Urban Site Index and Master Planting Design

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Urban Forester
Ohio Division of Forestry
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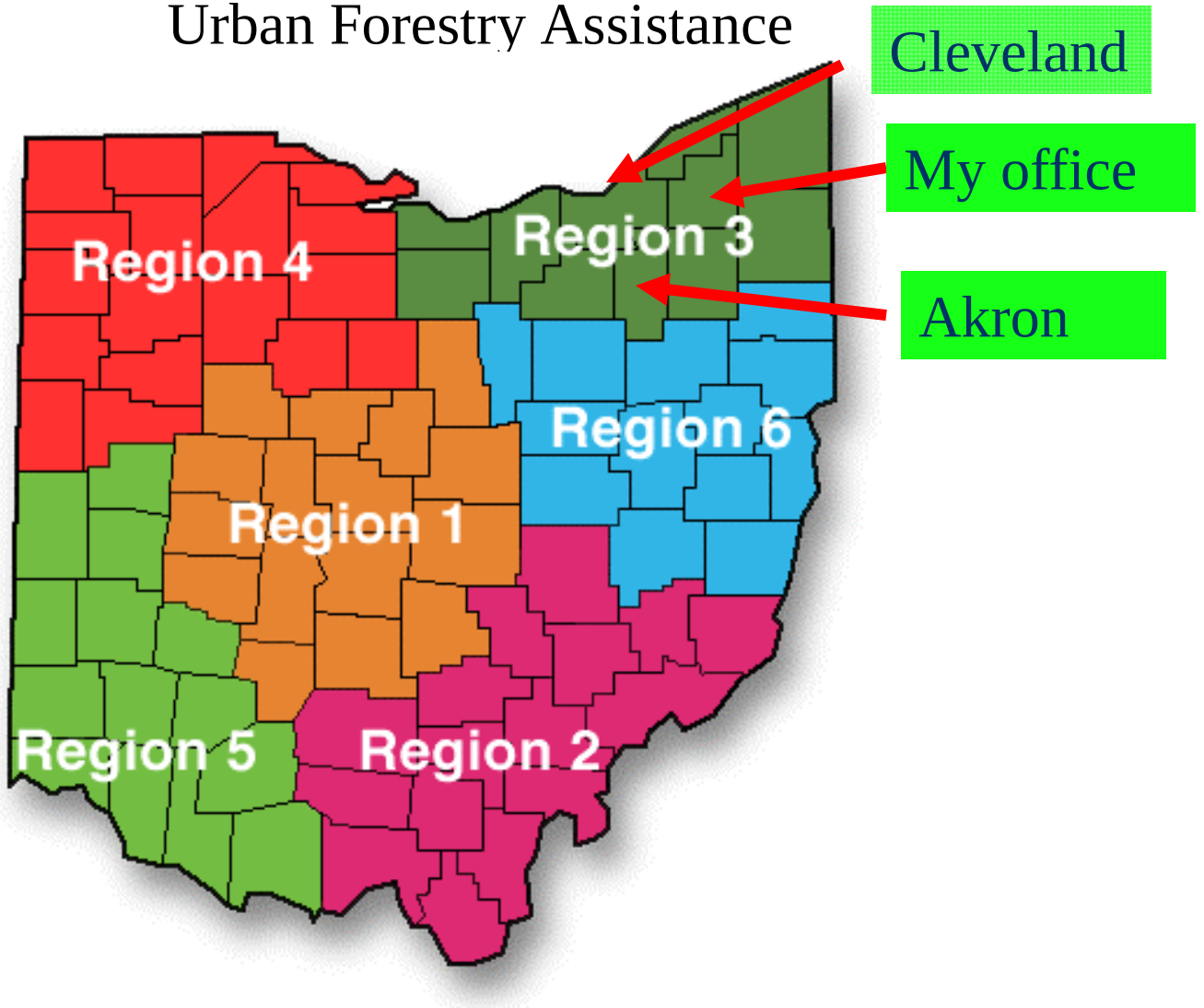

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Urban Forestry Assistance Program

Organizational and

Technical Assistance to

Communities on:

- Arboriculture
- Urban Forestry
- Human Relations
- Municipal Government

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TCA
TREE COMMISSION ACADEMY

TCA Structure

- Series of 4 classes
  - Freshman, Sophomore, Junior, Senior
  - 10 hours of class time and training/class
- Notebook & Resources
- Activities
  - Project Learning Tree & Others
  - Ideas for your own programs

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TREE COMMISSION ACADEMY

Urban Site Index
&
Master Planting Design

UF 202

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Re-establish the Urban Forest

Trees won't regenerate in the urban environment

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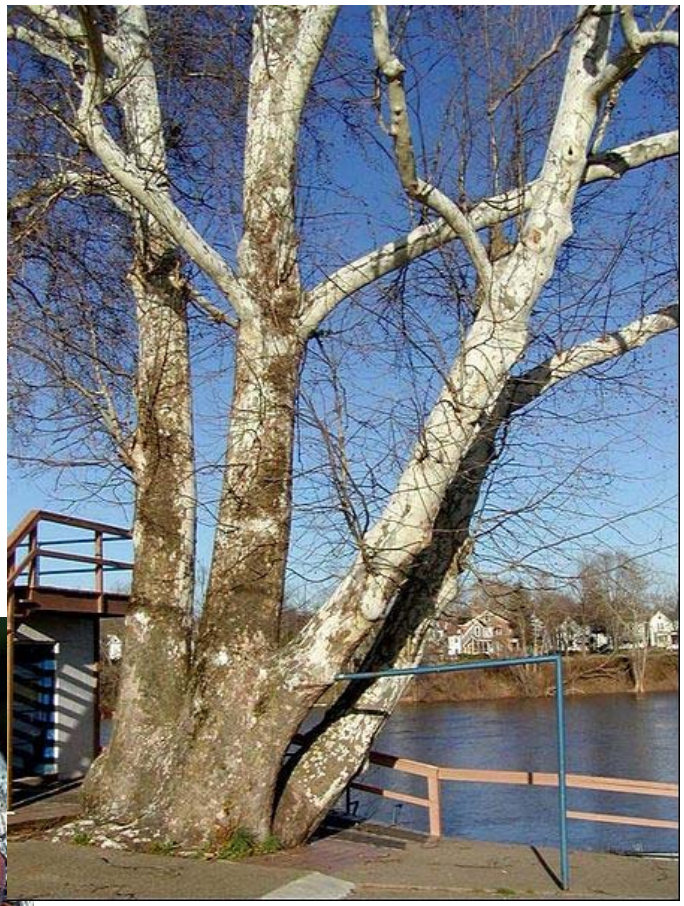
Re-establish the Urban Forest



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Re-establish the Urban Forest

Planting is the single best time to manipulate the urban forest

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Guidelines

- Right Tree, Right Spot
- Species Diversity
- Age Diversity
- Biggest Size Class for Location
- Least Hardy for Location

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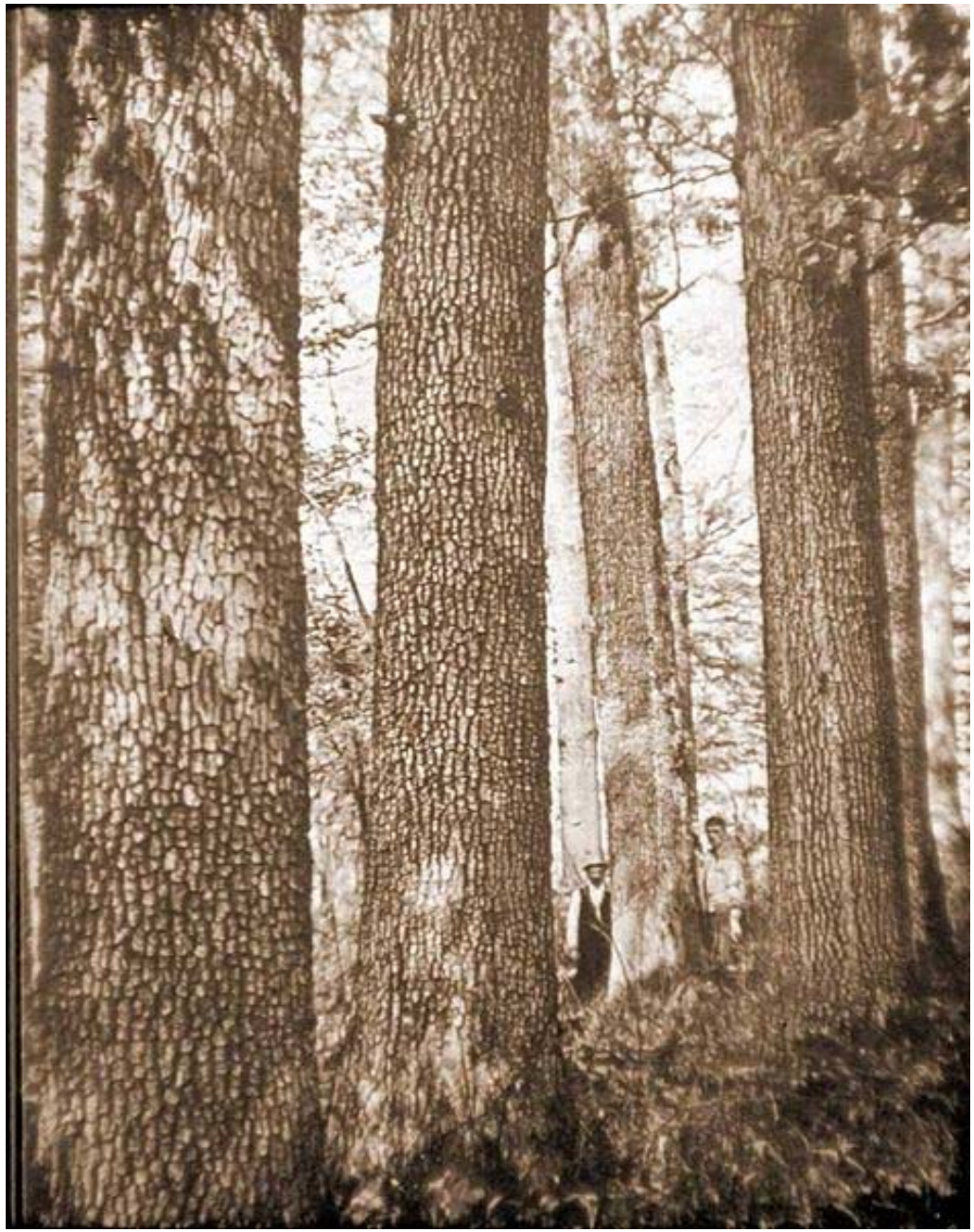

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Effects of Species Decision

5 Years Post Planting

Ecosystem Services

Crabapple: $22.50

London Plane: $137.50

Same guy
Same day

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Mature Size Matters!

Crabapple: $22.50

London Plane: $137.50

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Effects of Species Decision

20 Years Post Planting

Ecosystem Services Over Life of Tree

Crabapple		London Plane	
5 Years	$ 22.50	**5 Years**	$ 137.50
10 Years	$ 60.00	**10 Years**	$ 467.50
15 Years	$117.50	**15 Years**	$1,032.50
20 Years	$202.50	**20 Years**	$1,830.00

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50 Years Later
Still No Shade!

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Right Tree in the Right Spot
Size

Trees that are too large for their site are:

- Expensive to maintain
- Low vigor
  - Disease & insect susceptible
- Short lived

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Right Tree in the Right Spot

Size

Plant the largest tree that will fit in the site

Larger trees will be limited in most sites

Avoid planting small trees in large sites

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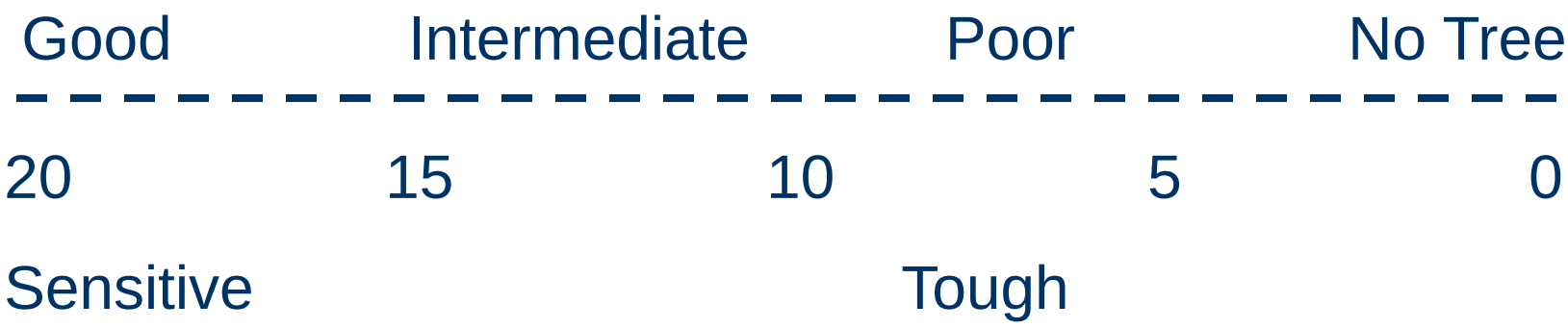
Right Tree in the Right Spot

Hardiness

Our Urban Forest has a spectrum of site qualities



We also have trees of different tolerances

Urban Site Index = Measure of Site Quality

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Right Tree in the Right Spot

Hardiness

Plant the least hardy tree that will survive and thrive in the site

- Sensitive trees will be limited in most sites
- Avoid planting tough trees in good sites

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Species Diversity

10-20-30 Rule

- No more than 10% of any one species
- No more than 20% of any one genus
- No more than 30% of any one family

