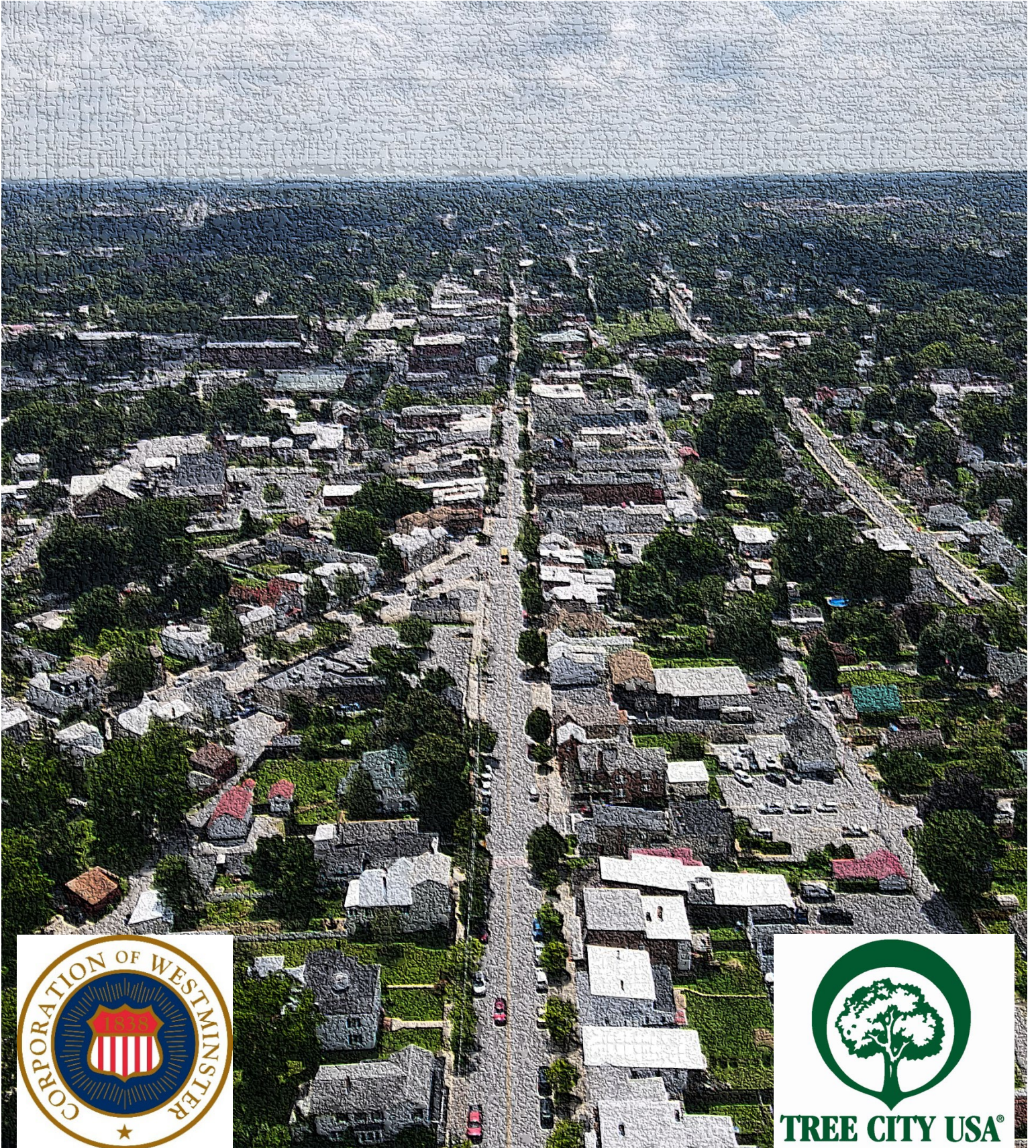


City of Westminster, Maryland Comprehensive Tree Plan

Second Edition - 2021



Mayor and Common Council, City of Westminster

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Gregory Pecoraro, Common Council President
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Heat Island Maps Provided by:

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Adopted by the Mayor and Common Council via Resolution No. 21-09 on December 13, 2021

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Introduction

The City of Westminster is the county seat and largest municipality in Carroll County, Maryland. Westminster has a land area of 6.619 square miles (17.14 km²), and a population of approximately 20,000 residents.

The City of Westminster Tree Commission (Commission) is charged with overseeing the City's urban forestry program. The Commission consists of five appointed members and two City staff members (Comprehensive Planner and City Arborist).

Benefits of maintaining an urban forestry program are numerous, and include increased property values, increased commercial activity, reduced negative impact on the stormwater system, increased wildlife habitat, reduction in the urban heat island effect, and reduced energy costs for nearby buildings.

The City annually allocates money on an annual basis in the Streets and Sanitation Department's operating budget to maintain the City's urban forestry program. In the future, the City plans to more efficiently utilize the expertise of the Commission and its staff to continue improving and reinforcing Westminster's award-winning urban forestry program.

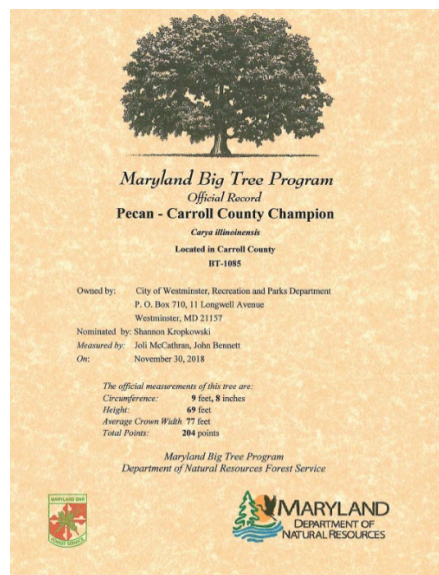
Trees in the City of Westminster are regulated by Chapter 148 of the City Code. This chapter includes information on topics such as: The Tree Commission, permissible roadside trees, tree location, tree care, violations, and appeals. For more information on Chapter 148 of the City Code, please see the following link: <https://ecode360.com/10164568>.

In November 2015, the Commission began to survey all street trees located along East and West Main Street and Pennsylvania Avenue in Historic Downtown Westminster. The resulting survey identified over 300 street trees along the 1.28-mile stretch of East and West Main Street and the 0.60-mile stretch of Pennsylvania Avenue. In 2017, the Commission began crafting the first-known Comprehensive Tree Plan for the City, utilizing information from the initial 2015 street tree survey and information gathered during the 2017 mid-cycle review of the 2009 Comprehensive Plan. The Commission worked on drafting the Tree Plan over the course of several of its meetings, which were all open to the general public.

The City's commitment to its urban forestry program is evidenced by its continued recognition by the Arbor Day Foundation as a Tree City USA for 31 years and by receipt of the Tree City USA Growth Award for 23 years.



Heritage Trees Located at Westminster City Hall.



Value of Trees

The “Three ‘E’s’ of Sustainability” are: Equity, Economy, and Environment. Trees can enhance the goals of sustainability by providing positive contributions to the three E’s of Sustainability. Examples include:

Equity

- Views of nature reduce the stress response of both body and mind when stressors of urban conditions are present.
- Trees in urban parks and recreational areas are estimated to improve outdoor leisure and recreation experiences in the United States by \$2 billion annually.
- Trees reduce crime. Apartment buildings with large amounts of greenery had 52% fewer crimes than those without any trees. Buildings with medium amounts of greenery had 42% fewer crimes.

Economy

- Landscaping, especially with trees, can significantly increase property values. As an example, a value of 9% (\$15,000) was determined in a United States Tax Court case for the loss of a large black oak on a property valued at \$164,500.
- The net cooling effect of a young, healthy tree is equivalent to ten single-room-sized air conditioners operating at 20 hours per day.
- As few as three, properly positioned trees can save the average household between \$100.00 and \$250.00 annually in energy cost.

Environment

- A typical community forest of 10,000 trees will retain approximately 10 million gallons of rainwater per year.
- Philadelphia's 2.1 million trees currently store approximately 481,000 metric tons of carbon with an estimated value of \$9.8 million.
- Leafy tree canopies catch precipitation before it reaches the ground, allowing some of it to gently drip and the rest to evaporate. This lessens the force of storms and reduces runoff and erosion. Research indicates that 100 mature tree crowns intercept about 100,000 gallons of rainfall per year, reducing runoff and providing cleaner water.

