i.e. fence) will be included within the building setbacks to serve as the buffer areas for privacy between the development and neighboring properties at the time of the development plan.

## **Open Space**

Open space is included within the development and totals approximately 1.18 acres or 18% of the property. This includes the interior open space within the lots and the community park and excludes the buffer yards. The total open space including buffer yards is approximately 2 acres or 31% of the total property.

A larger portion of the open space will include a community park in the middle of the development that will feature possible amenities such as a dog run, bocce ball, shelter with grills, etc. This park will be an amenity to be utilized not only by the multi-family residents, but also the surrounding neighborhoods.

## **Development Standards**

A complete list of applicable development standards for the PUD are shown on Table A. Those not expressly noted would revert to the Town of Ellettsville requirements for a C-3 zoned property.

## **Landscape Standards**

Landscaping for the PUD shall utilize native plant material. A complete list of landscaping standards and requirements is listed in Table B. The intent of the landscaping requirements of the PUD is to provide an attractively landscaped development, encourage native plant material use to reduce the need for irrigation and set minimum standards

#### **Road and Access Standards**

Access to this project will be through the Ellis-Ridge Subdivision. A full access drive will be provided onto SR 46 and a second access point will be from Ashbrook Drive from the north. There will be several drive cuts along the main north/south road within the Ellis-Ridge Subdivision for access to the internal parking areas to this project. All internal parking lots shall be asphalt or concrete pavement with concrete curb perimeter.

## **Sanitary Sewer**

All lots shall be served by and connect to the Eastern Richland Sanitary Sewer system which will be installed as a part of the Ellis-Ridge Subdivision. Although not a proposed use, any development within the PUD with a commercial kitchen will be require the installation of an external grease interceptors.

#### **Water Service**

All lots shall be served by and connected to the Town of Ellettsville Utilities water system. This system will be extended as required to serve the developments domestic and fire protection needs as a part of the Ellis-Ridge Subdivision. Master-metering of the multifamily residential component will be permitted.

## **Storm Water Management**

Storm water management will be provided by the Ellis-Ridge Subdivision design. Stormwater runoff from this PUD will be directed either to a common detention pond located south of the project or directed to a common detention pond located north of the project. The common detention ponds are adequately sized to provides detention and water quality needs for this PUD. The common detention ponds will be owned and maintained by the Ellis-Ridge Subdivision Owner's Association.

A storm sewer system along the main north/south road within the Ellis-Ridge Subdivision will be utilized for this PUD to convey stormwater runoff to the appropriate common detention ponds.

## Lighting

Lighting within the development, whether street lighting, parking lot lighting, bollard lighting or accent lighting shall be pedestrian scale lighting, meaning that no fixture may extend higher than 14'. All lighting fixtures will be shielded cut-off type fixtures and downward directed. The maximum foot candle level at the property line of any lot shall be zero. This limitation will preclude light spill or glare onto adjacent properties

## Schedule

Development will begin within 1 year following approval of the PUD Development Plan. It is anticipated that the Development Plan submission and processing would follow the Outline Plan approval within 6 months. The project will likely require 2 years for complete build out.

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The Flats on 46	
Table A	1
Development Standards	10 (50) 511 0 10
PUD Element	Lot 1 and 2 of Ellis-Ridge Subdivsion
Land Use	Multi-family Residential
	Leasing Office
	Club House
D 11 F 1	Mark a Book and
Descriptive Features	Multi-family Residential
	20 11 1 2051
Density	20 units per acre based on DUE**
Dwelling Unit Size	Min. 415 SF
Lond Aven	0.00
Land Area	6.36 acres
Development Standards	
Development Standards Setbacks	
	25'
Front Setback (building) Side Setback (building)*	10'
Rear Setback (building)*	20'
Parking (front yard)	25'
Parking (rioht yard) Parking (side yard)	Half of building setback
Parking (rear yard)	Half of building setback
*Doubles when adjacent to different zoning district	I fall of building setback
Parking/Building Setback from access and utility easement	N/A
Setback from internal lot line	N/A
Building Height	40'
Maximum Stories	3
Parking	MULTIFAMILY
. u.m.ig	1 spaces/studio
	1.5 spaces/ 1 bedroom
	2 spaces/2 or more bedroom
	CLUBHOUSE/LEASING
	2 spaces/1,000 GFA
Lighting	
Type	Pedestrian scale
Pole height	Max height of 14'
Fixture Type	Downward directed cut off fixture
Lighting Level	0 foot candle at Prop. Line
	·
Landscaping	Based on Table B
Signage	
Integrated Center Signage	1 integrated center sign per development
	·
Location	10' beyond R/W line
Туре	Ground monument
Height	Maximum 8'
Total Sign Face Area	80 SF per side
Illumintaion	Ground illuminated
Material	Limestone base
Building Signage	As permitted by Town code
0 0	,