5-10-15 Rule

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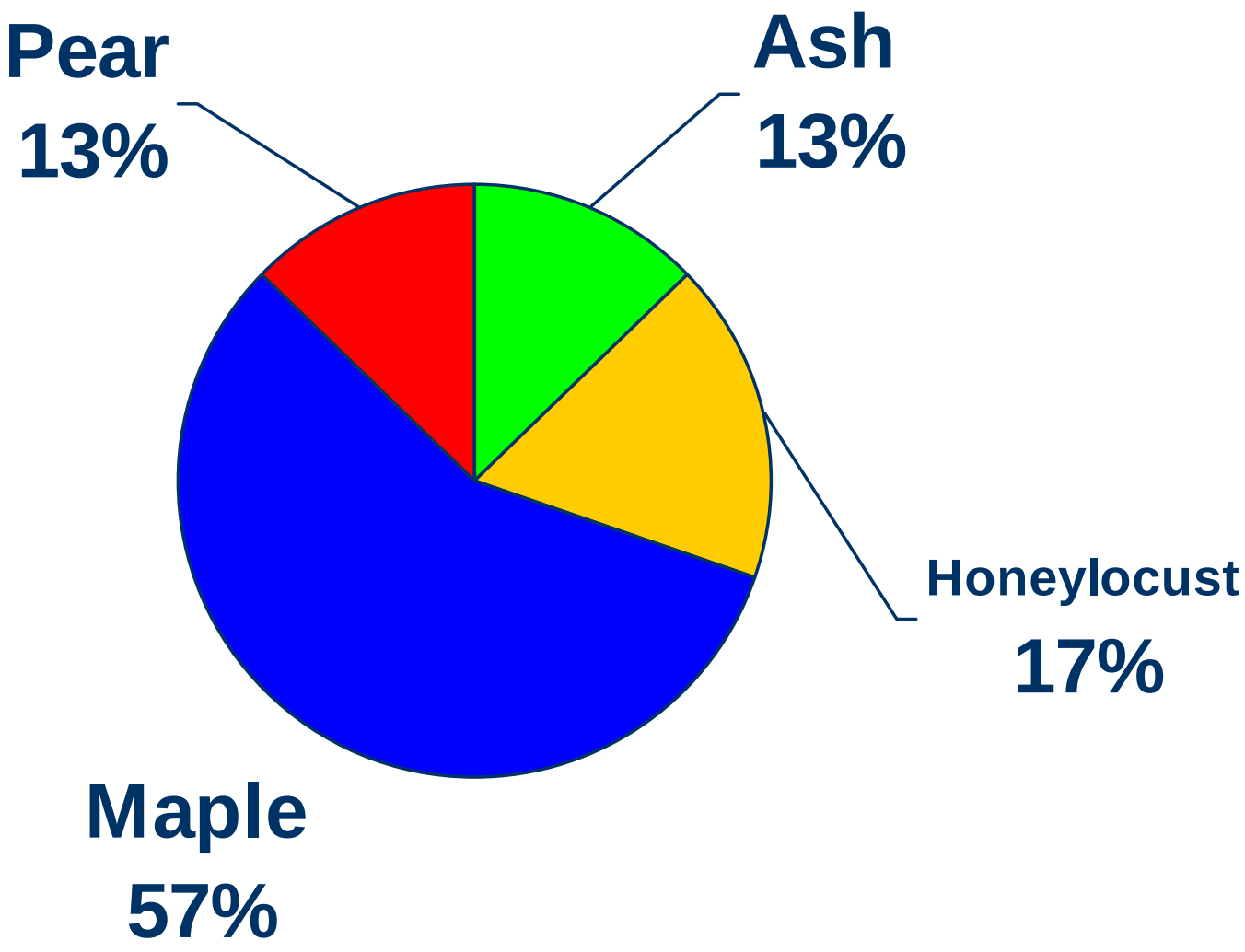

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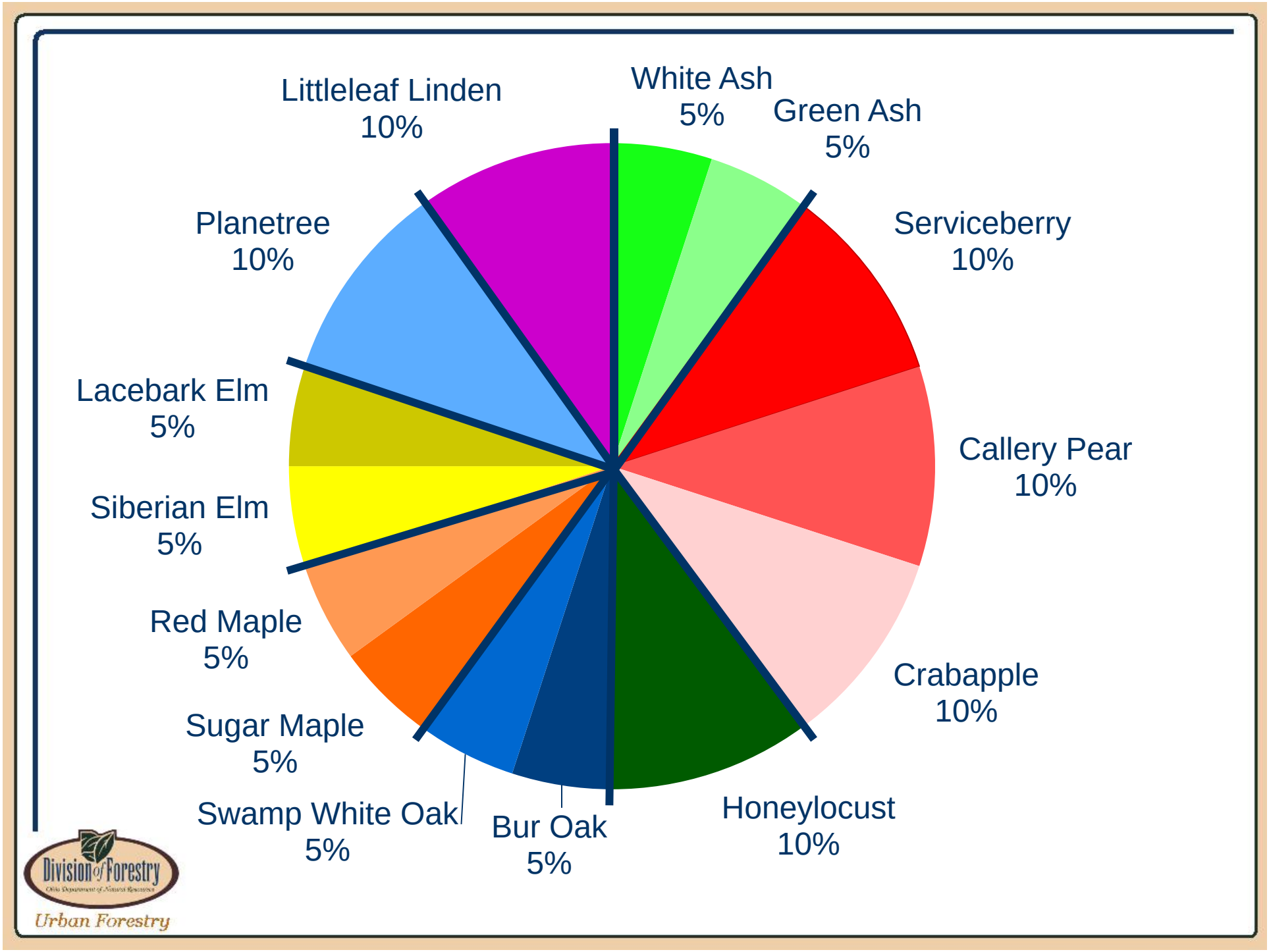
White Ash
5%
Green Ash
5%
Serviceberry
10%
Callery Pear
10%
Crabapple
10%
Honeylocust
10%
Bur Oak
5%
Swamp White Oak
5%
Sugar Maple
5%
Red Maple
5%
Siberian Elm
5%
Lacebark Elm
5%
Planetree
10%
Littleleaf Linden
10%
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Diversity Strategies

Species Diversity

Age Diversity

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Species Diversity Strategies

Street to Street/Block to Block

- Benefits
  - Community Diversity
  - Aesthetic Continuity
  - Efficient Management
  - Ease of Selection/Replacement
- Limitations
  - Catastrophic Events = Complete Loss/Block
  - Genetically Programmed
    - Lifespan
    - Susceptibilities to pathogens, weather, stressors

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Species Diversity Strategies

Complimentary Mix

- Trees of like characteristics
- Benefits
  - 2-3 Species per Street/Block
  - Neighborhood Diversity
  - Aesthetic Continuity
  - Efficient Management
  - Ease of Selection/Replacement
- Limitations
  - Sets often difficult to pair up

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Species Diversity Strategies

Mixed Species

- Naturalized Look & Feel
- Benefits
  - Neighborhood Diversity
  - Extremely low incidence of complete loss
    - Reduced pathogenic spread
- Limitations
  - Decreased Management Efficiency
  - Selection/Replacement Challenges
  - Lost Aesthetic Continuity

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Age Diversity Strategy

When filling planting spots

- Replace same number of trees removed

  plus

- Plant 5-10% of available planting sites annually
  - % calculated at beginning of reestablishment period

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Steps to Good Tree Selection

1. Visit the Site
2. Identify Growing Constraints
   - Systematic

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Growing Constraints

- Hardiness Zone
- Light
- Water
- Soil
- Space
- Salt Exposure
- Wind
- Human Activities

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Considerations

- Function
- Form
- Insect/Disease Resistance
- Maintenance Needs
- Aesthetics

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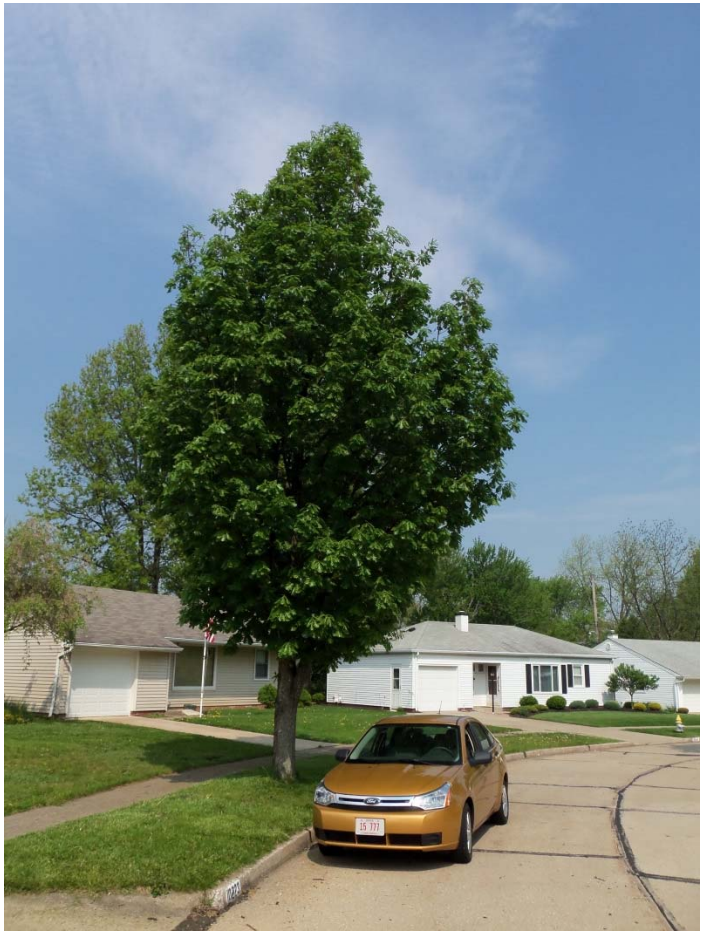
What we really need to know to pick a tree

- How much room the tree will have
- How good or bad is the site
- What is growing in the area



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What About on the Large Scale?

Towns & Cities

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What Do We *Really* Need For Large Scale Sites?

- Identify Site Constraints
  - Treelawn Width
  - Overhead Utility
  - Soil
  - Salt/Traffic Pattern
  - Traffic Use/Parking/Curbing

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Urban Site Index
USI

- Site Quality
  - Compaction
  - Structure
  - Soil Health
- Salt/Traffic Pattern

Quantitative/Measurable

Use Field Data & Score Sheets

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URBAN SITE INDEX (USI) INVENTORY

Collectors (s)_____ Page ____ Comments on back

Date _____ City/Stand _____

Large scale! Look for change in USI or site class

			Block Start	Block End													
No.	Street	Dir	Block #/Add #/ Landmark	Block #/Add #/ Landmark	Spp	Veg	Surf	Prob	Layer	Speed	Lane	Park	Length	Total	Size	Pri
1																	
2																	
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	
11																	
12																	
13																	
14																	
15																	

Key

Spp Species

Dir Street Direction (North/South/East/West)

Veg Vegetation
0 just bare dirt, gravel or some sort of pavement
1 sparse weeds with dirt showing through
2 patchy grass and weeds
3 good (un-watered) lush grass, some weeds are ok.

Surf Surface compaction
0 no soil pavement
1 hard like walking on office carpeting
2 moderate like walking on living room carpeting
3 soft like walking on well padded shag carpeting

Prob Shovel or Probe penetration
0 does not go into the ground
1 goes in but not completely
2 goes in but requires lots of effort
3 goes in fully with ease

Layer Soil layer
0 no soil
1 no top soil or layered subsoil or a clear separation between
2 layering in the soil from the old native soil
3 good layering of the A-B-C native soil

Speed Speed limit of street
0 50 mph or more
1 35 to 49 mph
2 less than 35 mph

Lane Number of traffic lanes on street
0 4 lanes or more
1 4 lanes
2 2 lanes

Park Type of parking on street
1 No parking
2 On street parking

Length Block length between traffic control devices
0 More than ½ mile
1 ¼ to ½ mile
2 less than ¼ mile

Size Size Class for Tree
L >8 Feet Wide & no overhead primary electric
M 4-8 Feet Wide & no overhead primary electric
S 4-6 Feet Wide or primary overhead electric

Pri Priority
1 Curb & Sidewalk
2 Curb or Sidewalk
3 No Curb, No Sidewalk

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Urban Site Index

- A rapid assessment process to quantify the severity/quality of street planting sites
- Based on easily obtained field observations
- Results in a numeric assessment: 0-20

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Urban Site Index
8 Observations

4 Soil Observations

- Scored 0-3

4 Street observations

- Scored 0-2

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4 Soil Observations

- Vegetation
- Surface compaction
- Probe penetration
- Soil development

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Vegetation

0 Bare dirt, gravel or some sort of pavement

1 Sparse weeds with some dirt showing

2 Patchy grass and weeds

3 Lush grass some weed ok

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Surface Compaction

0 No soil, pavement

1 Hard, like walking on office carpeting

2 Some give, like walking on padded carpet

3 Cushioned give, like walking on deep pile padding

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Probe/Shovel Penetration

0 No soil, pavement

1 Goes in, but not completely

2 Goes in, but requires lots of effort

3 Goes in fully with ease

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Soil Development

0 No soil, pavement

1 No top soil, un-layered sub soil, or clear separation between top & subsoil

2 Layering in soil from old native soil

3 Good, deep topsoil with only the A horizon in the probe

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4 Street Observations

- Speed
- Lanes
- Parking
- Length between traffic control devices

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Speed

0 50 mph or greater

1 35-45 mph

2 Less than 35

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Lanes

0 6 or more

1 3-5 lanes

2 2 lanes

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Parking

1. No street parking
2. On street parking

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Length Between Stop Signs/Lights