More information is available at:

<https://www.treeboardu.org/graphics/courses/05-01-03-benefits-stat-sheet.pdf>

Trees as Indicators of a Community’s Ecological Health

Urban ecology is more complex than tree cover. However, trees are good indicators of the health of an urban ecosystem, since they make up the majority of the *green* in green infrastructure. When trees are large and healthy, it suggests that the ecological systems that support them (including soils, air, and water systems) are also in good condition.

In turn, healthy trees provide valuable environmental benefits. Areas within central Maryland that have more tree cover exhibit better ecological characteristics. Greater canopy cover indicates less impervious surface, resulting in less detriment to the ecological systems.

Trees provide communities with many important benefits, not all of which are quantifiable with data or dollar values, but nonetheless, improve life for the community’s residents.



Mayor Mona Becker, Commission Chair Allgeier during a tree-planting event at Belle Grove Square.

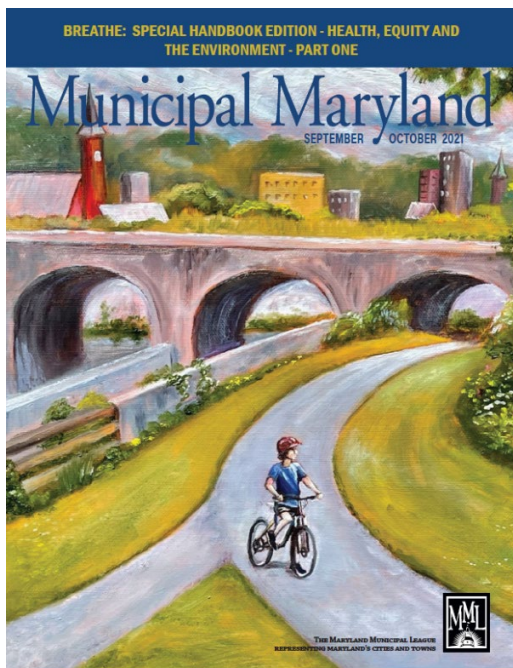
Why Trees are Important

Land surface temperature (LST) has a direct correlation to natural land cover (i.e., the more vegetation, the less heat absorbed by the surface to be subsequently radiated back into the atmosphere). This is due to the vegetative and vegetative covered surfaces absorbing less solar energy than urban surfaces, and vegetation releasing water into the air, which cools the atmosphere, in a process called evapotranspiration.

Typically, increases in the overall temperature of the City results in hotter average summertime temperatures as compared to the surrounding rural areas. The increased temperature leads to health problems, including death. For those that are lucky enough to have air conditioning, summer temperatures are not as dangerous. However, air conditioning uses electricity, which is most often generated by the consumption of fossil fuels, leading to the production of CO₂, and overall global temperature increase.


As the City continues to grow and increasing amounts of vegetative surfaces are replaced by a more urban ground cover comprised of asphalt, buildings, and other non-permeable surfaces, the surface temperatures rise, increasing the effects of the Urban Heat Island.

Figures on the following pages depict the LST and vegetation cover or Normalized Difference Vegetation Index (NDVI) in 1985, 1994, 2007, 2017, and 2021 for the City of Westminster and its immediately surrounding environs. The maps indicate that, in the intervening years, the City's land surface became more urbanized, with a corresponding increase in LST.




Community Spotlight: Westminster

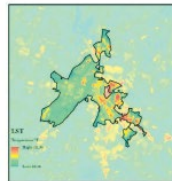
By STEVE ALLGEIER, CHAIR OF THE WESTMINSTER TREE COMMISSION



vegetation found throughout Westminster) and Land Surface Temperature (LST) Maps. Rather than just filling in empty tree pits on Arbor Day, we can direct plantings to defined areas. Our new Comprehensive Tree Plan has also become a "living plan" and is updated with new data.



The Tree Commission engages with community members through events. One example is a beneficial insect release held in the spring or summer. This annual family-oriented event helps educate about integrated pest management while helping many overcome a fear of bugs.



A group of interested high school students, having completed their study of a city stream to evaluate the health of this unbuffered waterway, plan to install a forested buffer along this stream. The tree buffer will improve water quality and increase local canopy cover.

Citizens have varied wants and needs. Frequently the connection between environmental and human health becomes lost. While people love the idea of having trees in their city or town, they aren't sure how to accomplish this. Involving the local community in novel activities to "green" the City generates interest and support.

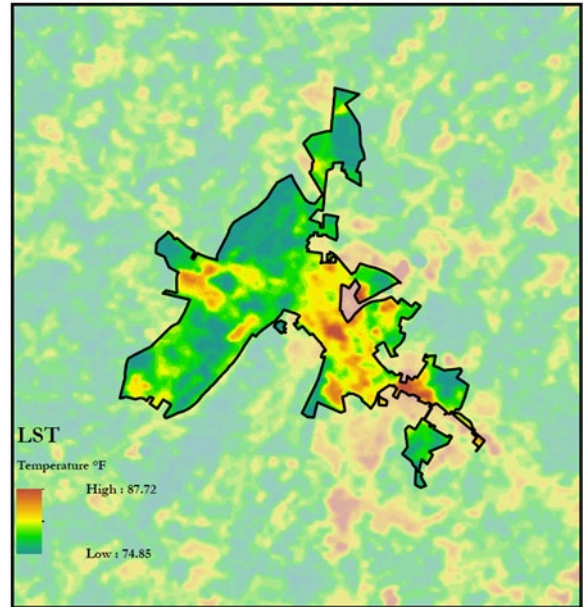
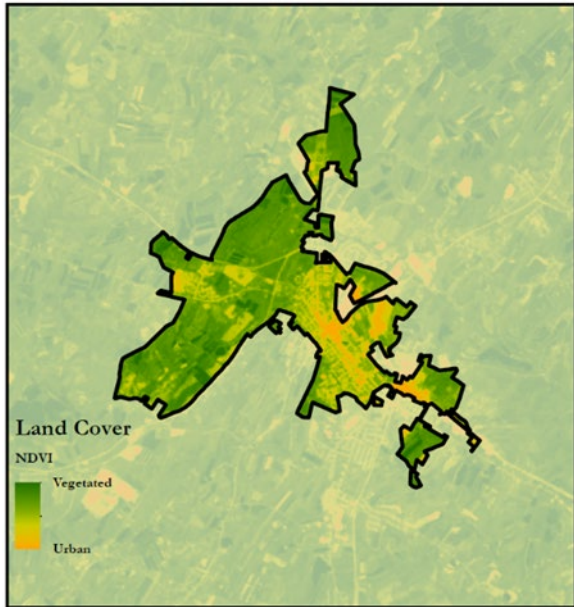
Having served on the Westminster Tree Commission for over 25 years, I've come to realize that *Kermit the Frog* is spot on -- "it's not easy being green."

Like many small urban areas, our "green canopy" or tree cover is challenged by classic issues that many communities face including limited budgets, lack of suitable planting sites, tree loss, changing environment/climate, invasive species, and at times waning public interest or indifference.