<sup>\*\*</sup>DUE = Dwelling Unit Equivalence

Efficeincy or studio of less than 550 SF = 0.33 of a unit

<sup>1</sup> bedroom unit with less than 750 SF = 0.50 of a unit

<sup>2</sup> bedroom unit of less than 950 SF = 0.66 of a unit

<sup>3</sup> or more bedroom unit = 1.0 unit

## **Landscape Requirements**

Table B

## (a) Placement of Landscape Materials:

- (1) Rights-of-way and Easements: It shall be the responsibility of the property owner to install and maintain landscape material in rights-of-way or easements. Plant types shall be approved by either the Town or the easement holder.
- (2) Utility Infrastructure: Trees shall be located to avoid significant interference with overhead or underground utilities, including lateral connections. Trees shall be planted at least ten (10) feet from sanitary sewer and water service lines. A tree canopy may project over a right-of-way or easement. All landscaping plans shall be reviewed by the Town Utilities Department in order to ensure that there are no conflicts between proposed landscaping and utility lines.
- (3) Vehicular and Pedestrian Movement: Plant materials shall be located to avoid interference with vehicular and pedestrian movement. Plant materials shall not project over sidewalks, paths, or trails below a height of eight (8) feet. Plant materials shall not project over street curbs or pavement within rights-of-way or access easements below a height of fifteen (15) feet.
- (4) Vision Clearance: Materials shall be located to avoid interference with visibility.
- (5) *Distribution*: Required landscaping shall be reasonably distributed throughout all open space areas. It is suggested that the required plantings be planted in clusters or irregular patterns, and that native grasses and other native species be used for ornamentation in addition to the required plantings.
- (b) <u>Maintenance</u>: Developers and their successors in interest shall be responsible for the regular maintenance of all landscaping elements in perpetuity. Failure to maintain all landscaping is a violation of the PUD zoning ordinance and subject to enforcement. Specifically:
  - (1) All plant material shall be maintained alive, healthy, and free from disease and pests.
  - (2) All landscape structures including, but not limited to, fences and walls shall be repaired or replaced periodically to maintain a structurally sound and aesthetic condition.

## (c) Plant Material Standards:

- (1) Live Plantings: All plant material shall be living species. Dead, diseased, or artificial plants shall not be recognized as contributing to require landscaping.
- (2) Species Diversity: On sites that require an aggregate total of twenty (20) or more new trees, any given species of tree shall be limited to a maximum of thirty-three percent (33%) of the total number of newly planted trees on site.
- (3) Permitted Plant Material: All plant material shall be selected from the material listed in this section. Substitutions to the list shall be submitted to the Planning Department for approval.

- (4) Prohibited Plant Material: Species identified in within the invasive and Poor Characteristics Species shall under no circumstances be planted.
- (5) New Planting Sizes: The following minimum sizes shall apply to all required plant material:
  - (A) Deciduous Trees: All newly planted deciduous trees shall be at least two(2) inches in caliper.
  - (B) Evergreen Trees: All newly planted evergreen trees shall be at least six (6) feet tall.
  - (C) Shrubs: Shrubs shall be at least three-gallon container size or eighteen (18) inches tall. (6)
- (d) <u>Street Trees</u>: Existing street trees shall be preserved to the extent possible. Additional street trees shall be added where required as follows:
  - (1) *Number*: A minimum of one (1) canopy tree shall be planted per forty (40) feet of property that abuts a public right-of-way or private street within the Flats on 46 PUD.
  - (2) Location:
    - (E) Vision Clearance: Street trees shall be planted outside the vision clearance triangle. Within fifty (50) feet of an intersection, street trees may be planted behind the sidewalk in order to maintain sight distances for traffic control signs. Low-branching species shall not be allowed within fifty (50) feet of an intersection. Locations for street trees within fifty (50) feet of an intersection shall be *approved* by the Town Street Department. Street trees shall be located a minimum of ten (10) feet from a driveway cut, traffic control sign, or street light, and a minimum of three (3) feet from a fire hydrant.
  - (3) *Type*: Street tree species shall be selected from those listed within this section.

## **Landscaping Standards; Multifamily Residential**

This Landscaping Standards section applies to the following zoning districts:

- (a) <u>Interior Plantings</u>: The following standards apply:
  - (1) *Trees*:
    - (A) Number: Any areas of a site not covered by a structure, parking lot or required buffer yard shall be planted with a minimum of fourteen (14) large canopy trees, five (5) evergreen trees, and five (5) medium or small canopy trees per acre.
  - (2) Shrubs:
    - (A) Number: Lots shall be planted with a minimum of thirty-six (36) shrubs per acre.