0 More than ½ mile

1 ½ to ¼ mile

2 Less than ¼ mile

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Think Large Scale

Large scale! Look for change in USI or size class

			Block Start	Block End												
No.	**Street**	**Dir**	Block #/Add #/ Landmark	Block #/Add #/ Landmark	**Spp**	Veg	Surf	Prob	Layer	Speed	Lane	Park	Length	Total	**Size**	**Pri**
1	Colt St	S	Brown Ln			2	2	2	2	1	1	2	2	14		
2																

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Score Range

0-20

Ratings

- No Tree 0-8
- Poor 9-11
- Intermediate 12-15
- Good 16-20

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Site Evaluation Needs

- Identify Site Constraints
  - Treelawn Width
  - Overhead Utility
  - Soil
  - Salt/Traffic Pattern
  - Traffic Use/Parking/Curbing

Large Scale Sites

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Size Classes

- Large Site
  - 8+ feet wide
  - No overhead primary electric
- Medium Site
  - 6-8 feet wide
- Small Site
  - 4-6 feet wide

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Think Large Scale

Large scale! Look for change in USI or size class

			Block Start	Block End												
No.	**Street**	**Dir**	Block #/Add #/ Landmark	Block #/Add #/ Landmark	**Spp**	Veg	Surf	Prob	Layer	Speed	Lane	Park	Length	Total	**Size**	**Pri**
1	Colt St	S	Brown Ln			2	2	2	2	1	1	2	2	14	L	
2																

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Parking/Curbing

- Primary Site
  - Curb & Sidewalk
  - Space clearly defined
- Secondary
  - Only curb or sidewalk
  - Lose space definition
- Tertiary
  - No curb
  - No sidewalk
  - No space definition

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Think Large Scale

Large scale! Look for change in USI or size class

			Block Start	Block End												
No.	**Street**	**Dir**	Block #/Add #/ Landmark	Block #/Add #/ Landmark	**Spp**	Veg	Surf	Prob	Layer	Speed	Lane	Park	Length	Total	**Size**	**Pri**
1	Colt St	S	Brown Ln	Saints Way		2	2	2	2	1	1	2	2	14	L	1
2																

- End Block; may be 7-11 Trees
- End Block; must when there is a change in USI, Size Class, or Priority

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URBAN SITE INDEX (USI) INVENTORY

Collectors (s) Group 2 Page 1 Comments on back

Date _____ City/Stand Salt Creek

Large scale! Look for change in USI or size class

No.	Street	Dir	Block Start Block #/Add #/ Landmark	Block End Block #/Add #/ Landmark	Spp	Veg	Surf	Prob	Layer	Speed	Lane	Park	Length	Total	Size	Pri
1	4	S	Rose Park	H		1	1	1	1	1	2	2	0	9	L	1
2	4	S	H	G		1	1	1	1	1	2	2	0	7	L	1
3	4	S	G	F		2	1	1	1	1	2	2	0	10	L	1
4	4	S	F	E		2	1	1	1	1	2	2	0	10	L	1
5	4	S	E	D		2	1	1	1	1	2	2	0	10	L	1
6	4	S	D	C		2	1	1	1	1	2	2	0	10	L	1
7	4	S	C	B		2	1	1	1	1	2	2	0	10	L	1
8	4	S	B	A		2	1	1	1	1	2	2	0	10	L	1
9	5		G	F		0	0	0	0	2	2	2	2	8	\	\
10	5		F	E		1	1	1	1	2	2	2	2	12	L	3
11	5		E	D		1	1	1	1	2	2	2	2	12	L	3
12	5		D	C		1	1	1	1	2	2	2	2	12	L	3
13	5		C	B		1	1	1	1	2	2	2	2	12	L	3
14	5		B	A		1	1	1	1	2	2	2	2	12	L	3
15	6		Rose Park	J		0	0	0	0	2	2	2	0	6	L	/

Key

Spp Species

Veg Vegetation
- 0 just bare dirt, gravel or some sort of pavement
- 1 sparse weeds with dirt showing through
- 2 patchy grass and weeds
- 3 good (un-watered) lush grass, some weeds are ok.

Surf Surface compaction
- 0 no soil, pavement
- 1 hard like walking on office carpeting
- 2 moderate like walking on living room carpeting
- 3 soft like walking on well padded shag carpeting

Prob Shovel or Probe penetration
- 0 does not go into the ground
- 1 goes in but not completely
- 2 goes in but requires lots of effort
- 3 goes in fully with ease

Layer Soil layers
- 0 no soil
- 1 no top soil un-layered subsoil or a clear separation between
- 2 layering in the soil from the old native soil
- 3 good layering of the A-B-C native soil

Dir Street Direction (North/South/East/West)

Speed Speed limit of street
- 0 50 mph or more
- 1 35 to 49 mph
- 2 less than 35 mph

Lane Number of traffic lanes on street
- 0 6 lanes or more
- 1 4 lanes
- 2 2 lanes

Park Type of parking on street
- 1 No parking
- 2 On street parking

Length Block length between traffic control devices
- 0 More than ½ mile
- 1 ½ to ¼ mile
- 2 less than ¼ mile

Size Size Class for Tree
- L >8 Feet Wide & no overhead primary electric
- M 6-8 Feet Wide & no overhead primary electric
- S 4-6 Feet Wide or primary overhead electric

Pri Priority
- 1 Curb & Sidewalk
- 2 Curb or Sidewalk
- 3 No Curb, No Sidewalk

Comments

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Site Evaluation Categories
Utilizing Score Sheet

Good Quality Site 16-20	Intermediate Quality Site 12-15	Poor Quality Site 9-11	No Tree 0-8
Large Tree	Large Tree	Large Tree	
Medium Tree	Medium Tree	Medium Tree	
Small Tree	Small Tree	Small Tree	

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Urban Site Index Scores
Totals = 0-20

Approximate rating

No tree	**0-8**
Poor	**9-11**
Intermediate	**12-15**
Good	**16-20**

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Right Tree in the Right Spot
Hardiness

Our Urban Forest has a spectrum of site qualities

Good Intermediate Poor Bad

20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 0

Sensitive Tough

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Urban Site Index

Approximate rating	
No tree	0-8
Poor	9-11
Intermediate	11-15
Good	16-20

1. Be able to recognize toughest sites

Next step

2. Understand the hardiness of the tree

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Urban Site Index

Approximate rating

No tree	**0-8**	Plastic trees
Poor	**9-11**	Honey locust
Moderate	**12-15**	Red maple
Good	**16-20**	Sugar Maple

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Next Step: Rate Trees

Tree	USI
Honey Locust	9
Red maple	12
Sugar maple	16

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Rating Database

Honeylocust

Condition	USI
Good	20
Good	19
Good	18
Good	17
Good	16
Good	15
Good	14
Good	13
Good	12
Good	11
Good	10
Good	9
Fair	8
Dead	7
Dead	6
Dead	5
Dead	4
Dead	3
Dead	2
Dead	1

USI=9

Red Maple

Condition	USI
Good	20
Good	19
Good	18
Good	17
Good	16
Good	15
Good	14
Good	13
Good	12
Fair	11
Poor	10
Dead	9
Dead	8
Dead	7
Dead	6
Dead	5
Dead	4
Dead	3
Dead	2
Dead	1

USI=12

Sugar Maple

Condition	USI
Good	20
Good	19
Good	18
Good	17
Good	16
Fair	15
Poor	14
Dead	13
Dead	12
Dead	11
Dead	10
Dead	9
Dead	8
Dead	7
Dead	6
Dead	5
Dead	4
Dead	3
Dead	2
Dead	1

USI=16

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Tree Criteria

- Established in environment
- 6-20 inch DBH
  - Species dependent
- 15-50 years old

- 5 or more on a site
  - Fewer for unique species

USI: 15

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Urban Site Index
Field Findings in Ohio

Sugar maple

USI	Condition
19	Good
18	Good
18	Good
16	Good
15	Fair
13	Poor

USI = 16

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Urban Site Index
Field Findings in Ohio

Littleleaf Linden

USI	Condition
15	Good
12	Good
12	Good
11	Good
10	Fair

USI =11

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Urban Site Index
Field Findings in Ohio

Honeylocust

USI	Condition
16	Good
15	Good
14	Good
14	Good
13	Good
11	Good
10	Good
9	Good

USI = 9

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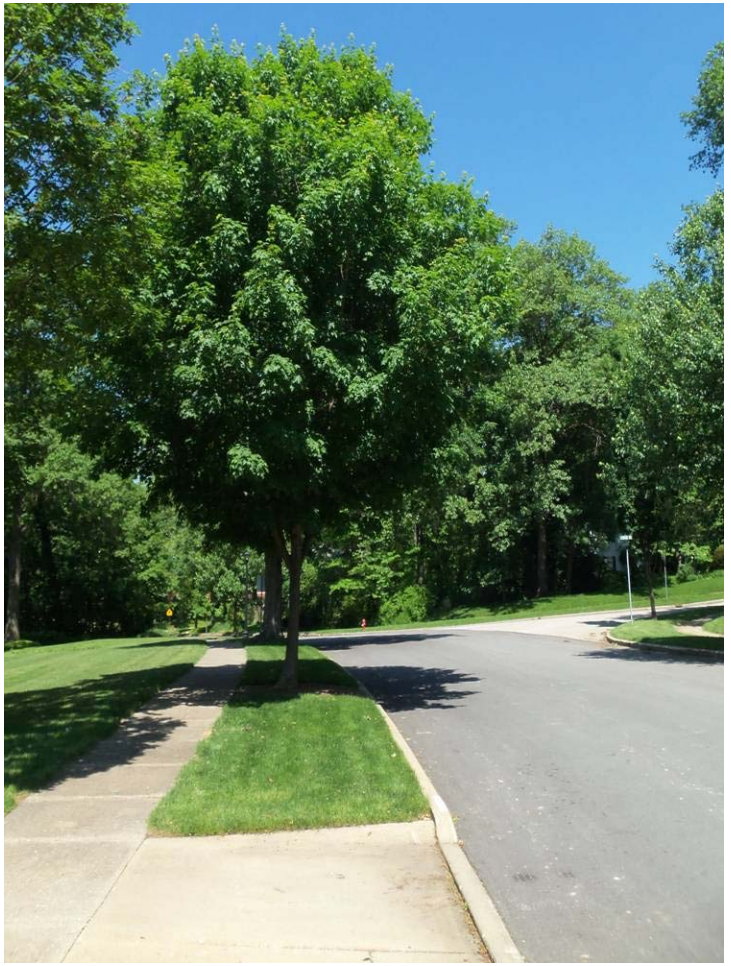
Urban Site Index
Field Findings in Ohio

Red Maple

USI	Condition
15	Good
14	Fair
14	Fair
12	Good
12	Good



USI = 12

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Urban Site Index
Field Findings in Ohio

Northeast Ohio

Red Maple

USI	Condition
15	Good
12	Good
12	Good

Northwest Ohio

Red Maple

USI	Condition
14	Fair
14	Fair

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Urban Site Index
Field Findings in Ohio

Urban Site Index Species Scores

Rev. March 2014
for NE Ohio

Common Name	Species	USI Score	SC*
Hedge Maple	Acer campestre	13	2
Armstrong Maple	Acer freemanii	15	1
Celebration Maple	A. freemanii	13	2
Freeman Maple	A. freemanii	13	2
Norway Maple	Acer platanoides	12	3
Crimson King Norway Maple	A. platanoides 'Crimson King'	14	1
Red Maple Northeast Ohio	Acer rubrum	12	4
Red Maple Northwest Ohio	A. rubrum	16	3
Silver Maple	Acer saccharinum	13	2
Sugar Maple	Acer saccharum	16	3
Columnar Sugar Maple	A. saccharum	15	1
Red Horsechestnut	Aesclus pavia	12	2
Italian Alder	Alnus cordata	13	1
Serviceberry	Amelanchier x grandiflora	12	2
European Hornbeam	Carpinus betulus	13	2
Eastern Redbud	Cercis canadensis	16	2
Turkish Filbert	Cornus colurna	16	1
Thornless Hawthorn	Crataegus sp.	12	2
Washington Hawthorn	Crataegus sp.	13	1
Tri-color Beech	Fagus sylvatica	18	1
Green Ash	Fraxinus pensylvanica	12	2
Ginkgo	Ginkgo biloba	8	1
Kentucky Coffee Tree	Gymnocladus dioicus	10	2
Honey Locust	Gleditsia triacanthos	9	4
Golden Rain Tree	Koelreuteria paniculata	18	1
Sweet Gum	Liquidambar styraciflua	13	2
Tulip Poplar	Liriodendron tulipifera	14	2
Crabapple	Malus	13	2
Blue Spruce	Picea pungens	15	1
London Planetree	Platanus occidentalis	12	2
Purple Leaf Plum	Prunus sp.	13	1
Callery Pear	Pyrus calleryana	12	1
Scarlet Oak	Quercus coccinea	10	2
Pin Oak	Q. palustris	11	2
English	Q. robur	10	1
Red	Q. rubra	11	2
Japanese Tree Lilac	Syringa reticulata	12	2
Bald Cypress	Taxodium distichum	11	2
Little Leaf Linden	Tillia cordata	12	5
Silver Linden	T. tomentosa	12	1
Hybrid Elm	Ulmus sp.	15	2
Lacebark Elm	U. parvifolia	15	2
Japanese Zelkova	Zelkova serrata	11	3

* Score Confidence (SC)

1	One site has been measured for this species
2	Less than 10 sites have been found and evaluated but no fair or poor condition sites have been found to suggest a lowest number
3	Less than 10 sites have been found and evaluated with at least one fair or poor condition site found to suggest a lowest number
4	More than 10 sites have been found and evaluated but no fair or poor condition sites have been found to suggest a lowest number
5	More than 10 sites have been found and evaluated with at least one fair or poor condition site found to suggest a lowest number

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Urban Site Index
Field Findings in Ohio

2013 Field Study

Focused on Red maple and Little leaf linden

- *85 total sites*
- *38 Red maple sites*
- *28 Little leaf linden*
- *19 other*

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Field Findings in Ohio

2013 Field Study Red maple

USI	*number*	*condition*
17	*3*	*good*
16	*10*	*good*
15	*6*	*good*
14	*6*	*good*
13	*7*	*good*
12	*5*	*good*
12	*1*	*fair*