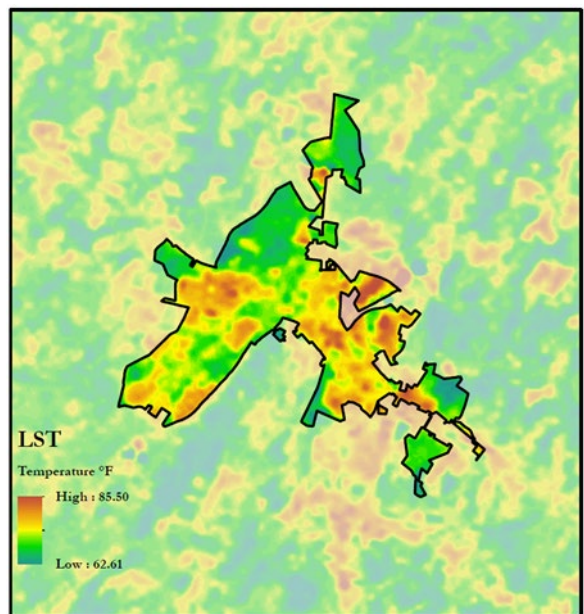
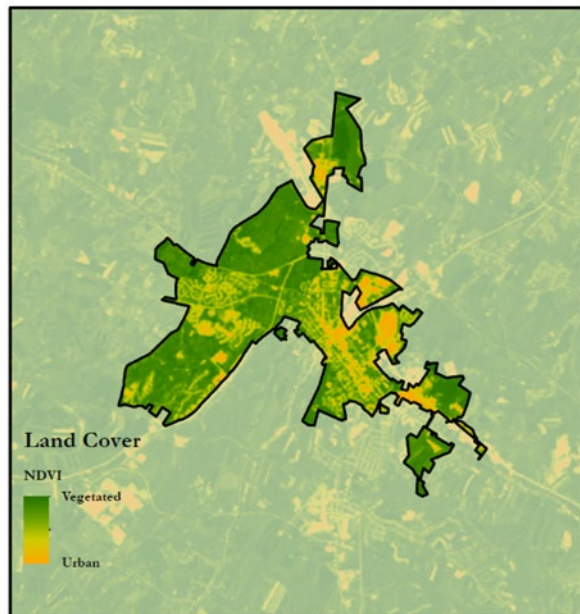
In troubleshooting our green problems, we have turned to better data to help make decisions and plan for the future. Additionally, we varied our outreach to the community through some novel events and partnerships with Tree Services, McDaniel College, local high school environmental clubs and others.

Andrew Gray, Comprehensive Planner for the City of Westminster, helped our City Tree Commission refocus our efforts and effectiveness by guiding the creation of a new [Comprehensive Tree Plan](#) that incorporates scientific data. Sharing his master's thesis data and outcomes with the commission helped develop the plan. His thesis, "Analyzing The Urban Heat Island Effect in the City of Westminster, Maryland, with Attention to Mitigative and Adaptive Measures", contained valuable data such as Normalized Difference Vegetation Index (NDVI - graphical representation of

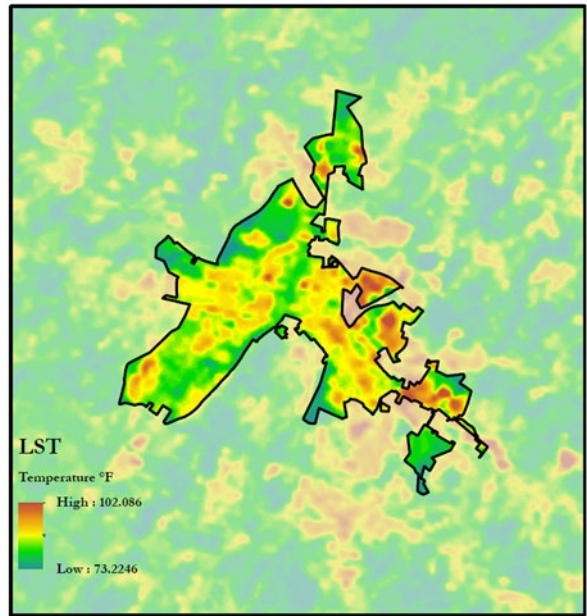
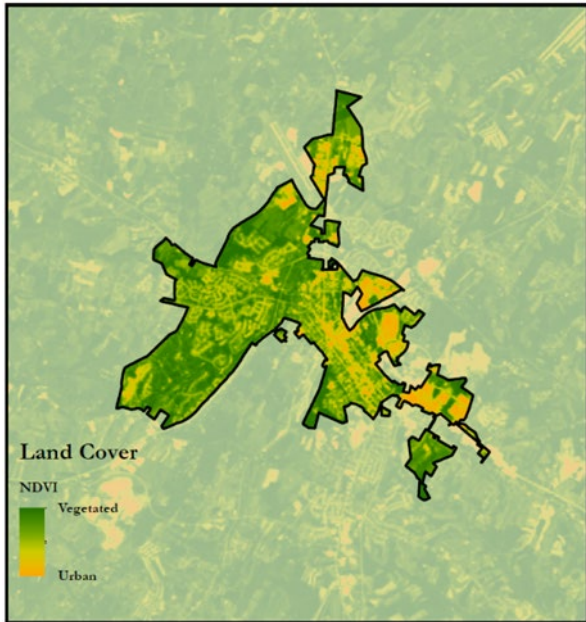
1985



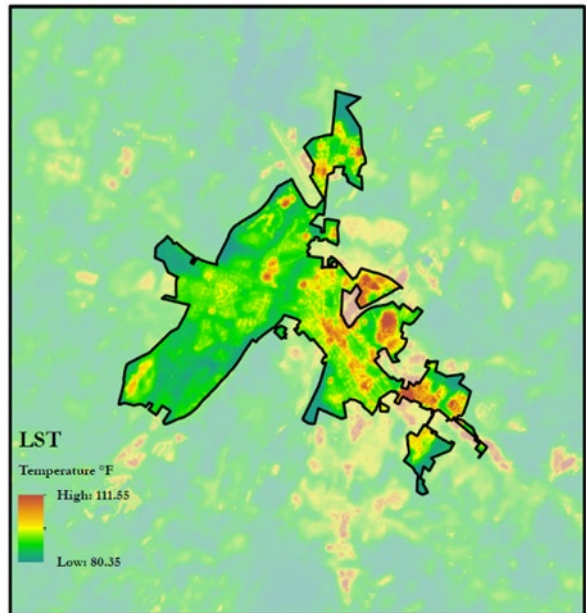
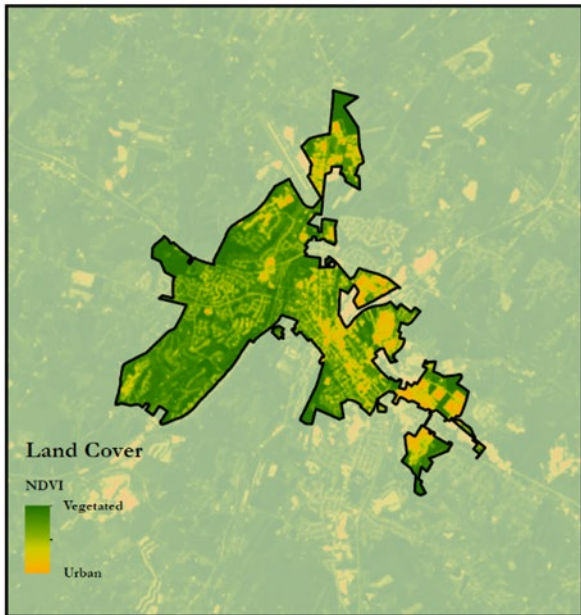
1994