- (B) Type: A minimum of fifty percent (50%) of the required shrubs shall be evergreen.
- (C) Substitution: One (1) ornamental tree may be substituted for every four (4) shrubs; however, substitution shall not exceed fifty percent (50%) of the required shrubs.
- (D) Foundation Plantings: Shrubs and ornamental trees along foundation walls of structures shall be planted no closer than two (2) feet and eight (8) feet respectively from the foundation wall.

#### **Buffer Areas**

This Landscaping Standards section applies as follows:

- (a) Multifamily Residences Existing tree lines along the property boundaries shall be preserved to the greatest extent possible.
- (b) Multifamily Residences There shall be a landscape buffer of a minimum of 6' high and 10' wide between the multifamily area and adjacent properties that are single-family residential use that share a common lot line. The buffer shall include a mix of evergreen trees and tall deciduous shade trees with a spacing between of 20'.
- (c) Responsibility: The developer or owner of the property being developed is responsible for installing the buffer yard at the time of that development. The adjacent property owner shall not be required to participate in the installation of the buffer yard.
- (d) Location: All required buffer yard areas shall be provided entirely on the subject property and may be placed within the setbacks. The required buffer yards shall be installed despite the presence of streets, alleys, streams or other features that may separate the two properties.
- (e) Plant Material: All plant material used to meet the buffer yard requirements shall meet the standards and shall be selected from the list of permitted plant species.
- (f) Groundcover: All portions of a buffer yard not planted with trees, shrubs, or other required landscape materials shall be covered with grass or similar ground-covering vegetation. Landscaping stone or other non-vegetative materials may not be substituted for ground-covering vegetation. Decorative mulch or stone planting beds may be used around trees, provided that such planting beds are no greater than six (6) feet in diameter.

## **Proposed Plant Material**

## **Street Trees**

Littleleaf Linden

Trees suitable for planting along public streets and highways, parking lots, and in locations where low maintenance and hardy constitution are required. (Bold indicates native species)

## **Permitted Plant Species by Characteristics and Location**

## Large street trees 45' and over at mature height

•	3
Common Name	Scientific Name
Black Maple	Acer nigrum
Red Maple	Acer rubrum
Sugar Maple	Acer saccharum
Sugar Hackberry	Celtis laevigata
Hackberry	Celtis occidentalis
American Beech	Fagus grandfolia
Thornless Honeylocust	Gleditsia triacanthos inermis
Kentucky Coffee Tree	Gymnocladus dioica
Sweetgum	Liquidambar styraciflura
Tulip Tree	Liriodendron tulipifera
Blackgum or Tupelo	Nyssa sylvatica
Sycamore	Platanus occidentalis
White Oak	Quercus alba
Swamp White Oak	Quercus bicolor
Scarlet Oak	Quercus coccinea
Shingle Oak	Quercus imbricaria
Bur Oak	Quercus macrocarpa
Red Oak	Quercus rubra
Shumard Oak	Quercus shumardii
Black Oak	Quercus velutina
Bald Cypress	Taxodium distichum
Basswood or American Linden	Tilia Americana

## Medium street trees 25' to 45' at mature height

Tilia cordata

Common Name	<u>Scientific Name</u>
Autumn Flame Red Maple	Acer rubrum
Downy Serviceberry	Amelanchier arborea
American Hornbeam or Blue Beech	Carpinus caroliniana
Yellowwood	Cladrastis lutea
Hop Hornbeam or Ironwood	Ostrya virginiana

## Small street trees under 25' at mature height

Common Name	Scientific Name
Shadblow Serviceberry	Amelanchier canadensis
Allegheny Serviceberry	Amelanchier laevis
Eastern Redbud	Cercis canadensis
Flowering Dogwood	Cornus florida
Thornless Cockspur Hawthorn	Crataegus crus-galli
Washington Hawthorn	Crataegus phaenopyrum
Green Hawthorn	Crataegus viridis
Flowering Crabapple	Malus sp.

**Interior Trees** 

Trees suitable for use within the interior of a site.

Permitted street tree species listed in previous tables may also be used in addition to the species identified below.

## Large trees 45' and over at mature height

Common Name	Scientific Name
Ohio Buckeye	Aesculus glabra
Yellow Buckeye	Aesculus octandra
Horsechestnut or Buckeye	Aesculus sp.
Bitternut Hickory	Carya cordiformis
Pignut Hickory	Carya glabra
Shellbark Hickory	Carya laciniosa
Shagbark Hickory	Carya ovata
Mockernut Hickory	Carya tomentosa
Northern Catalpa	Catalpa speciosa
Black Walnut	Juglans nigra
Eastern Red Cedar	Juniperus virginiana
Cucumber Tree	Magnolia acuminata
White Pine	Pinus strobes
Virginia Pine	Pinus virginiana
Black Cherry	Prunus serotina
Chestnut Oak	Quercus prinus
Canadian or Eastern Hemlock	Tsuga Canadensis