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Field Findings in Ohio

2013 Field Study Little Leaf Linden

USI	*number*	*condition*
19	*1*	*good*
17	*5*	*good*
16	*4*	*good*
15	*5*	*good*
14	*9*	*good*
13	*3*	*good*
12	*1*	*good*

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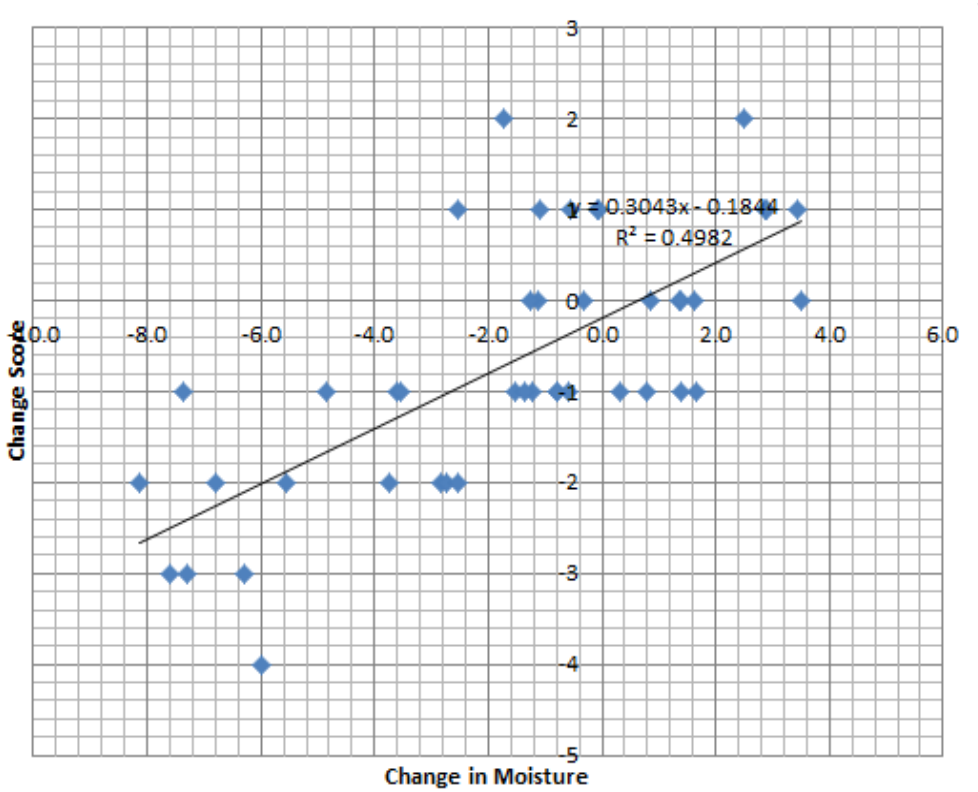
Urban Site Index
2013 Field Findings in Ohio

Effects of moisture on scores

15 sites re-scored three times



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Urban Site Index
2013 Field Findings in Ohio

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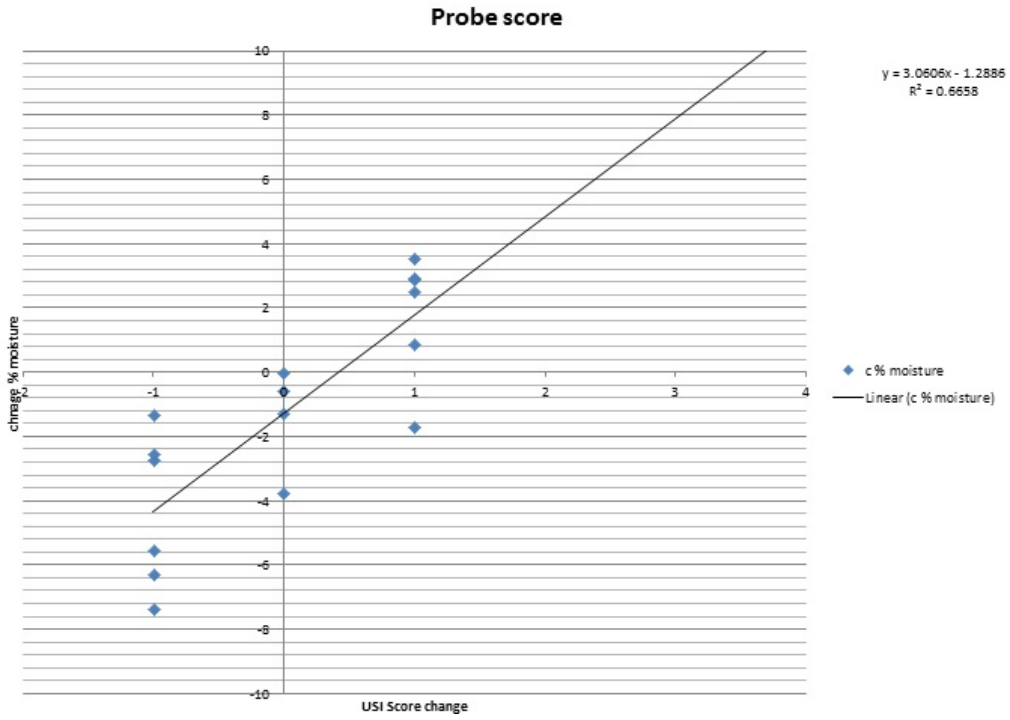

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Urban Site Index
2013 Field Findings in Ohio

Effects of moisture on scores

15 sites re-scored three times

- Length score of 13 of the 15 sites were different

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Urban Site Index
Suggestions for Nebraska

Advantages

Good systematic method for assessing hardiness of sites and trees

- *This rapid assessment process is a good predictor of in-depth soil and site analysis results*
- *Fast and easy*

Limitations

You will need your own list

- *Cooperative project*
- *Graduate student*

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TCA
TREE COMMISSION ACADEMY

Planned Planting

Master Planting Design

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Master Planting Design

- Roadmap for the future
- Plan for the entire community…
  …regardless of what's there now

How Might We Do This?

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Supply List

- Community Street Map
  - Labeled with street names
  - Labeled N/S/E/W if applicable
  - Block numbers
  - Scale
- USI Data Collection Sheet
- Colored Markers
- Pencil
- Soil Probe/Shovel

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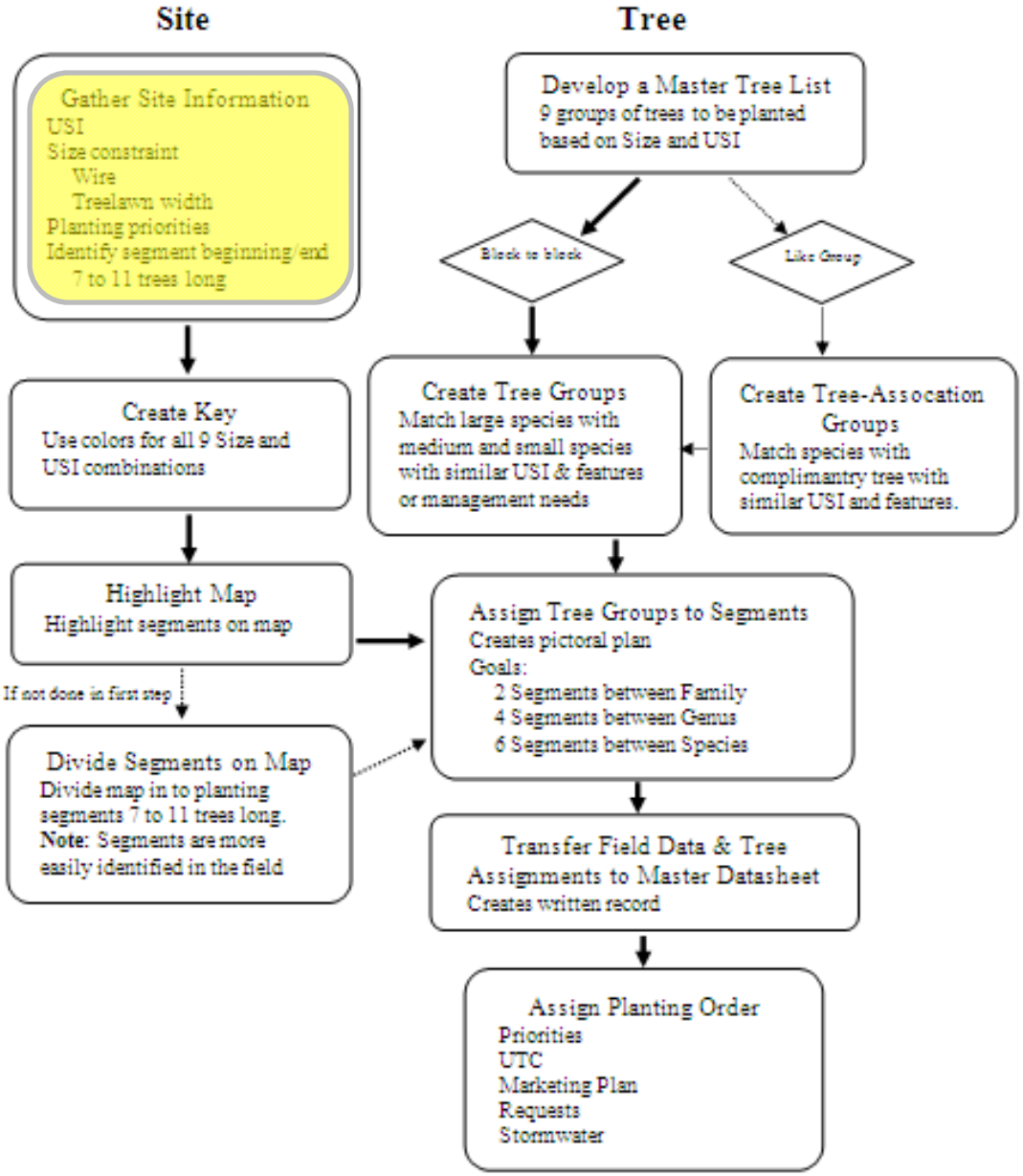
Developing and Implementing a Master Planting Design



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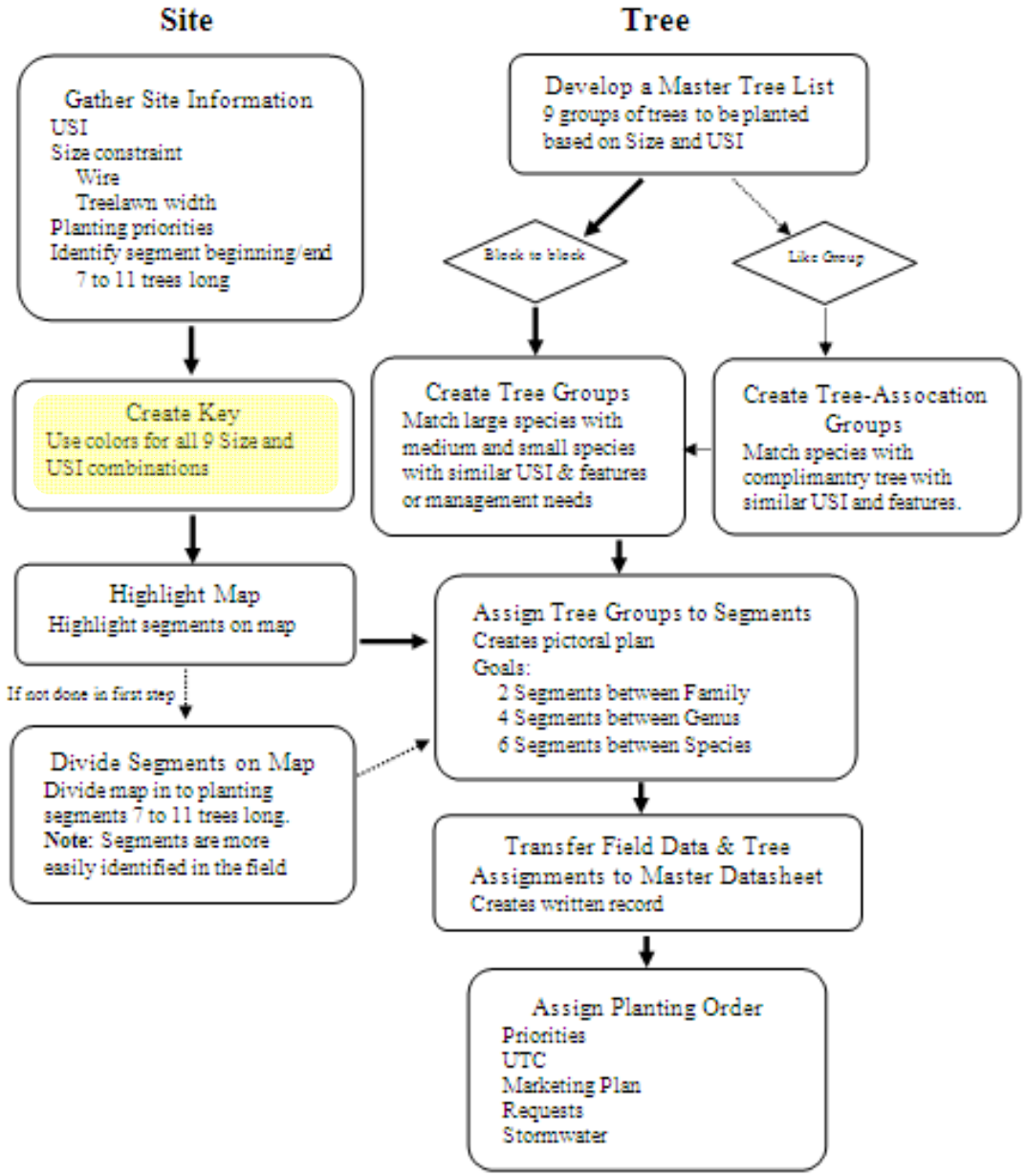
Developing and Implementing a Master Planting Design



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Site Evaluation Categories

Key

Good Quality Site 16-20	Intermediate Quality Site 12-15	Poor Quality Site 8-11	No Tree 0-7
Large Tree	Large Tree	Large Tree	
Medium Tree	Medium Tree	Medium Tree	
Small Tree	Small Tree	Small Tree	