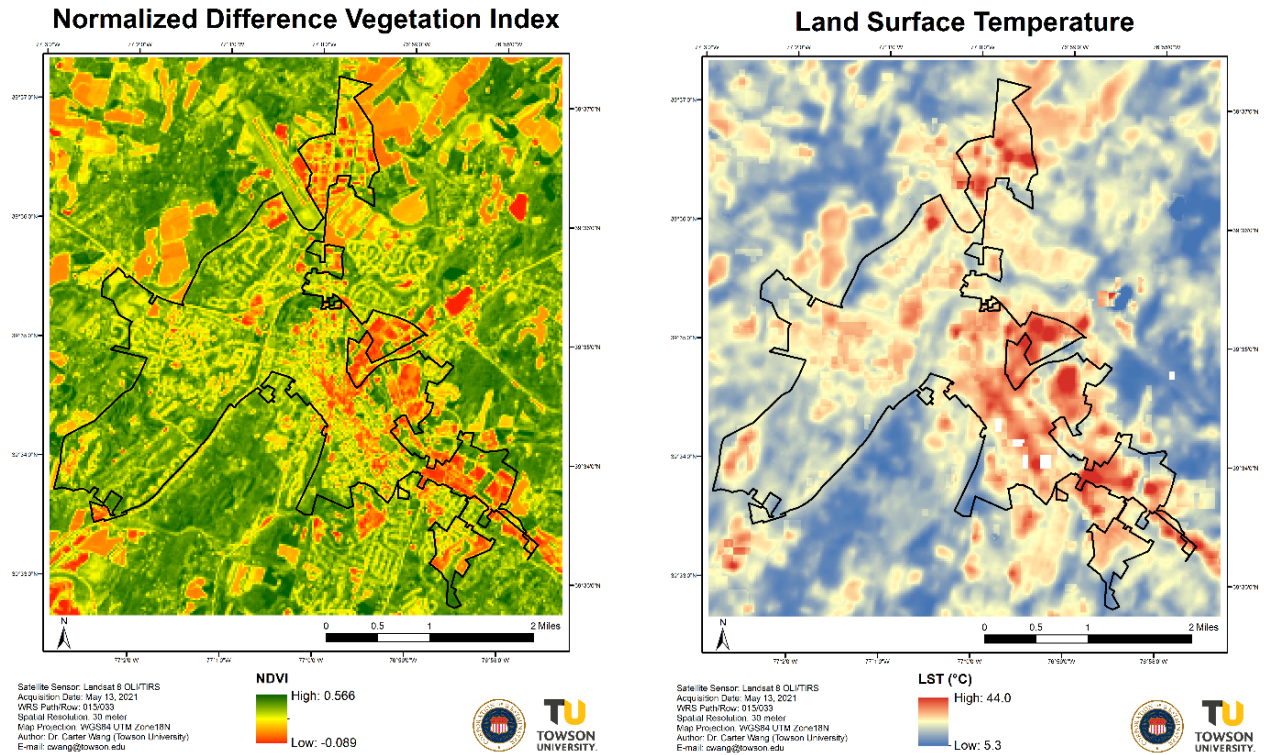
2007



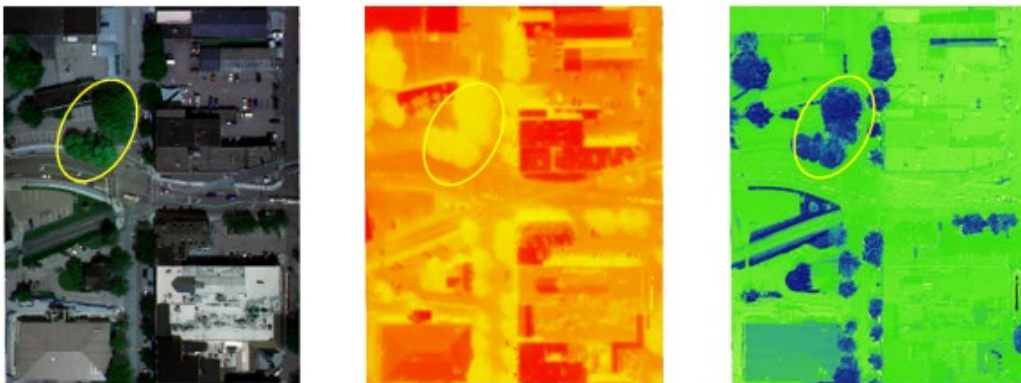
2017



2021



More precise detail of the effects of loss of vegetation can be seen in the following LST and NDVI images of the Heart of Downtown. These images were acquired from data provided by Towson University on July 13, 2021, and analyzed in GIS by Planning Staff. As the images indicate, the street trees directly correlate with reduced LST (yellow circle) and the darker roofs/asphalt directly correlate with increased LST. This data was provided for the entire Main Street between McDaniel College and Old Washington Road and can be seen in Appendix 2.

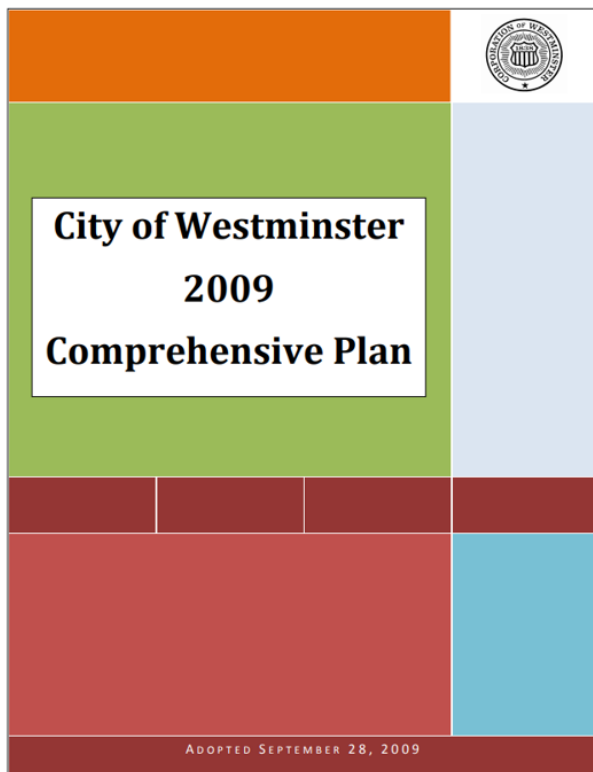


Left to Right: Satellite, LST, and NDVI of Main Street at Maryland Route No. 27

2009 Comprehensive Plan Mid-Cycle Review

Per adopted Maryland State Law, municipal Planning and Zoning Commissions are now required to review their comprehensive plans to determine if changes may be needed. In 2017, City Planning Staff met with all City department heads, officials from the Westminster Volunteer Fire Department, the Westminster Historic District Commission, and the Westminster Tree Commission to understand the City's current progress with implementing the objectives in the *2009 Comprehensive Plan*.

Goal R4 in the Environmental Resources & Protection Chapter (below) was identified as pertaining to the Tree Commission. During the July 2017 special meeting of the Tree Commission, Commissioners evaluated the implementation of the objectives found within the 2009 Comprehensive Plan that pertained to its work. An implementation summary follows.



Tree Commission Goals and Objectives from the 2009 Comprehensive Plan

<p>Goal R4 Protect and improve the environment by promoting forest preservation, urban and community forestry, and tree planting throughout the City of Westminster.</p>	<p>Objective 1 Develop and adopt a Westminster Urban Forestry Plan that promotes a healthy and thriving urban canopy and other desirable forms of vegetation.</p>	a. Inventory all street trees in Westminster and keep the inventory up to date through an annual update.
		b. Work with the Westminster Tree Commission to determine the priority areas for tree planting projects and to develop tree preservation and planting standards for the Urban Forestry Plan.
		c. Develop a “Westminster Street Tree Plan” and program for each residential, commercial, and industrial neighborhood in the City to be included into the Urban Forestry Plan.
		d. Require street trees in all residential, commercial, and industrial development and redevelopment be subject to the Westminster Street Tree Plan and program.
	<p>Objective 2 Promote the National Arbor Day Foundation’s vision of a community where trees and forests are abundant, healthy, and sustainable, and highly valued by all people.</p>	a. Support the Tree Commission as an organization of dedicated members who lead the way and help individual citizens plant and care for trees to enrich the environment.
		b. Provide opportunities for public education on the value of trees, including their environmental, aesthetic, and visual qualities and benefits.
		c. Expand the awareness of the need for tree planting and care by increasing publicity about Arbor Day and Westminster’s celebration of Arbor Week.
		d. Ensure City street tree standards conform to the Westminster Tree Commission and National Arbor Foundation’s recommendations for an officially designated Tree City.
	<p>Objective 3 Encourage trees and native vegetation as necessary components in the aesthetic and environmental quality of residential, industrial, and commercial areas.</p>	a. Require developments to retain existing significant trees and vegetation, where feasible, through regulations in the Westminster Zoning Ordinance and Landscape Manual.
		b. Utilize trees and landscaping to mitigate environmental degradation and to buffer surrounding land uses impacted by residential, industrial, and commercial activities.

Tree Commission Implementation Status from 2017 Mid-Cycle Review

The Tree Commission is in the process of crafting a Comprehensive Urban Forestry Plan over its next several Commission meetings. During the October 11, 2017, meeting, Commissioners started to add information such as action items and goals to the draft document.

The Tree Commission continues to uphold this objective. Documentation to this commitment can be seen from the continued recognition from the National Arbor Day Foundation as a Tree City and many Growth Awards.

The City Code and the Landscape Manual provide for vegetation requirements for new development.

Current Implementation of the Comprehensive Plan - Goal R4

On June 13, 2018, the Commission voted to forward the Westminster Comprehensive Tree Plan to the Mayor and Common Council for review and adoption. On February 25, 2019, the Mayor and Common Council of Westminster adopted, via Resolution No. 19-08, the City of Westminster Comprehensive Tree Plan, First Edition 2018.