## Medium trees 25' to 45' at mature height

Common Name	<u>Scientific Name</u>
River Birch	Betula nigra
Sassafras	Sassafras albidum
American Arborvitae	Thuja occidentalis

## Small trees under 25' tall at mature height

Common Name	Scientific Name
Pawpaw	Asimina triloba
Persimmon	Diospyros virginiana
Silverbell	Halesia carolina
Wild Plum	Prunus Americana
Staghorn Sumac	Rhus typhina

Shrubs, Bushes, & Hedges. Plants suitable for individual, screen, biohedge uses (up to 12 feet at mature height)

Common Name	Scientific Name
Black Chokeberry	Aronia melanocarpa
Boxwood	Buxus species Caolinia
New Jersey Tea	Ceanothus americanus
Buttonbush	Cephalanthus occidentalis
American Hazelnut	Corulus Americana

American Hazelnut Corylus Americana
Eastern Witch Hazel Hamamelis virginiana
Wild Hydrangia Hydrangia arborescens

InkberryLlex glabraWinterberry HollyIlex verticillataVirginia SweetspireItea virginicaJuniperJuniper speciesSpicebushLindera benzoin

Ninebark Physocarpus opulifolius

Shrubby Cinquefoil Potentilla Sand Cherry Prunus pumila Rhus aromatic Fragrant Sumac Winged Suma Rhus copallina **Shinning Sumac** Rhus glabra Virginia Rose Rosa virginiana **Pussy Willow** Salix discolor Bladdernut Stapphylea trifolia

Coralberry or Indian Currant Symphoricarpos orbiculatus

Canadian Yew Taxus canadensis

Highbush Blueberry

Mapleleaf Viburnum

Arrowwood

Nannyberry

Black Haw

Prickly Ash

Vaccinium corymbosum

Viburnum acerifolium

Viburnum dentatum

Viburnum lentago

Viburnum prunifolium

Zanthoxylum americanum

Herbaceous Perennial Plants and plants suitable for infill, aesthetics, and cover

(bold indicates native species)

## **Flowering Perennials**

Flowering Perennials	5
Common Name	Scientific Name
Canadian Anemone	Anemone canadensis
Columbine	Aquilegia canadensis
Swamp or Marsh Milkweed	Asclepias incarnata
Common Milkweed	Asclepias syriaca
Butterflyweed	Asclepias tuberosa
Smooth Aster	Aster laevis
Short's Aster	Aster shortii
False Blue Indigo	Baptisia australis
Tall Coreopsis	Coreopsis tripteris
Larkspur	Delphinium tricorne
Purple Coneflower	Echinacea purpurea
Spotted-Joe-Pye-Weed	Eupatorium maculatum
Wild Geranium	Geranium maculatum
Autumn Sneezeweed	Helenium autumnale
Stiff or Prairie Sunflower	Helianthus pauciflorus
False Sunflower	Heliopsis helianthoides
Violet Lespedeza	Lespedeza violacea
Rough Blazing Star	Liatris aspera
Prairie Blazing Star	Liatris pycnostachya
Dense Blazing Star	Liatrus spicata
Cardinal Flower	Lobelia cardinalis
Great Blue Lobelia	Lobelia siphilitica
Virginia Bluebells	Mertensia virginica
Bergamot or Bee-balm	Monarda fistulosa
Purple Prairie Clover	Petalostemum purpureum
Blue Phlox	Phlox divaricate
Summer Phlox	Phlox paniculata
Obedient Plant	Physostegia virginiana
Yellow Coneflower	Ratibida pinnata
Orange Coneflower	Redbeckia fulgida
Black-Eyed-Susan	Rudbeckia hirta
Green-Headed Coneflower	Rudbeckia laciniata
Sweet Coneflower	Rudbeckia subtomentosa
Stiff Goldenrod	Solidago rigida
Blue-stemed Goldenrod	Solidago caesia
Grey Goldenrod	Solidago nemoralis

#### Flats on 46 PUD Outline Plan

Royal Catchfly Silene regia Fire Pink Silene virginica

Celandine Poppy Stylophorum diphyllum Coralberry Symphoricarpos orbiculatus Culver's Root Veronicastrum virginicum

Violet Viola sororia

#### **Ground Covers**

Scientific Name Common Name Canada Anemone Anemone canadensis Wild Ginger Asarum canadense Palm Sedge Carex muskingumensis Common Oak Sedge Carex pensylvanica Running Strawberry Bush Euonymus obovatus Wild Strawberry Fragaria virginiana **Dwarf Crested Iris** Iris cristata

**Creeping Juniper** Juniperus horizontalis **Creeping Phlox** Phlox subulate Partridge Berry Mitchella repens Wild Stonecrop Sedum ternatum Foam Flower