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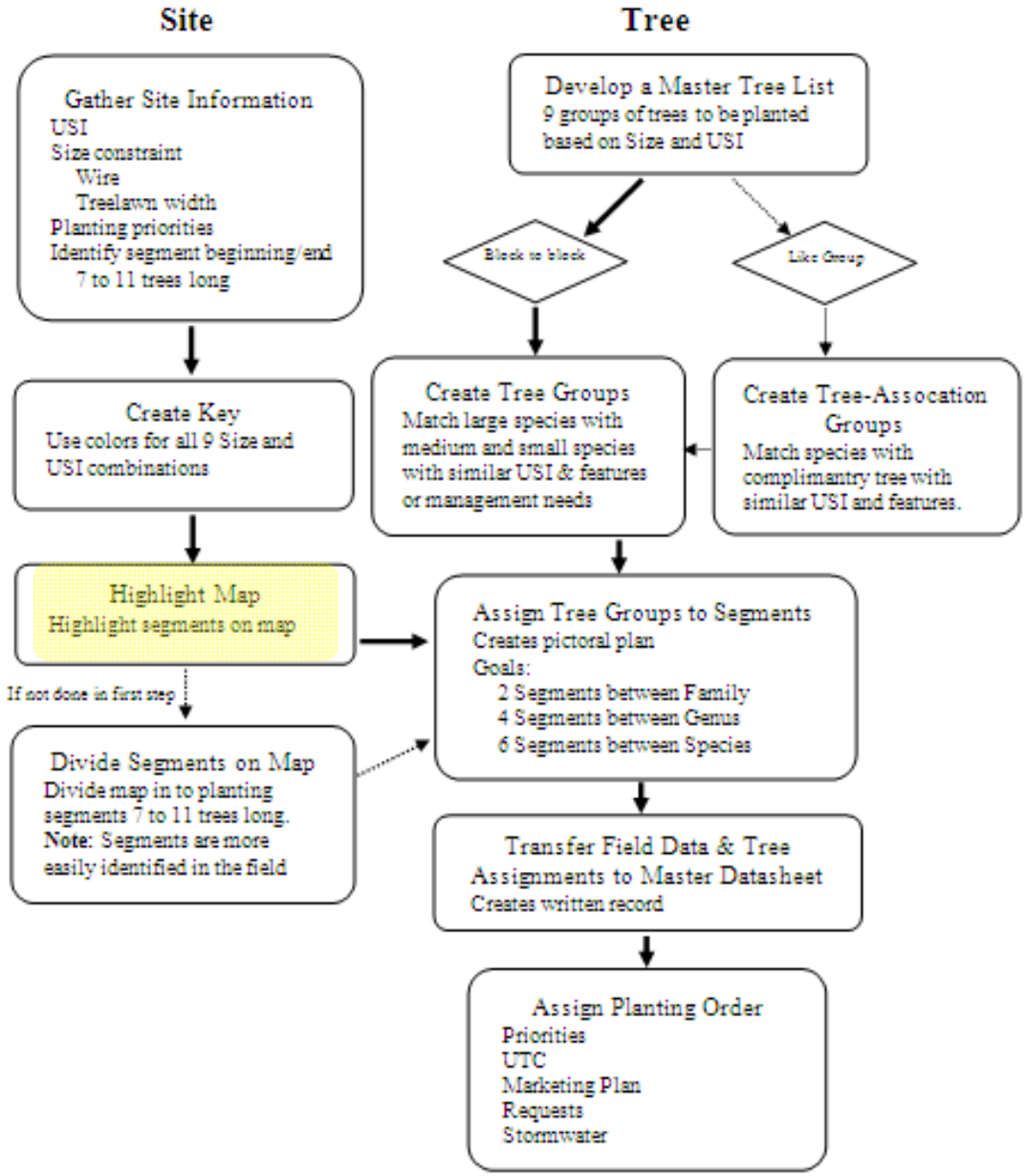

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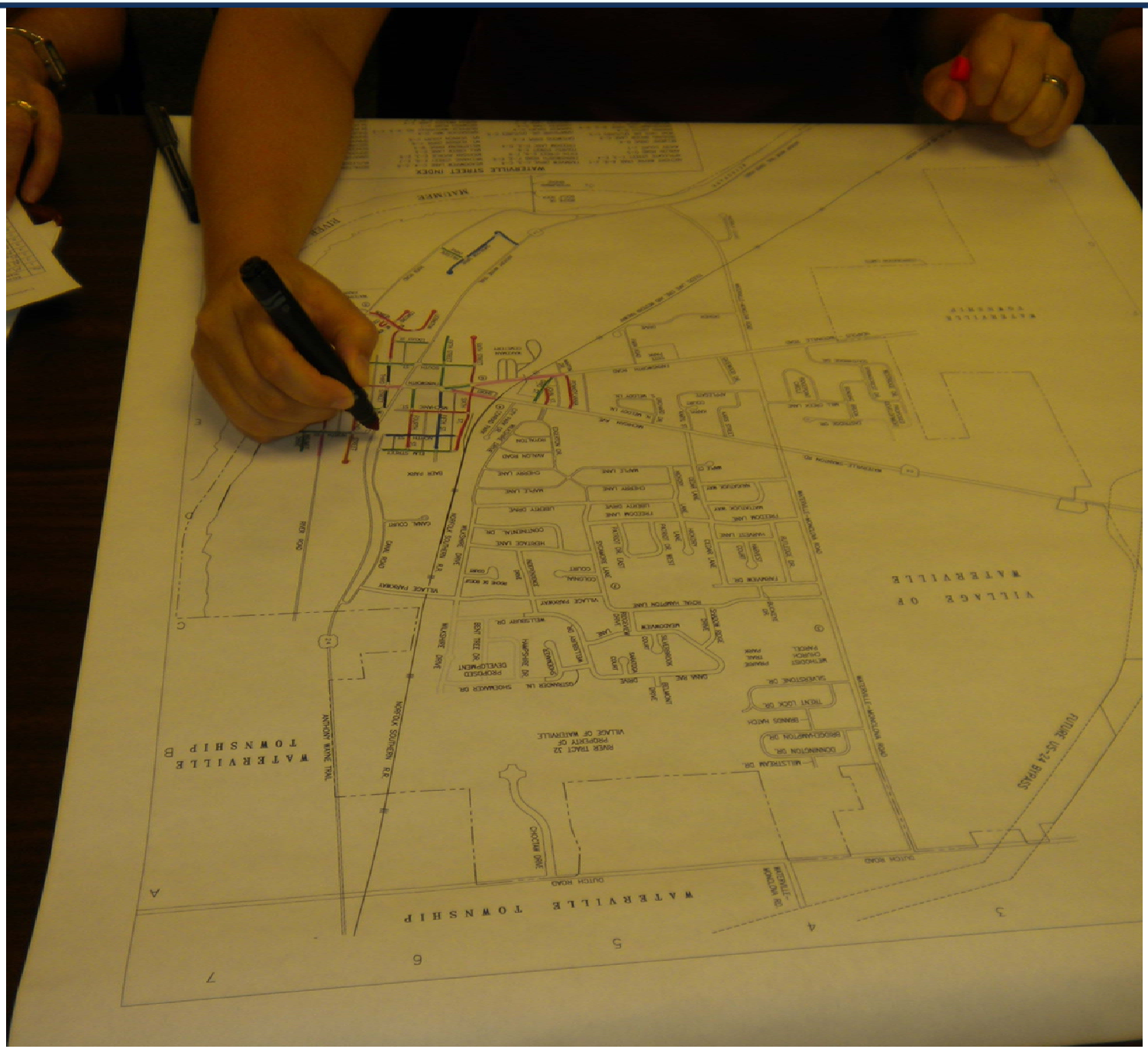

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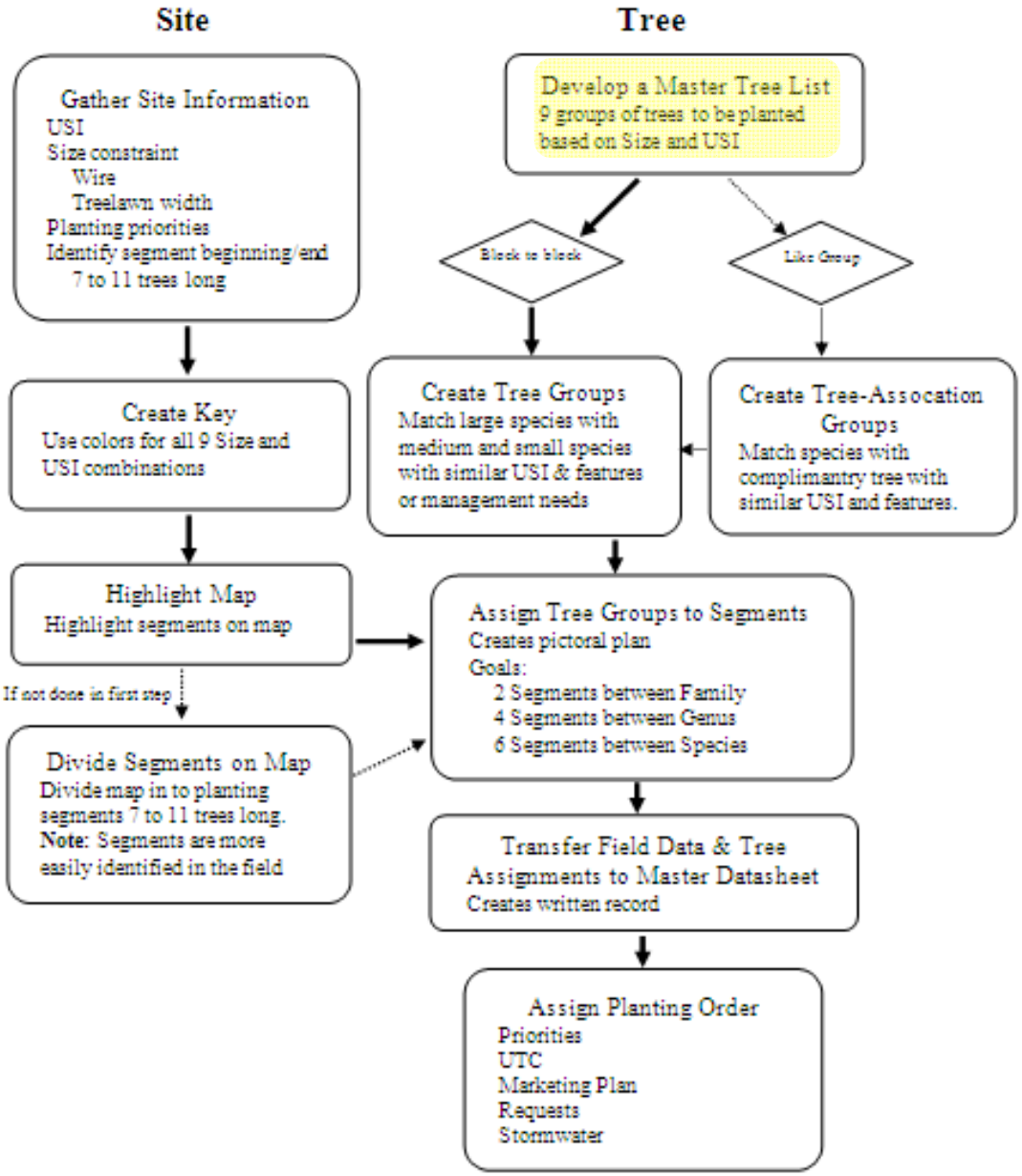

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Utilize TCA Tree List

- Good Site: Large Species
  - Wide Treelawns
  - Low/No Road Salt
  - Good Soils

Tree Selection

Large Species

Match Complimentary Small/Medium Species

only @ overhead utility

Push the Envelope to increase diversity

May plant trees that aren't usually on street tree lists

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Community Tree List

Good Quality/Large Site

Large Tree	Medium Tree	Small Tree
Tulip poplar, *Liriodendron tulipifera Magnoliaceae*	Umbrella magnolia, *Magnolia tripetala Magnoliaceae*	Saucer magnolia *Magnolia* x *soulangiana Magnoliaceae*
Sugar or Black Maple, *Acer saccharum* or *nigrum Aceraceae*	Striped maple, *Acer pennsylvanicum Aceraceae*	Pagoda or Flowering dogwood, *Cornus alternifolia* or *florida Cornaceae*
Red Maple, *Acer rubrum Aceraceae*	Sycamore maple, *Acer pseudoplatanus Aceraceae*	Fringetree, *Chionanthus virginicus Oleaceae*

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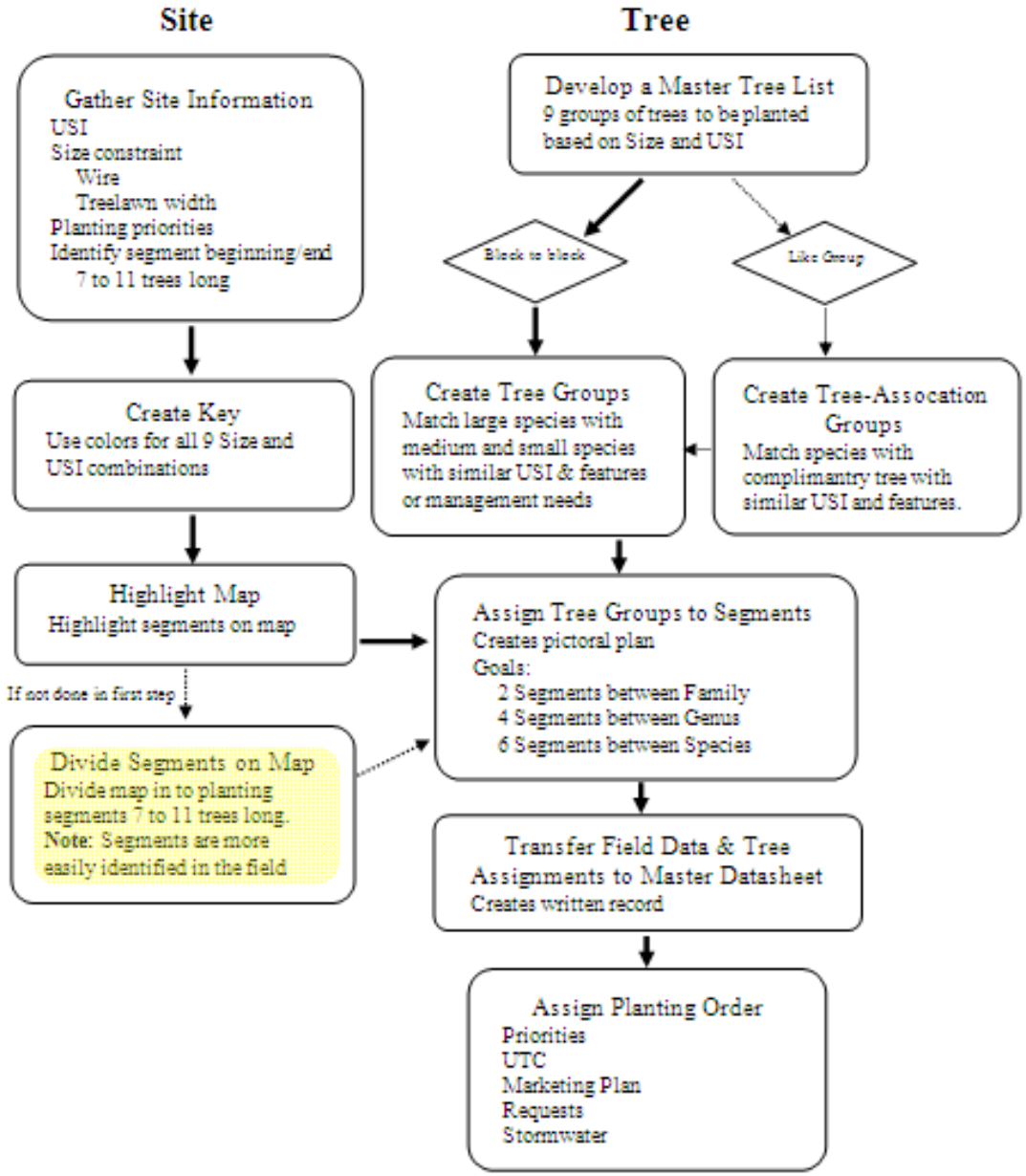
Developing and Implementing a Master Planting Design