The Commission has held many educational opportunities for the public including the Urban and Community Forestry Workshop and the Beneficial Insect Release. The most recent Beneficial Insect Release was attended by dozens of children. Bartlett Tree Experts provided a verbal educational information session about the insects that were being released and then released predacious mites and scale destroyer beetles with the help of the many children from the City Summer Camp program. This event was covered on the front page of the Carroll County Times.

During the development review process, the City requires all development proposals to conform with City Zoning Ordinance Section 164-113 (Location and Landscaping for all off-street parking and loading facilities) and the City Landscape Manual.



Lady Bugs Released

Urban Forestry and Tree Commission Achievements

2021 Highlights

- The City was once again recognized for achieving Green Level status in the Maryland People Loving and Nurturing Trees (PLANT) Program. The Green Level is the highest level of certification that a municipality can receive.
- The City was recognized for the 30th year as a Tree City USA.
- On July 13, 2021, Dr. Carter Wang, Towson University Assistant Professor, Department of Geography and Environmental Planning, in coordination with the Planning Department, provided Land Surface Temperature (LST) and Normalized Difference Vegetation Index (NDVI) maps of the entire City. Dr. Wang also provided more precise LST and NDVI data, along with Surface Elevation data, of Main Street, with a quadcopter drone outfitted with a 6-band multispectral sensor. This imagery shows how different types of land uses and tree species affect LST in the approximately 17 acres of Downtown Westminster.



Left to Right: Carroll County Times Front Cover “Bugs Put to Work” (July 21, 2021), Towson University’s 6-band multispectral sensor drone

2020 Highlights

- The City was once again recognized for achieving Green Level status in the Maryland People Loving and Nurturing Trees (PLANT) Program. The Green Level is the highest level of certification that a municipality can receive.
- The City was recognized for the 30th year as a Tree City USA.

2019 Highlights

- The City was once again recognized for achieving Green Level status in the Maryland People Loving and Nurturing Trees (PLANT) Program. The Green Level is the highest level of certification that a municipality can receive.
- The City was recognized for the 29th year as a Tree City USA.

2018 Highlights

- The City was recognized for achieving Green Level status in the Maryland People Loving and Nurturing Trees (PLANT) Program. The Green Level is the highest level of certification that a municipality can receive.
- The City was recognized for the 28th year as a Tree City USA and for achieving the Growth Award by the Arbor Day Foundation for 22 years. The Growth Award is given to local governments that demonstrate high levels of tree care.

2017 Highlights

- Arbor Day 2017 marked the completion of the final section of the Heritage Tree Trail at Bennett Cerf Park. Select trees along this section of wooded trail are labeled with metal QR codes that anyone with a QR code reader can scan to review information about each tree. This trail was a joint effort between the Carroll County Department of Recreation and Parks, the City of Westminster, and the Westminster Tree Commission.

- The City of Westminster, the Westminster Tree Commission, and Bartlett Tree Experts conducted a beneficial insect release on June 17, 2017, at Westminster City Hall. Over 200,000 insects were released, including predacious mites, green lacewings, and 100,000 lady bird beetles. This event also included a giveaway of free tree sapling and classes led by certified arborists from Bartlett Tree Experts about tree planting and how beneficial insects control pest pressure. Many children were in attendance to help release the insects into the City’s ecosystem.
- In October 2017, the City participated in the Tree-Mendous program. This program was sponsored by the Maryland Department of Natural Resources, Forest Service.
- In October 2017, the City of Westminster, the Westminster Tree Commission, and Bartlett Tree Experts conducted the 25th annual Urban and Community Forestry Workshop, with over 100 attendees from all across the State of Maryland and from neighboring States. This event educates tree care professionals on good tree care practices.
- In December 2017, the City was awarded a \$3,000 grant for the treatment of 57 Ash Trees as part of the Maryland Department of Natural Resources, Forest Service’s Emerald Ash Borer Treatment Program.



2017 Beneficial Insect Release at City Hall



2017 Arbor Day Tree Planting

2016 Highlights

- The Commission surveyed all the street trees located along East and West Main Street and Pennsylvania Avenue in Historic Downtown Westminster. The resulting survey identified over 300 street trees along the 1.28-mile stretch of East and West Main Street and the 0.60-mile stretch of Pennsylvania Avenue.

- In February 2016, the City was notified that it was among five jurisdictions in Maryland, and the only municipality besides Baltimore City, to be awarded grant funding for the treatment of Ash Trees as part of the Maryland Department of Natural Resources, Forest Service Emerald Ash Borer Treatment Program.
- In March 2016, the City was awarded additional grant funding for the treatment of Ash Trees as part of the Maryland Department of Natural Resources, Forest Service Emerald Ash Borer Treatment Program.
- In September 2016, the City received grant funding to replace two Ash Trees with two 25-gallon Red Maple trees as part of the Maryland Department of Natural Resources, Forest Service Tree-Mendous program.



Heritage Tree Program

The Commission sponsors the Westminster Heritage Tree Program. The Commission established the Heritage Tree Program in 2011 to encourage residents and property owners to identify and protect individual trees or groups of trees that meet one or more of the following qualifications:

- **Specimen:** A tree of exceptional size, form or rarity, or horticultural value
- **Historic:** A tree of exceptional age, and/or associated with or contribution to an historic structure or with a noted person or historic event
- **Landmark:** A tree that is a prominent identifying feature of a community
- **Collection:** A group of trees in a notable grove, avenue, or other planting

Anyone may nominate a tree or trees, but the person who owns the land on which the tree stands must consent to the nomination. Trees located in County right-of-way are not eligible. There are no regulatory restrictions associated with this designation.

For more information on the Heritage Tree Program, please contact the City of Westminster at planning@westminstermd.gov or 410-848-9002.

Heritage Tree Locations		
#	Type	Location
1	90-foot Sycamore	Old Westminster Pike
2	70-foot Sugar Maple	Denton Drive
3	50-foot Sycamore	East Main Street
4	55-foot American Holly	Willis Street
5	80-foot White Oak	Willis Street
6	85-foot American Hornbeam	Willis Street
7	Pair of 45-foot Weeping Purple Beech	Emerald Hill Lane
8	90-foot White Oak (377 years old, as of 7-2012)	Ridge Road
9	95-foot Silver Maple	Old Westminster Pike
10	55-foot Black Mayberry	Gist Road
11	33-foot Cucumber Magnolia	Bond Street
12	50-foot Wye Oak	Ridge Road
13	38-foot Indian Cigar	Manchester Avenue

Emerald Ash Borer Community Response Plan - Westminster, Maryland

The City Arborist, in conjunction with Bartlett Tree Experts, has been monitoring the City's Ash tree population since 2008. Each tree is inspected at least twice a year. In late 2015, staff from the Maryland Department of Natural Resources, Forest Service came to Westminster to locate, map, and recommend the treatment or removal of Ash trees on public property. This inventory identified 46 Ash trees. In early 2016, the City Arborist identified several more Ash trees throughout the City.

In October 2015, 44 of the City's Ash trees had root flare injection treatments with *Tree-Age*. During the spring of 2016, nine Ash trees were treated with *Arbormectin*. In spring 2018, all the previously injected Ash trees were treated with *Arbormectin*.

Currently, the treatment cycle for the City's Ash trees is once every two years. In the spring of 2020, the City treated half of its inventory of Ash Trees with *Tree-Age*. The current *Tree-Age* treatment is highly effective, with a success rate of 98%.

The City's Urban Forestry expenditures are overseen by the Westminster Street Department. The Department's Superintendent is aware of the two-year treatment cycle.

Currently, there are 57 Ash trees that are proposed to be re-treated in the City. Five of the largest Ash trees can be found on the grounds of Westminster City Hall. Re-treating the City's Ash trees every two years is essential to effectively sustaining Westminster's urban tree canopy for years to come.