Tiarella cordifolia

## Vines

Common Name Scientific Name

Wooly Douchman's Pipe Aristolochia tomentosa Crossvine Bignonia capreolata **Trumpet Creeper** Campsis radicans Virgin's Bower (native clematis) Clematis virginiana Virginia Creeper **Parthenocissus** quinquefolia

**Ferns** 

Common Name Scientific Name Maidenhair Fern Adiantum pedatum Athyrium filix-femina Lady Fern Giant Wood Fern or Goldie's Fern Dryopteris goldiana Evergreen Shield Fern Dryopteris marginalis Ostrich Fern Matteuccia struthiopteris Cinnamon Fern Osmunda cinnamomea Christmas Fern Polystichum acrostichoides

## Flats on 46 PUD Outline Plan

## Grasses

Common Name	Scientific Name
Big Bluestem	Andropogon gerardii
Side-Oats Gramma	Bouteloua curtipendula
Indian Seaoats	Chasmanthium latifolium
Bottlebrush Grass	Elymus hystrix
Virginia Wild Rye	Blymus virginicus
June Grass	Koeleria macrantha
Switch Grass	Panicum virgatum
Little Bluestem	Schizachyrium scoparium
Prairie Dropseed	Sporobulus heterolepsis

## Invasive Species, Species with Poor Characteristics and Noxious or Detrimental

## **Plants**

Species considered unacceptable and that should not be planted because of invasive characteristics, weak wood, and/or abundant litter.

- \* = Indiana State-listed noxious weeds (USDA, INDNR, &/or State Seed Commissioner)
- + = Indiana detrimental plants (INDNR)

## **Invasive Trees**

ilivasive frees	
Common Name	Scientific Name
Amur Maple	Acer ginnala
Norway Maple	Acer platanoides
Tree-of-Heaven	Ailanthus altissima
Black Alder	Alnus glutinosa
Russian Olive	Elaeagnus angustifolia
Autumn Olive	Elaeagnus umbellata
White Mulberry	Morus alba
Princess Tree	Paulownia tomentosa
Sawtooth Oak	Quercus acutissima
Armur Cork Tree	Phellodendron amurense
Callery Pear and all cultivars	Pyrus calleryana
European or Common Buckthorn	Rhamnus cathartica
Glossy or Smooth Buckthorn	Rhamnus frangula
Buckthorn Tallhedge	Rhamnus frangula columnaris
Black Locus	Robinia pseudoacacia
Siberian Elm	Ulmus pumila

## **Trees with Poor Characteristics**

Common Name	Scientific Name
Box Elder	Acer negundo
Silver maple	Acer saccharinum
European White Birch	Betula pendula
Poison Hemlock	Conium maculatim L
Ash	Fraxinus species
Gingko (female only)	Gingko biloba
Giant Hogweed	Heracleum mantegazziznum
Rice Cutgrass	Leersia oryzoides
Flowering Crabapple	Malus
Wild Parsnip	Pastinaca sativa
American Elm	Ulmus Americana

Poison Ivy Toxicodendron radicans
Poison Sumac Toxicodendron vernix

### **Invasive Herbaceous Perennials**

Common Name Scientific Name Japanese Chaff Flower Achyranthes japonica Wild Garlic and Wild Onion Alliums spp. \* Garlic Mustard Alliaria petiolata Artemisia vulgaris Mugwort Spiny Plumless Thistle Carduous acanthoides Cornflower or Bachelor's Button Centaurea cyanus Russian Knapweed Centaurea repens \* Centaurea stoebe Spotted Knapweed Canada Thistle Cirsium arvense \*+ **Bull Thistle** Cirsium vulgare Poison Hemlock Conium maculatum **Grecian Foxglove** Digitalis lanata

Teasel Dipsacus fullonum ssp. Sylvestris

**Cutleaf Teasel** Dipsacus lacinatum Giant Hogweed Fallopia japonica Dame's Rocket Hesperis matronalis Meadow Fleabane or British Yellowhead Inula britannica **Perennial Peppergrass** Lepidium draba\* Pepperweed Lepidium latifolium Bicolar Lespedesza Lespedesza Cuneata Sericea Lespedeza Lespedeza cuneata Purple Loosestrife Lythrum salicaria \* **Sweet Clover** Melilotus alba, M.

officinalis Star of Bethlehem Ornithogalum umbellatum

Lesser Celandine

Japanese Knotweed

Giant Knotweed

Bohemian Knotweed

Perennial Sowthistle

Black Swallow-wort

Pale Swallow-wort

Paganunculus ficaria

Reynoutria sachalinensis

Reynoutria x bohemica

Sonchus arvensis \*

Vincetoxicum nigrum

Vincetoxicum rossicum

## **Invasive Grasses**

Common Name	Scientific Name
Quackgrass	Agropyron repens *
Giant Reed	Arundo donax
Small Carpgrass	Arthraxon hispidus
Smooth Brome	Bromus inermis