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Break Into Planting Segments

If not done in the field

- Sets of 7-11 trees per side
  - No less than one block
- Look for natural breaks
  - Stop lights/Intersections/Dead Ends
  - Site constraint change
  - Some will be more difficult

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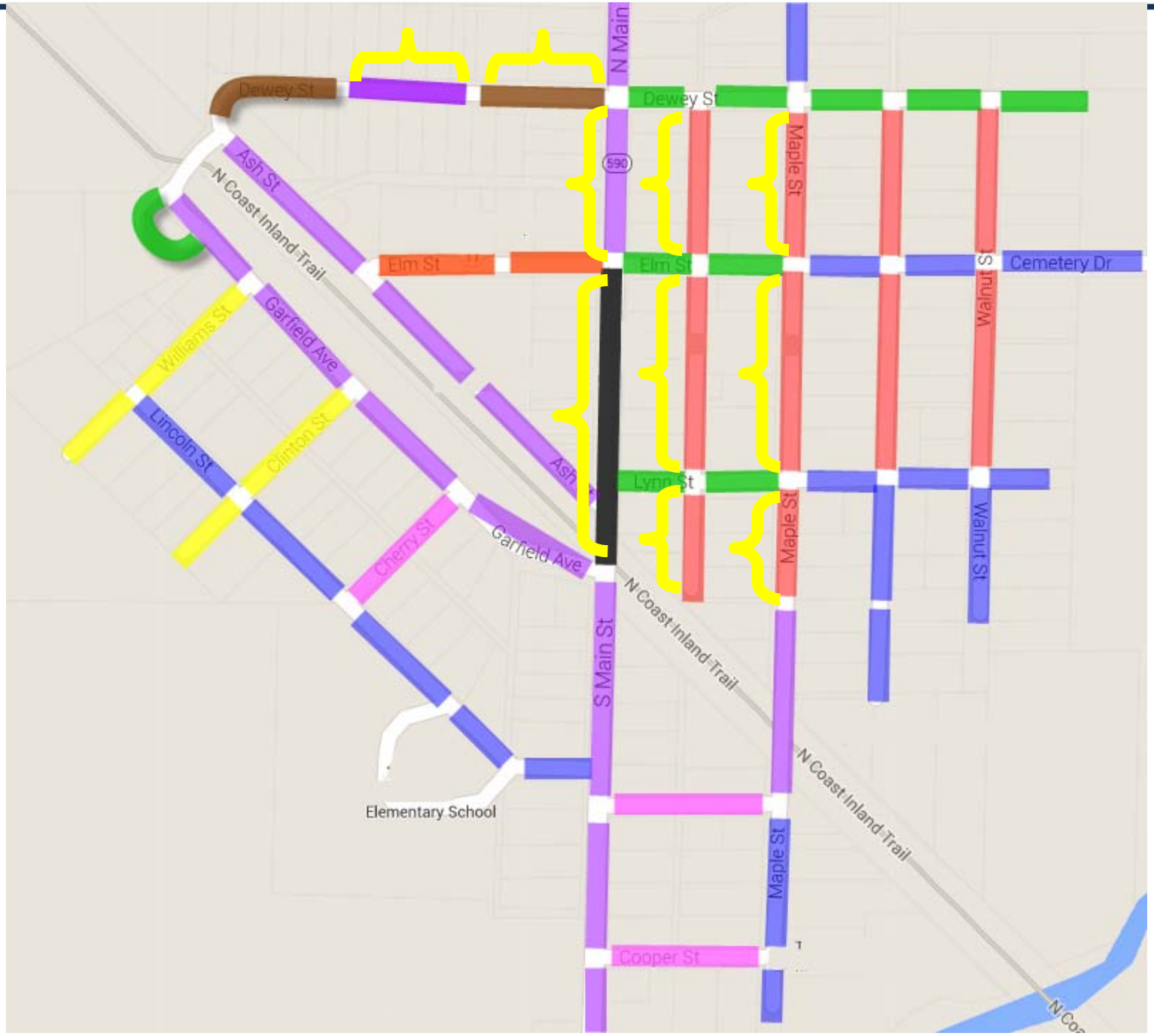

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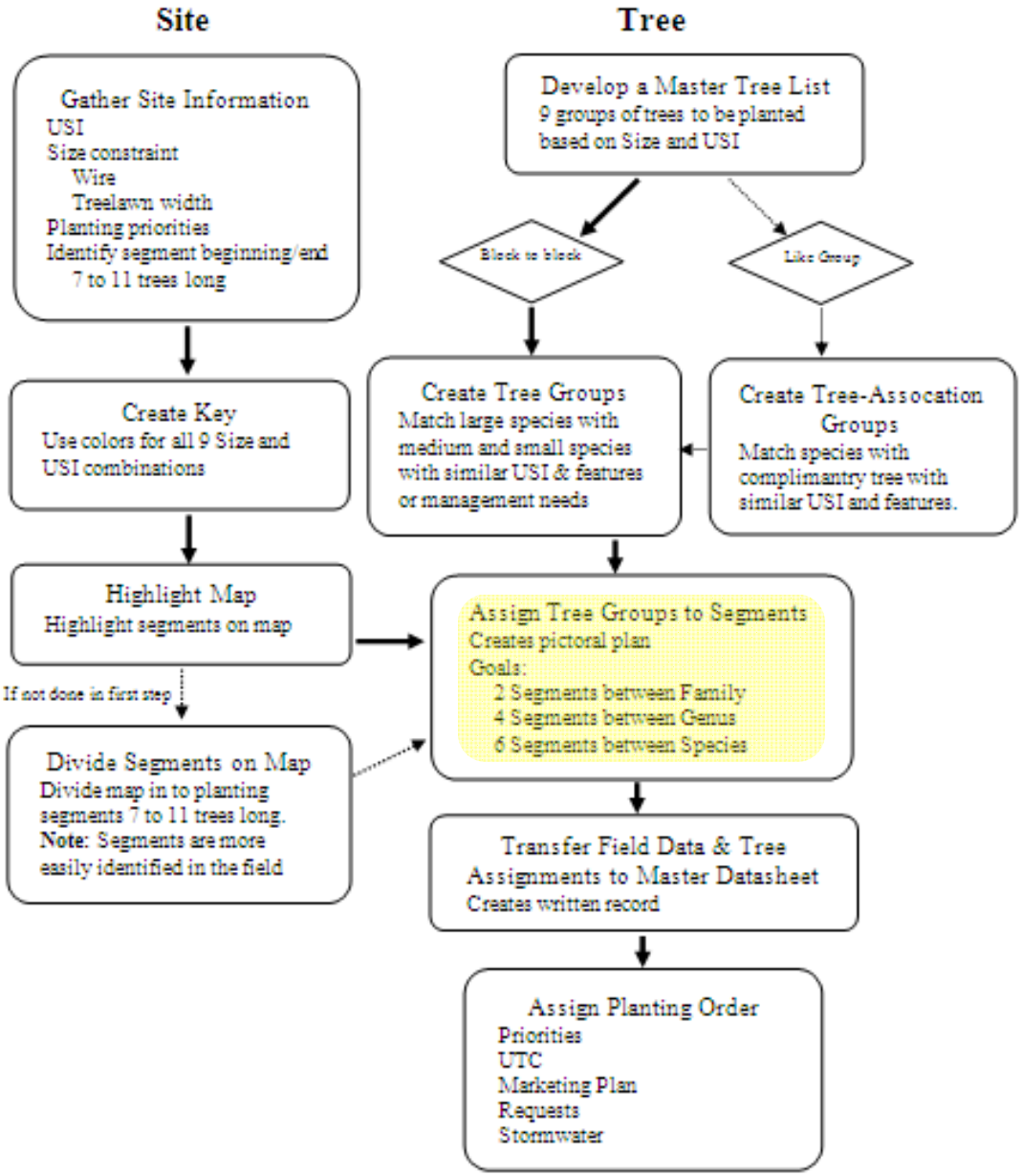

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Assign Species

2 Segments between Family

4 Segments between Genus

6 Segments between Species

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Kingdom

Phylum

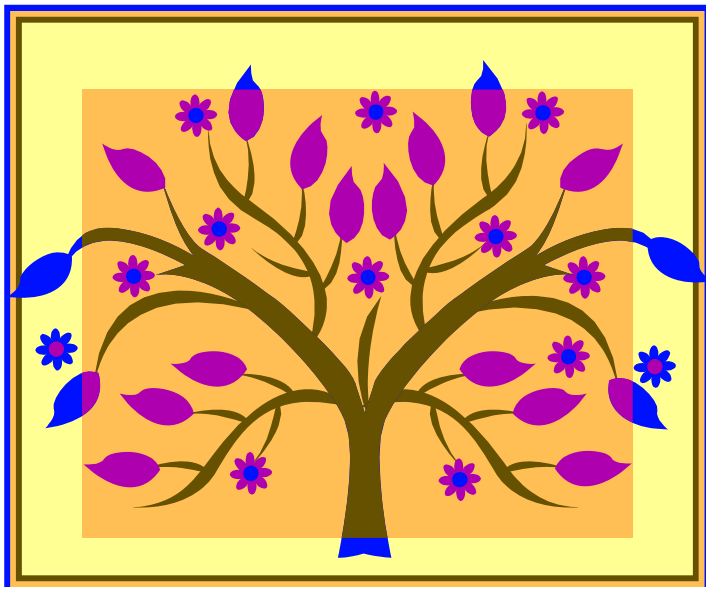
Class

Order

Family

Genus

Species



Acer rubrum Aceraceae

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Select from tree list for Site Type

Large Tree	Medium Tree	Small Tree
Tulip poplar, *Liriodendron tulipifera Magnoliaceae*	Umbrella magnolia, *Magnolia tripetala Magnoliaceae*	Saucer magnolia *Magnolia* x *soulangiana Magnoliaceae*
Sugar or Black Maple, *Acer saccharum* or *nigrum Aceraceae*	Striped maple, *Acer pennsylvanicum Aceraceae*	Pagoda or Flowering dogwood, *Cornus alternifolia* or *florida Cornaceae*
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2 Segments

Same Family

Ulmaceae (Elm)

Celtis/Ulmus/Zelkova

4 Segments

Same Genus

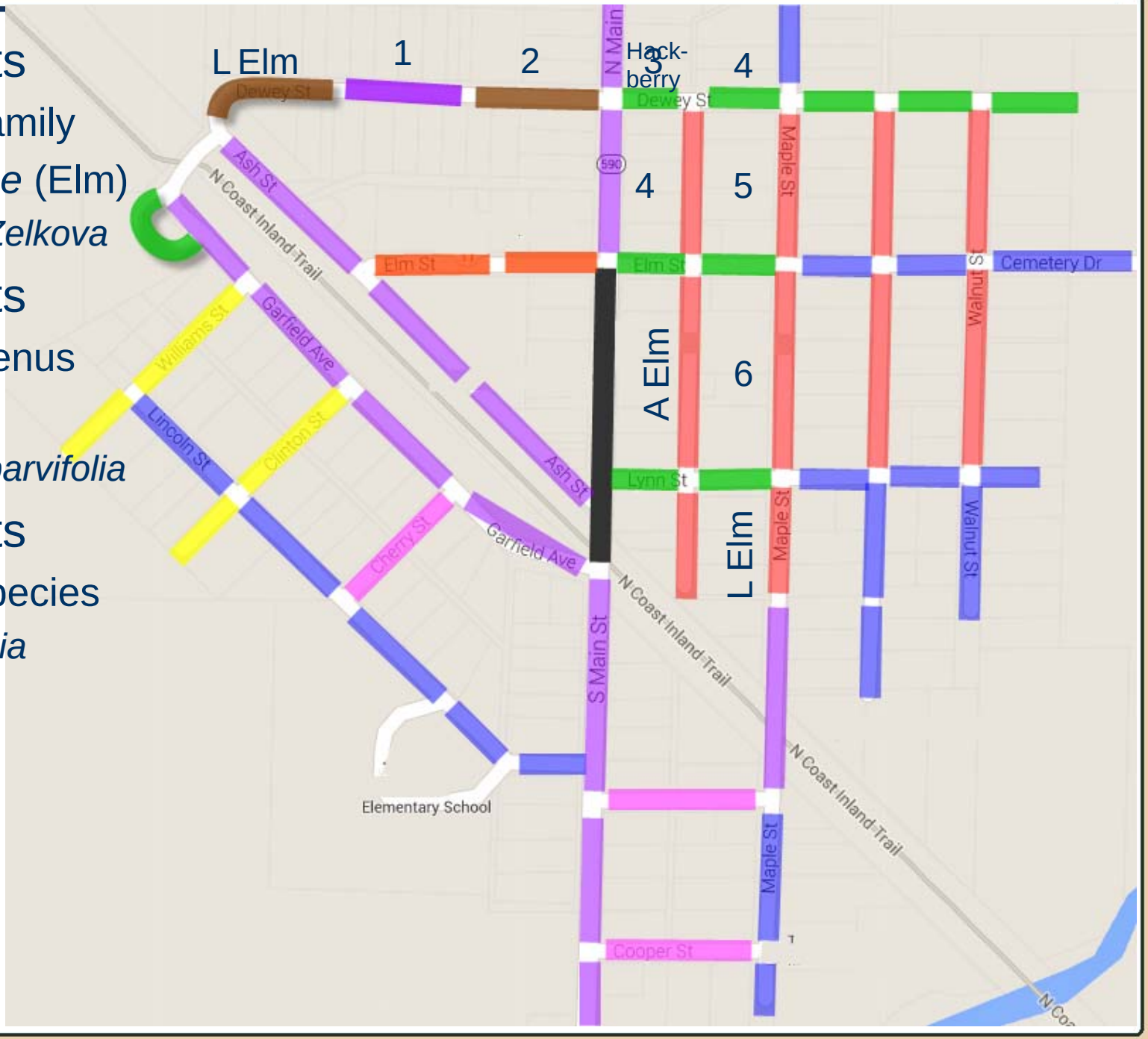
Ulmus

americana & parvifolia

6 Segments

Same Species

Ulmus parvifolia



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Assign Species

2 Segments between Family

4 Segments between Genus

6 Segments between Species

- Breaks up similar trees
- Means to test diversity
- Only use cultivar if it has a bearing on site constraint
  - i.e. an upright cultivar near a car dealership