EAB galleries. Art Wagner, USDA APHIS PPQ, Bugwood.org

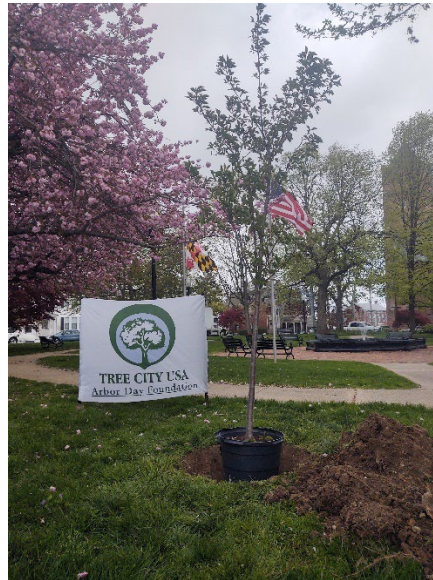


EAB larva. David Cappaert, Michigan State University, Bugwood.org

Arbor Day Celebrations

2021

The City of Westminster and the Commission held its 31st annual Arbor Day Celebration at Belle Grove Square on April 22. Due to the COVID-19 Pandemic, no members of the public were invited.



2020

The City of Westminster and the Commission held its 30th annual Arbor Day Celebration at Westminster City Hall on September 25. Due to the COVID-19 Pandemic, no members of the public were invited.



2019

The City of Westminster and the Commission held its 29th annual Arbor Day Celebration at Belle Grove Square on April 20. Councilmember Dr. Mona Becker presided over the event that featured the planting of an Autumn Blaze Maple, a Hawthorn, and a Cherry tree. Bartlett Tree Experts generously donated these trees.



Councilmember Dr. Mona Becker presides over the Arbor Day Celebration



Flowers by the newly planted trees in Belle Grove Square

2018

The City of Westminster and the Commission held its 28th annual Arbor Day Celebration at Dutterer Family Park on April 27. Mayor Joe Dominick and Councilmember Dr. Mona Becker helped plant a Dogwood and a Hawthorn tree to commemorate the event.



(Left to Right) Councilmember Dr. Mona Becker and Mayor Joe Dominick participating in the 2018 Arbor Day Celebration



Mayor Dominick assists Tree Commission members in planting the second tree during the 2018 Arbor Day Celebration

2017

The City of Westminster and the Commission held the 27th annual Arbor Day Celebration on April 28. The ceremony took place at the entrance to the Heritage Tree Trail at Bennett Cerf Park, located at 544 Manchester Road in Westminster. The Celebration featured the planting of a White Oak tree to commemorate the completion of the Bennett Cerf Park Interactive Heritage Tree Trail. The Celebration also included the planting of a Sycamore tree in memory of Connie Hoge, an active member of the Westminster community who formerly served as the chair of the Carroll County Forest Conservancy District Board.



2016

For the 26th annual Arbor Day Celebration, held on Friday, April 29, the City and the Commission commemorated Mrs. Jeannie Vogel, the late owner of Downtown Westminster's JeannieBird Baking Company. The City commemorated this event by planting two Ginkgo trees at the entrance of the Davis Lot, located next to 32 West Main Street, which is the parking lot adjacent to JeannieBird Baking Company.



Vision and Goals

The development of the Comprehensive Tree Plan for Westminster includes a vision statement. This statement has been determined by the Commission to fully define the City's focus and commitment to its urban forestry program.

Vision: *To sustain a healthy, safe, and appealing public park and street tree population, and increase the overall tree population to enhance environmental and economic benefits.*

Goal 1: *Protect and improve the environment by promoting forest preservation, urban forestry, and tree planting throughout the City of Westminster.*

Goal 2: *Protect the integrity of the trees located along historic Main Street and in the many City parks.*

Goal 3: *To manage the urban forest of Westminster in an effective manner through sound fiscal, personnel, and operational management, utilizing in-house and contracted services, as well as volunteers from the community.*

Tree Planting Recommendations

- The recommended seasons for planting trees in the City are in the fall or early winter when trees are dormant or in the early spring.
- The recommended size of trees for planting is 1-inch to 2-inch caliper for open space where the root zone is uninhibited by any obstructions.
- Tree species well adapted to the urban environment are recommended for planting.

Short-Term Action Items

- Approve a revised Tree Ordinance. *Revised March 11, 2019, via Ordinance No. 908.*
- Replace the Permissible Roadside Tree List in the City Code with language directed to the *Not Suitable Street Tree List*, in this plan. *Revised via Ordinance No. 908.*
- Strengthen Tree Commission membership. *Former Mayor Dominick Appointed a new Commission Member on May 10, 2021.*
- Continue to remove hazard trees on and along public right-of-ways.
- Perform systematic trimming as needed per ANSI A300 standards.
- Plant street trees as needed.
- Remove and replace diseased trees throughout the City.
- Monitor trees on an annual basis for problems.
- Develop a full inventory of street trees. *On August 4, 2020, Planning Staff requested the assistance of two college interns to help collect information on Street Trees in select neighborhoods. No one has volunteered to date.*
- Use software to calculate the benefits that the street trees provide to the City and its residents.
- Inform the public of ongoing efforts and long-term strategies.

- Continue to work with Baltimore Gas and Electric Company to prune and/or remove street trees that may cause a danger to the electric grid of Westminster.
- Continue to identify and remove street and park trees that are in danger of falling and may cause harm to people and property.
- Provide training for in-house personnel on all phases of urban and community forestry.
- Identify potential partners for urban and community forestry programming within the City, such as:
 - Homeowners Associations
 - Carroll Community College
 - McDaniel College
 - Public and private schools
 - Churches
 - Nurseries
 - Garden clubs



Photos from the 2017 Beneficial Insect Release at Westminster City Hall

Long-Term Action Items

- Increase public education on urban forestry.
- Continue to increase the fiscal budget for the urban forestry program
- Develop partnerships with:
 - Local and regional utility companies.
 - Government agencies and other organizations
- Develop the inventory of park trees.
- Develop a comprehensive set of specifications for contracted services.
- Improve trees along the Wakefield Valley Community Trail “Linear Park.”
- Work with the Maryland Department of the Environment, Department of Natural Resources, and Carroll County on developing and refining standards and criteria for the care of trees on state roadways and public land.

Removal of Street and Park Trees

If the City Arborist determines that a street or park tree is a threat to public safety, the Commission will meet to determine if the tree can be saved, or if it will have to be removed. If the Commission determines that the tree must be removed, then the City Arborist will ensure that the tree is removed with care, and that a new suitable tree is planted in its place.

If any tree to be removed is located in the public right-of-way of any public street or road, the City will notify the Maryland Department of Natural Resources before the tree is removed. A new tree will not be planted if the City Arborist determines that such planting would have a negative effect on adjacent utilities and would thereby pose a risk to public safety.

If the City Arborist determines that a tree poses an immediate risk to property or public safety, the City Arborist can remove the hazard immediately, notifying the City's Director of Planning, the City Tree Commission, and the Maryland Department of Natural Resources immediately afterward.

Maintenance of City Trees

The City Arborist annually surveys and maintains the City Trees as needed. The City Arborist uses approved tree care techniques certified by the International Society of Arborists.

Maintenance of Street Trees

Please see § 139-7 of the City Code for more information on tree trimming.

§ 139-7 of the City Code can be found here: <https://ecode360.com/10164296>

Please see § 148-11 of the City Code for more information on public tree care.

§ 148-11 of the City Code can be found here: <https://ecode360.com/10164603>

Please see § 139-11A. of the City Code for more information on sidewalk responsibility.