#### Flats on 46 PUD Outline Plan

Tall Fescue Festuca elation

Japanese Stilt Grass Microstegium vimineum Maiden Grass Miscanthus sinensis Phalaris arundinacea **Reed Canary Grass** Common Reed Grass Phragmites australis Columbus Grass Sorghum almun Parodi \* Shattercane Sorghum bicolor \*+ Johnson Grass or Sorghum Almum Sorghum halepense \*+ Yellow Groove Bamboo Phyllostachys aureosulcata

### **Invasive Vines and Groundcovers**

Common NameScientific NameOriental BittersweetCelastrus orbiculatusAsiatic BittersweetCelastrus scandensSweet Autumn ClematisClematis ternifloraField BindweedConvolvulus arvensis \*

Crown Vetch Coronilla varia

Black Swallow-Wort Cynanchum nigrum, syn. Vincetoxicum nigrum

Pale Swallow-Wort

Potato vine

Chinese Yam

Purple Winter Creeper

Creeping Charlie

Cynanchum rossicum

Dioscorea batatas

Dioscora oppositifolia

Euonymus fortunei

Glechoma hederacea

English Ivy Hedera helix

Japanese Hops

Japanese Honeysuckle

Creeping Jenny or Moneywort

Mile-A-Minute Weed

Kudzu

Humulus japonicus

Lonicera japonica

Lysimachia nummularia

Polygonum perfoliatum

Pueraria montana lobata

Bur Cucumber Sicyos angulatus \*+

Periwinkle or Myrtle Vinca minor
Wisteria Wisteria sinensis

## **Invasive Shrubs**

Common Name Scientific Name Black Alder Alnus glutinosa Japanese Barberry Berberis thunbergii **Butterfly Bush** Buddleia davidii **Burning Bush** Euonymus alatus **Blunt-leaved Privet** Ligustrum obusifolium Common Privet Ligustrum vulgare Bush or Amur Honeysuckle Lonicera maackii Morrow's Honeysuckle Lonicera morowii

### Flats on 46 PUD Outline Plan

Tatarian Honeysuckle Lonicera tatarica
Bell's Honeysuckle Lonicera x bells

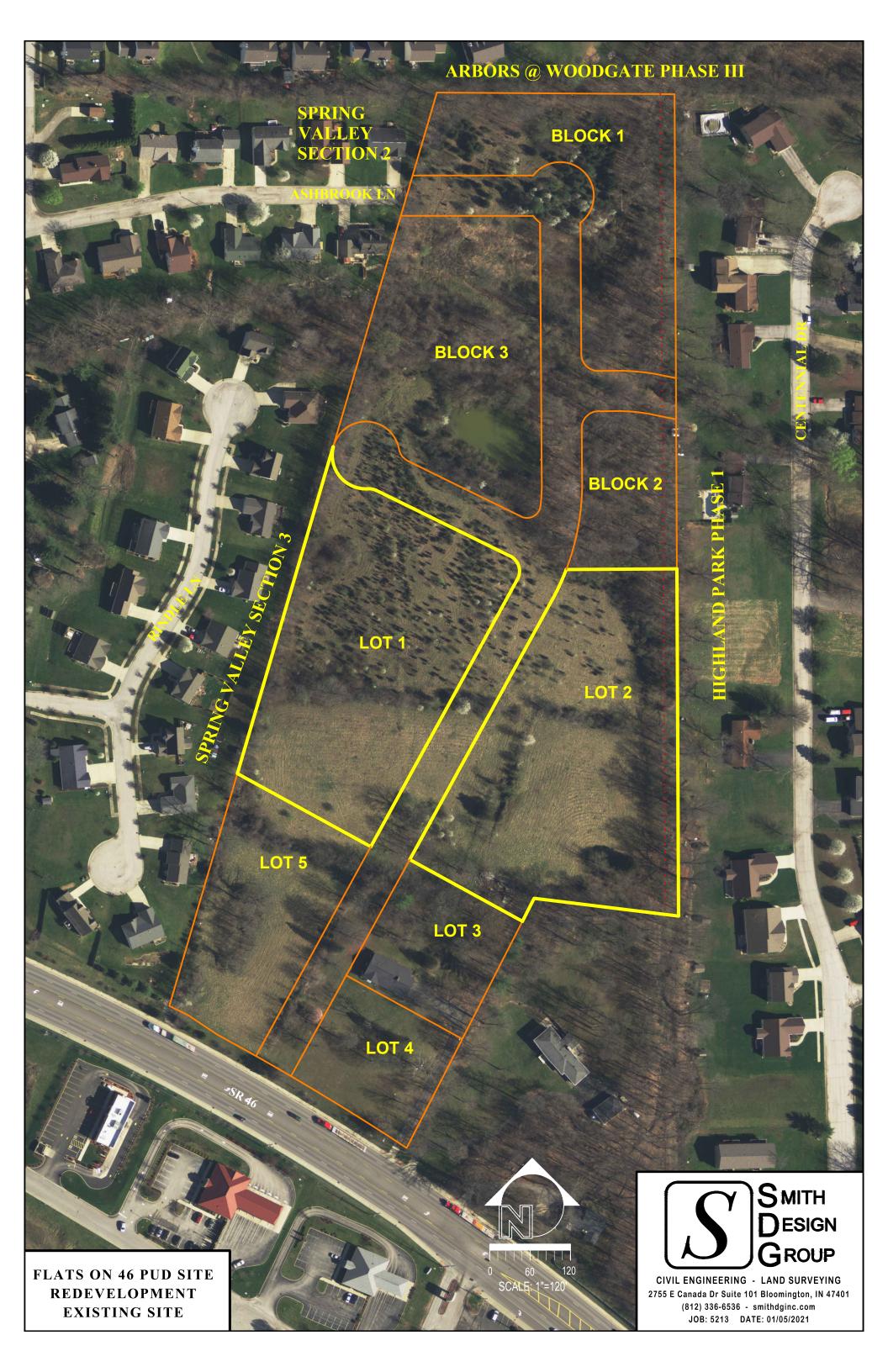
Jetbead Rhodotypos scandens
Multiflora Rose Rosa multiflora \*
Multiflora Rose Rosa multiflora\*
Winberry Rubus phoenicolasius