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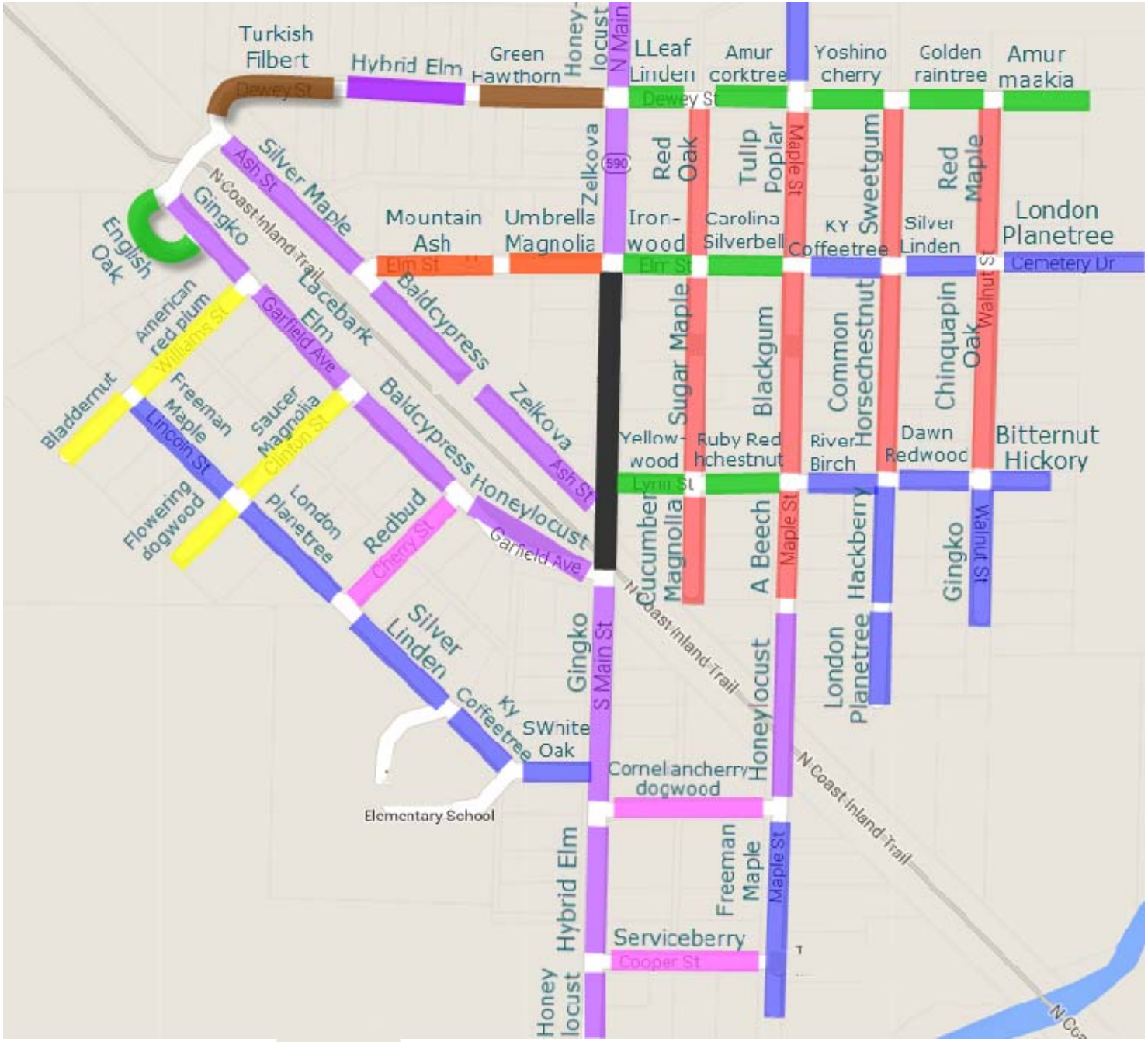

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Monroe St
Locust St
W North St
Zelkova
N Main St
Gibson St
Peters St
Norfolk Southern
E North St
Euro Beech
East St
E South St
E Fremont St
Japanese Tree Lylac
Water St
Walnut St
S Gibson St
Scott St
AMUR MAALKIA or Golden Rain Tree
Grant St
W Fremont St
264
Arcadia
E Brown Rd
216
Silver MAPLE
Lace Bark Elm
Vine
Japanese Tree Lylac
Honey Locust
Ginko
WEST
SOUTH

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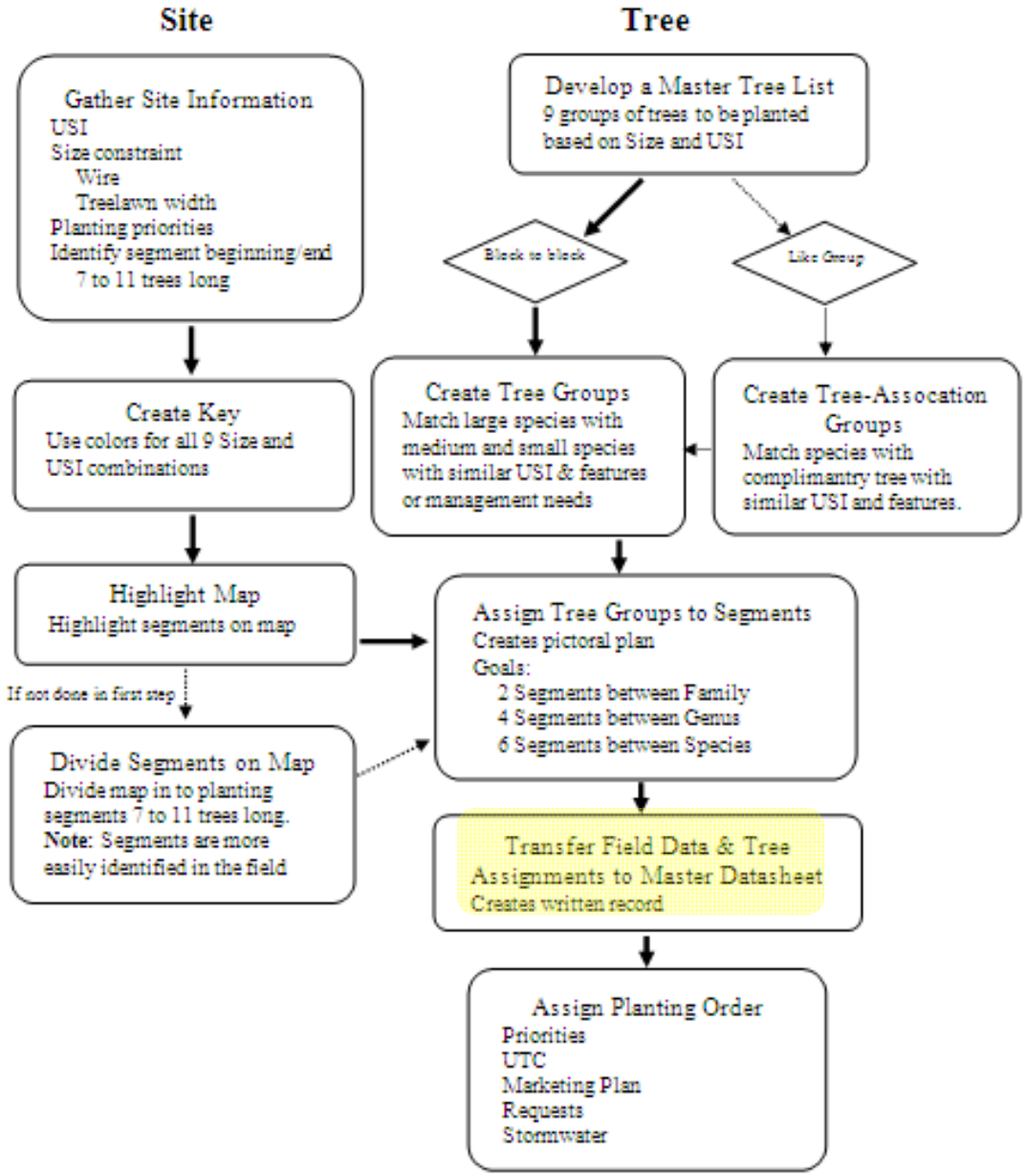
Developing and Implementing a Master Planting Design



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7-11 trees dominant side **Size Class** Species

Street	Dir	Segment Start	Segment End	USI		Pri	Notes	Large1	Large2	Medium1	Medium2	Small1	Small2	Page
Street Name	N/S/ E/W	Block #/ Add #/ Landmark	Block #/ Add #/ Landmark	Score	L/M/S	1,2,3	SECTION 4	Large size class only; also assign medium & small trees		If medium size class, then do not assign large tree, do assign small		If small size class, then do not assign another size species		7
	N/S													
Toussaint		W Water	W Main	17	S	2						Fringetree		
Toussaint		W Main	W Oak	18	L	1		Sugar Maple		Striped Maple		Bladdernut		
Toussaint		W Oak	W Walnut	18	M	1				Mountain Ash				
Toussaint		W Walnut	Cul-de-sac	18	L	1		Black Gum		Yoshino Cherry		Cornilian Cherry	Serviceberry	
Benton		W Water/105	W 163	11	S	1						Japanese Lilac		
Benton		W 163	W Park	10	S	1						Serviceberry		
Benton		W Park	W Washington	14	M	2				Lacebark Elm		Amur Maple	Japanese Lilac	
Benton		W Washington	Townline	14	M	2				Hedge Maple	Miyabei Maple	Tatarian Maple	Cornilian Cherry	
Benton		Townline	S Railroad				NO TREES							

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TCA
TREE COMMISSION
ACADEMY

Where do We Plant First?

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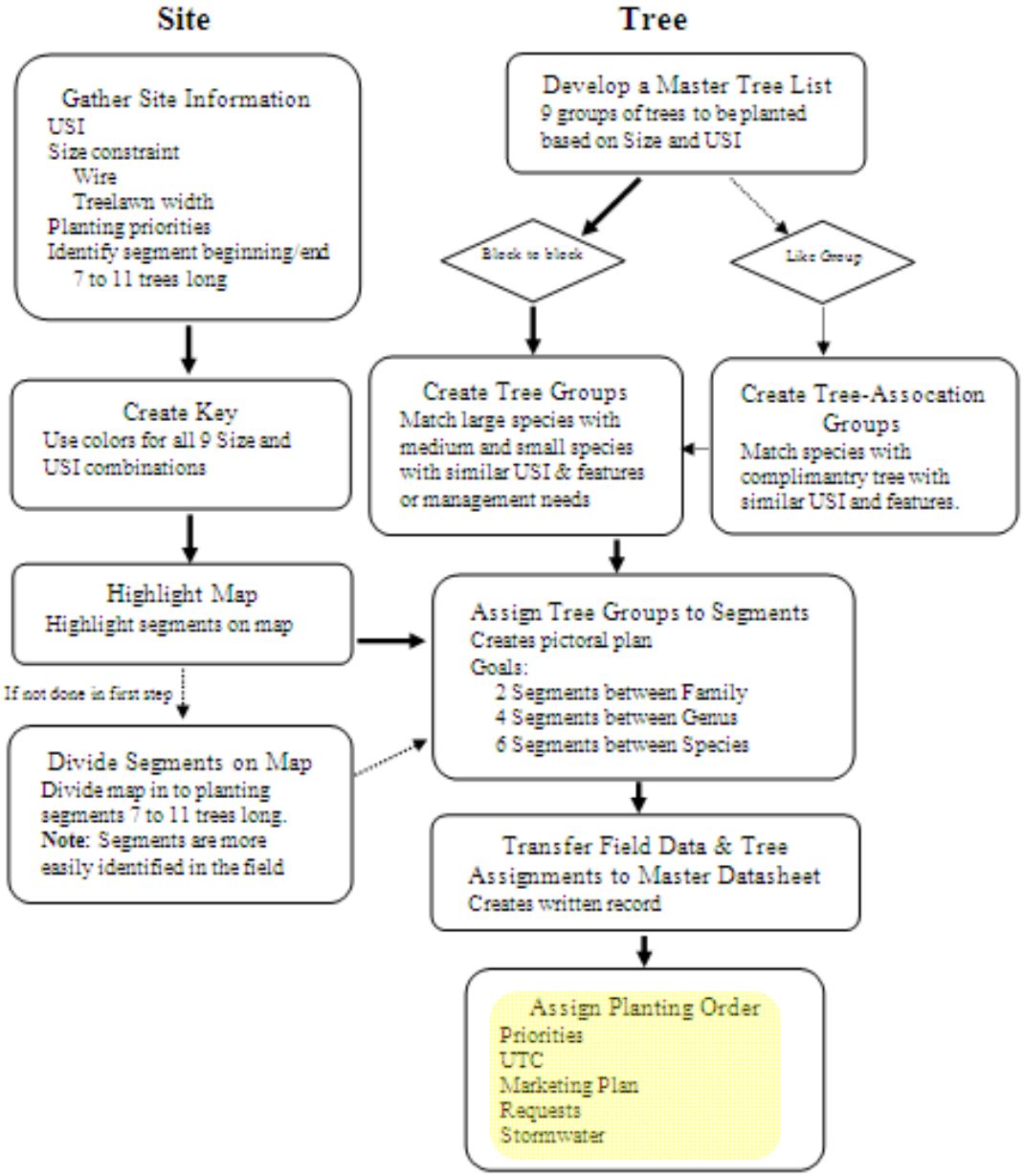
Developing and Implementing a Master Planting Design