§ 139-11 of the City Code can be found here: <https://ecode360.com/10164306>

Calendar Year Urban Forestry Expenditures

2020 Urban Forestry Expenditures	
Tree Planting and Initial Care	\$ 9,677.91
Tree Maintenance	\$ 16,210.00
Tree Removals	\$ 66,297.60
Management	\$ 375.00
Utility Line Clearance	\$ 0.00
Other (Volunteer Time)	\$222.21
Total Community Forestry Expenditures	\$ 92,582.72

2019 Urban Forestry Expenditures	
Tree Planting and Initial Care	\$ 25.00
Tree Maintenance	\$ 22,200.00
Tree Removals	\$ 11,558.00
Management	\$ 60,350.00
Utility Line Clearance	\$ 0.00
Other (Volunteer Time)	\$ 296.28
Total Community Forestry Expenditures	\$ 71,072.03

2018 Urban Forestry Expenditures	
Tree Planting and Initial Care	\$17,750.96
Tree Maintenance	\$ 3,675.00
Tree Removals	\$ 880.00
Management	\$ 35,250.00
Utility Line Clearance	\$ 1,400.00
Other (Volunteer Time)	\$ 592.56
Total Community Forestry Expenditures	\$ 59,548.52

2017 Urban Forestry Expenditures	
Tree Planting and Initial Care	\$ 15,000.00
Tree Maintenance	\$ 14,253.00
Tree Removals	\$ 34,100.00
Management	\$ 4,253.00
Utility Line Clearance	\$ 2,500.00
Other (Volunteer Time)	\$ 669.75
Total Community Forestry Expenditures	\$ 70,775.75

- In October 2017, the City was awarded a **\$204.00 grant** for the purchase of 2 Red Maple and 3 Serviceberry trees as part of the Maryland Department of Natural Resources, Forest Service’s Tree-Mendous Program.
- In December 2017, the City was awarded a **\$3,000.00 grant** towards the treatment of 57 Ash trees as part of the Maryland Department of Natural Resources, Forest Service’s Emerald Ash Borer Treatment Program.

2016 Urban Forestry Expenditures	
Tree Planting and Initial Care	\$ 3,750.00
Tree Maintenance	\$ 44,480.00
Tree Removals	\$ 1,770.00
Management	\$ 5,875.00
Other (Staff Time at Tree Commission Meetings)	\$ 143.75
Total Community Forestry Expenditures	\$ 56,018.75

- In February 2016, the City was awarded a **\$1,368.00 grant** for the treatment of nine Ash trees as part of the Maryland Department of Natural Resources, Forest Service’s Emerald Ash Borer Treatment Program.
- In March 2016, the City was awarded a **\$2,400.00 grant** for the treatment of Ash trees as part of the Maryland Department of Natural Resources, Forest Service’s Emerald Ash Borer Treatment Program.
- In September of 2016, the City was awarded **\$260.00** to replace two Ash trees with two 25-gallon Red Maple trees as part of the Maryland Department of Natural Resources, Forest Service’s Tree-Mendous program.



Unsuitable Street Tree List

NOT SUITABLE UNDER ANY CIRCUMSTANCES AS A STREET TREE	
Common Name	Botanical Name
Norway Maple	<i>Acer platanoides</i>
Silver Maple	<i>Acer saccharinum</i>
Red Maple	<i>Acer rubrum</i>
Sugar Maple	<i>Acer saccharum</i>
Ash	<i>Fraxinus</i>
Willow	<i>Salix</i>
Black Walnut	<i>Juglans nigra</i>
English Walnut	<i>Juglans regia</i>
Golden Rain	<i>Koelreuteria paniculata</i>
Ginkgo female	<i>Ginkgo biloba</i>
Mimosa	<i>Albizia julibrissin</i>
Linden	<i>Tilia</i>
Catalpa	<i>Catalpa bignonioides</i>
Big Leaf Magnolia	<i>Magnolia macrophylla</i>
Sawtooth Oak	<i>Quercus acutissima</i>
Aspen	<i>Populus tremuloides</i>
Paulownia	<i>Paulownia tomentosa</i>
Callery Pear (Bradford)	<i>Pyrus calleryana</i>



Suitable Trees around Power Lines (Less than 25 Feet Tall)

According to Baltimore Gas and Electric Company (BGE), the following trees are appropriate for planting under or near power lines.

Ornamental	Shade	Evergreen
Crabapple	Amur Maple	Arborvitae - Nigra
Crape Myrtle	Japanese Red Maple – Bloodgood	Techny, Emerald
Dogwood - Kousa	Burgundy Lace	Chinese Juniper - Robusta Green
Gray	Paperback Maple	Spartan
Eastern Redbud	Trident Maple	Spearmint
Franklinia	Truncatum Maple – Norwegian Sunset	Holly - Nellie R. Stevens
Goldenchain - Vossii	Pacific Sunset	Foster
Hawthorne		
Japanese Snowbell		
Japanese Tree Lilac - Summer Snow		
Ivory Silk		
Serviceberry		
Stewartia		

For more information, please see *Choosing the Right Tree* from BGE at <https://www.bge.com/SafetyCommunity/Safety/Documents/Choosing%20the%20Right%20Tree.pdf>

Planting around Transformers

Please refer to BGE’s *Plant the Right Tree in the Right Place* webpage (<https://www.bge.com/SafetyCommunity/Safety/Pages/PlantingTrees.aspx>) for more information.

Be sure to call Miss Utility at 811 before you start digging.