Japanese Spirea Spiraea japonica

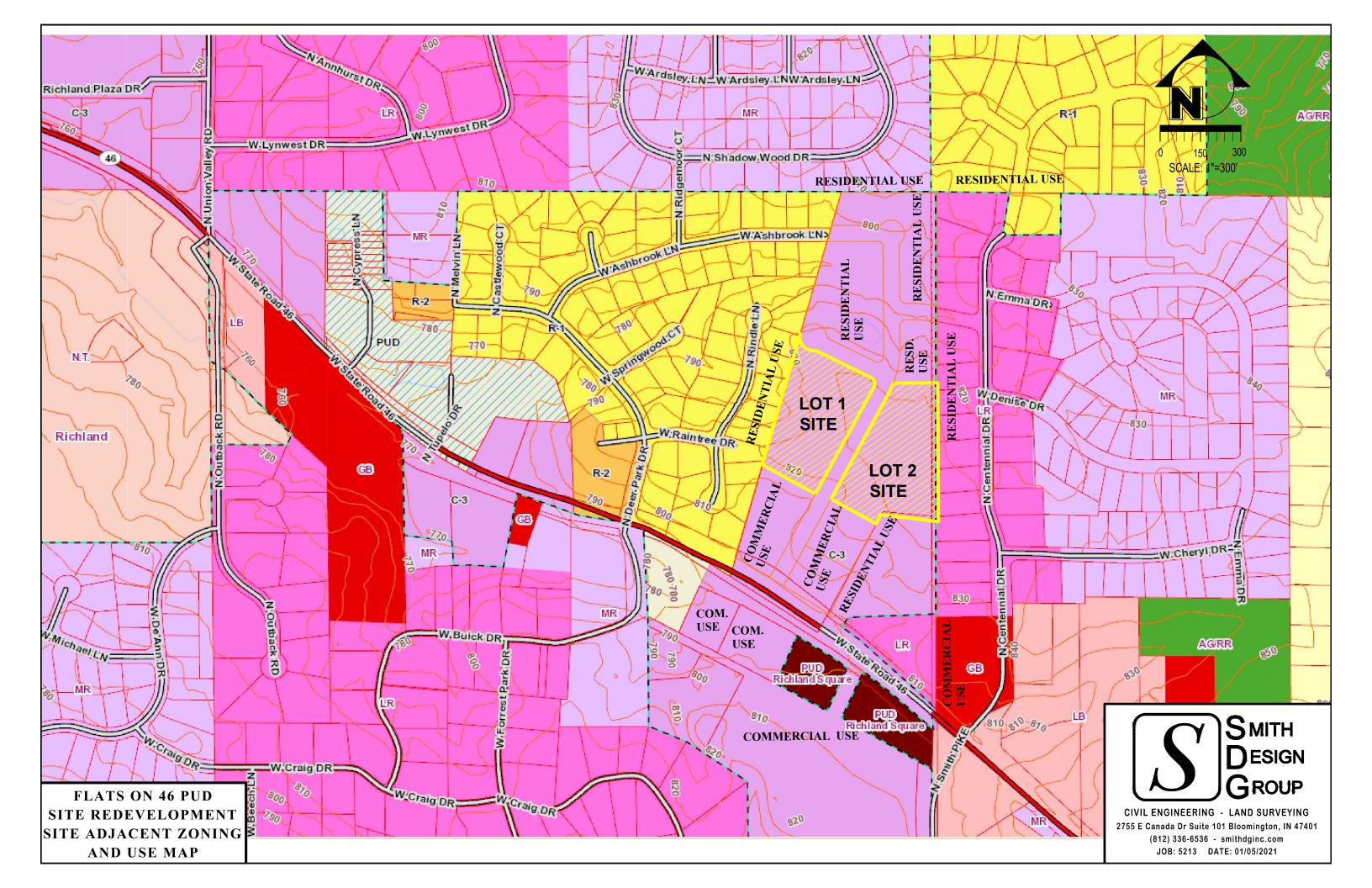
Atlantic Poison Oak Toxicodendron pubescens, syn. Rhus pubescens