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Benton		W Water/105	W 163	11	S	1						Japanese Lilac		
Benton		W 163	W Park	10	S	1						Serviceberry		
Benton		W Park	W Washington	14	M	2				Lacebark Elm		Amur Maple	Japanese Lilac	
Benton		W Washington	Townline	14	M	2				Hedge Maple	Miyabei Maple	Tatarian Maple	Cornilian Cherry	
Benton		Townline	S Railroad				NO TREES							

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Parking/Curbing

- Primary Site
  - Curb & Sidewalk
  - Space clearly defined
- Secondary
  - Only curb or sidewalk
  - Lose space definition
- Tertiary
  - No curb
  - No sidewalk
  - No space definition

Plant Primary First
Allows us to Prioritize
Additional Age Diversity

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High Priority Locations

- Main Drag/Entry Corridor
- High Use Areas
- High Visibility Areas
- Adopt-A-Tree Participants
- Historic Locations
- Urban Tree Canopy Assessment (UTC)

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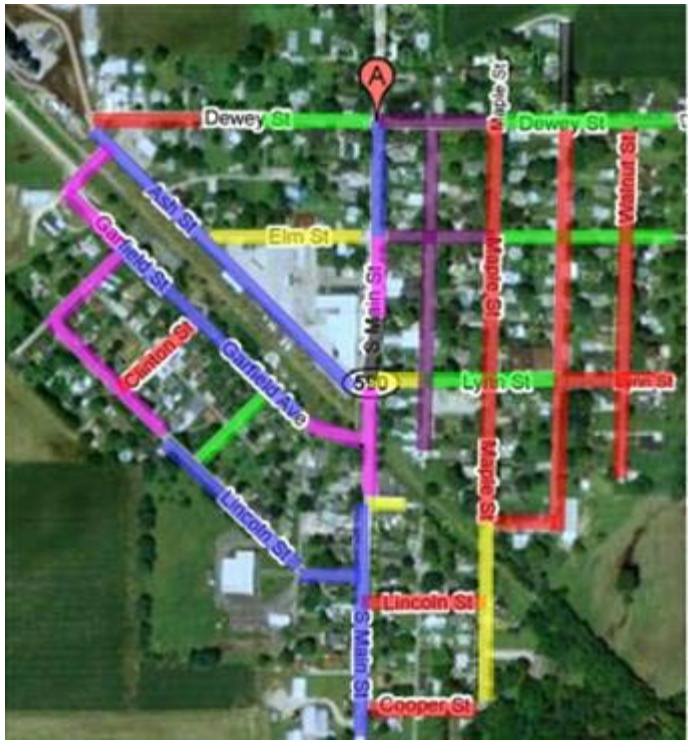
Benefits of Master Planting Design

- Long-Range Planning
- Buy-in from Residents
- Planning with Nurseries
- Insect/Disease/Weather Monitoring
- USI Truthing



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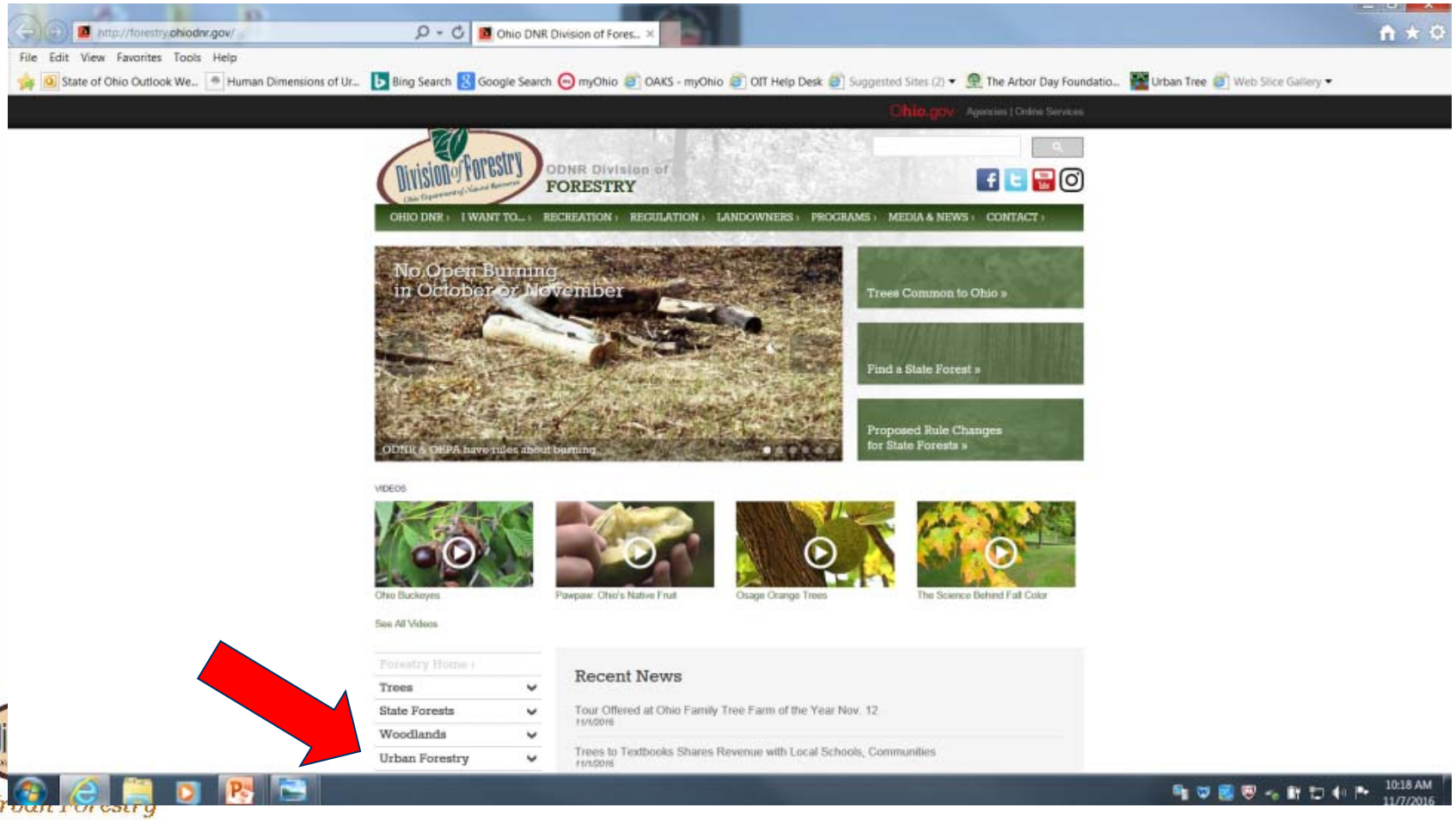
Urban Site Index and Master Planting Design

Resources **forestry/ohiodnr.gov**



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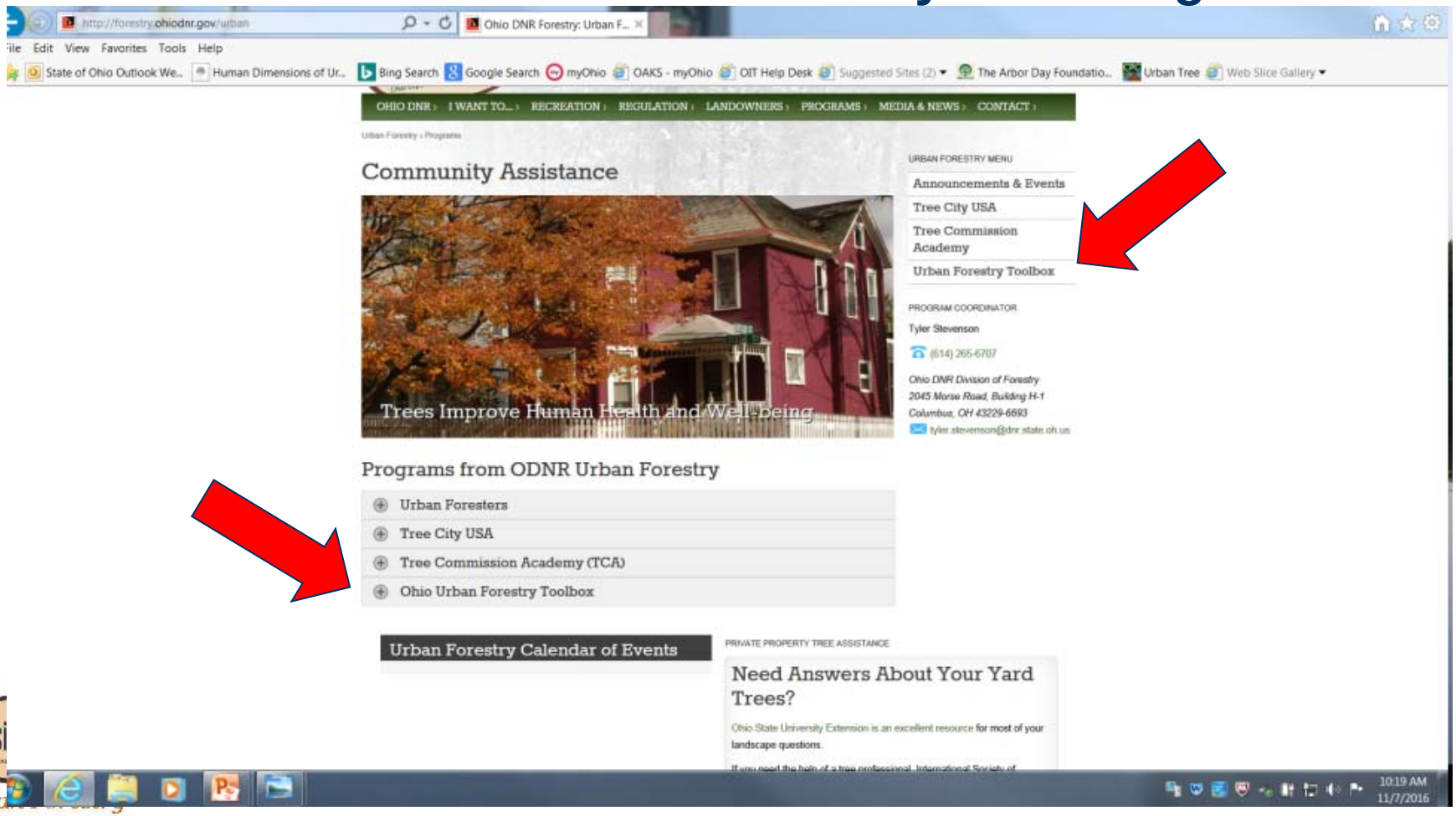

Urban Site Index and Master Planting Design

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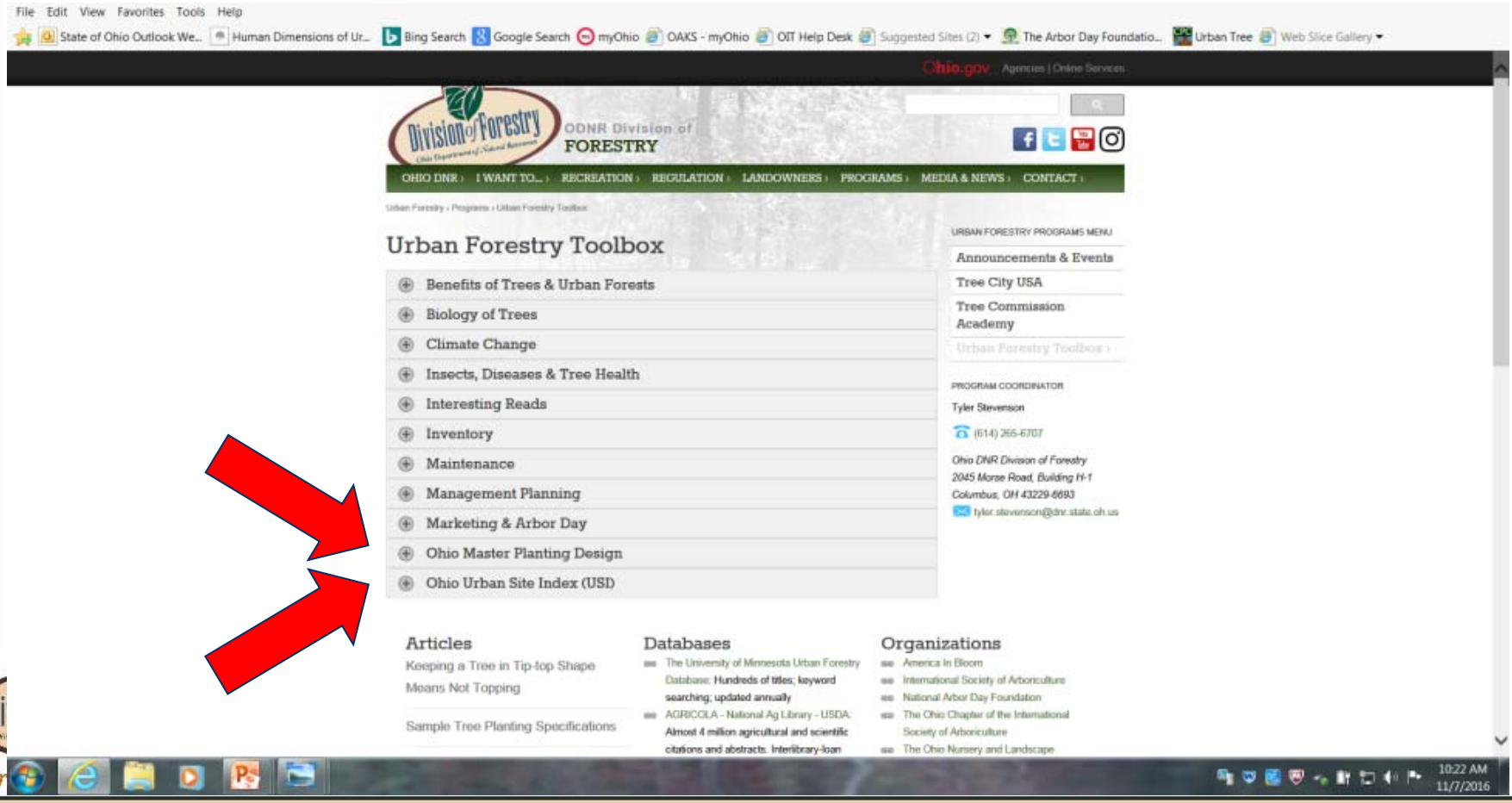

Urban Site Index and Master Planting Design

Questions?

Let's Do This

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