Poison Sumac Toxicodendron vernix, syn Rhus vernix

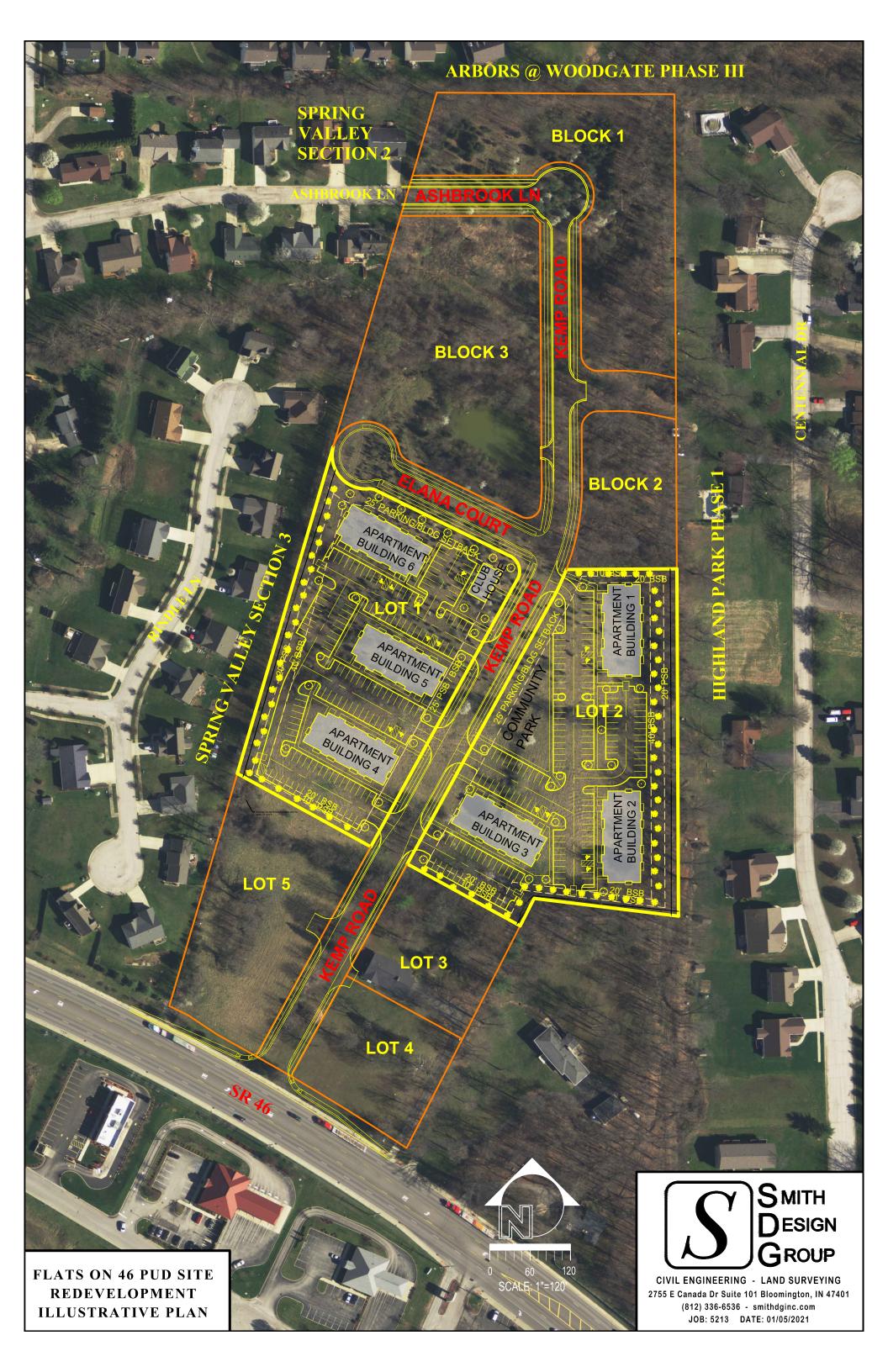
European Highbush Cranberry Viburnum opulus v. opulus













## FLATS ON 46 - APARTMENT BUILDING CONCEPT

TRIDGE GROUP