Appendix No. 1

Street Tree Location Maps

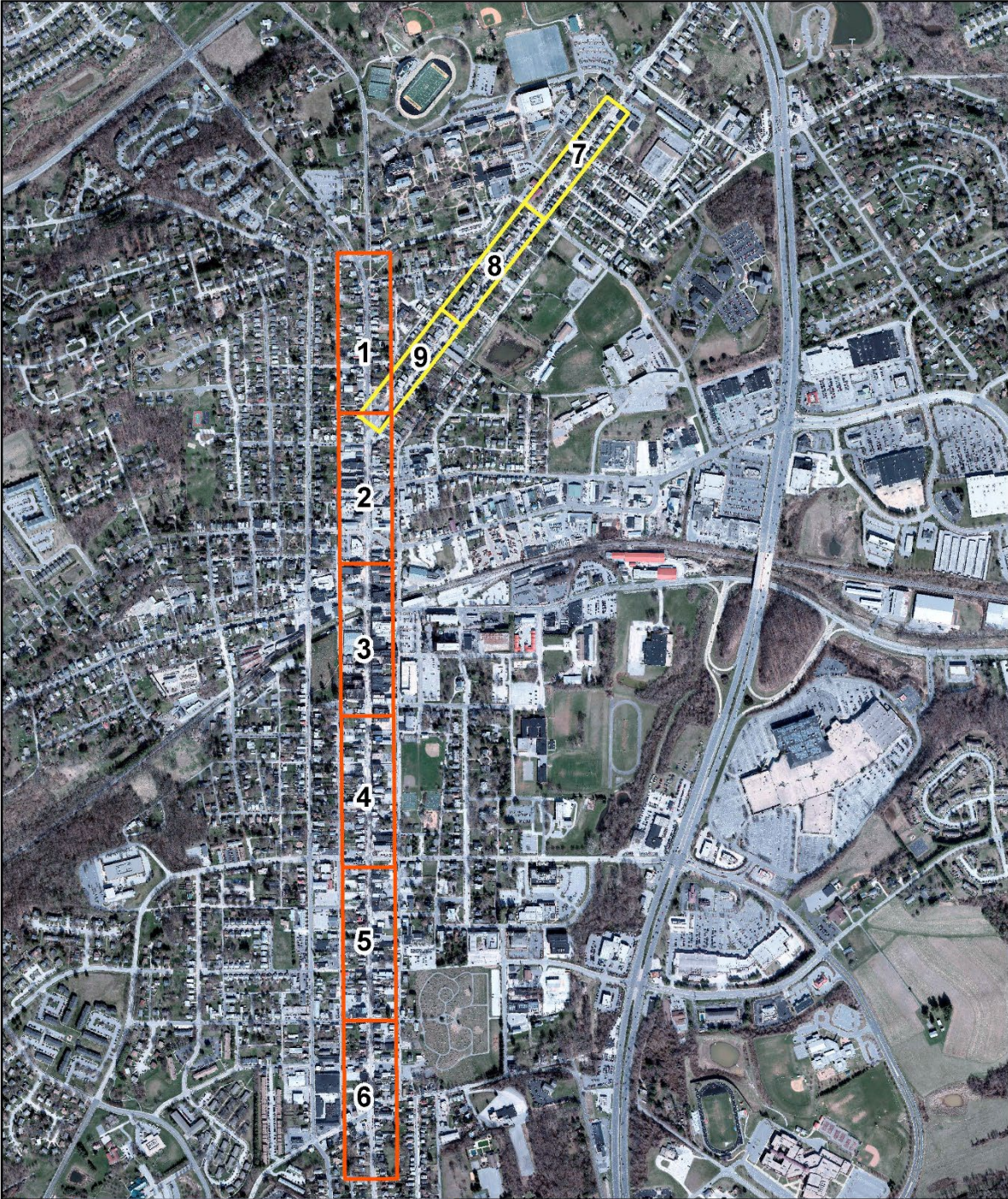




Sheet 1-3 West Main Street

Sheet 3-6 East Main Street

Sheet 7-9 Pennsylvania Avenue

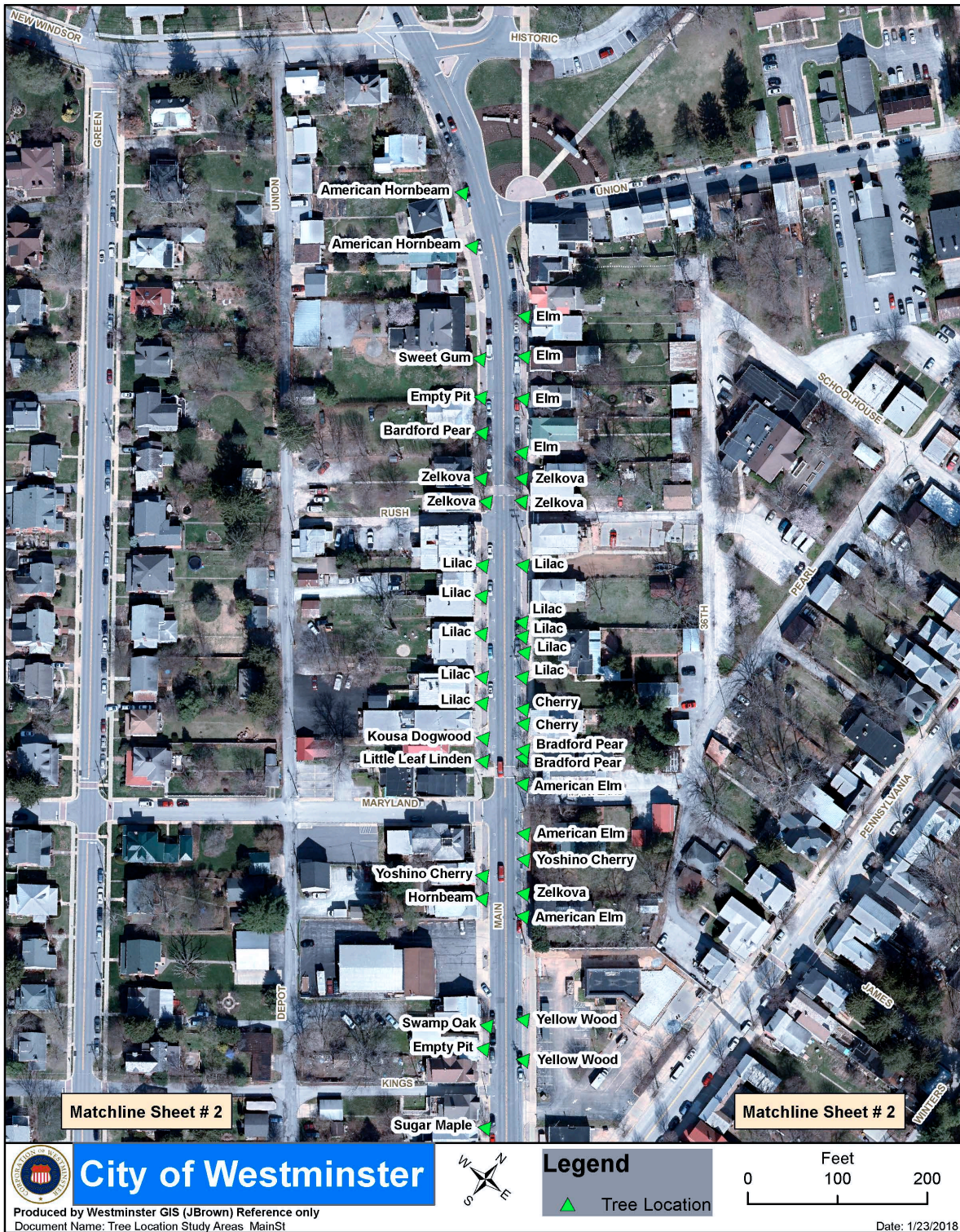
Tree Location Study Areas (Westminster, Maryland)



	City of Westminster Produced by Westminster GIS (JBrown) Reference only Document Name:	 Date: 1/23/2018	All polygons display study area boundaries for each page in this report. Any numbers found within each polygon above are directly related to the page number.
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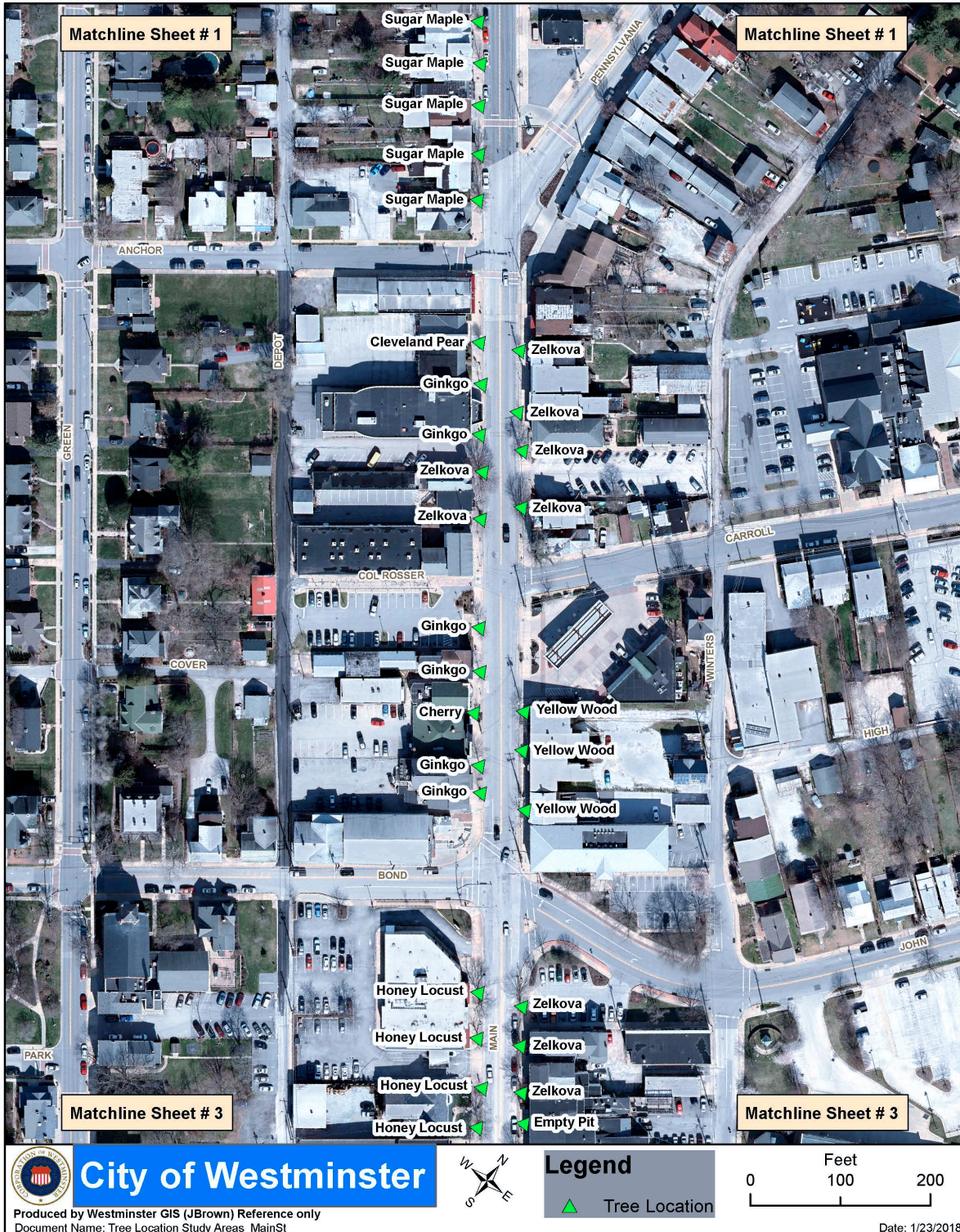
Sheet #1

Tree Information & Location (Westminster, Maryland)



Sheet #2

Tree Information & Location (Westminster, Maryland)



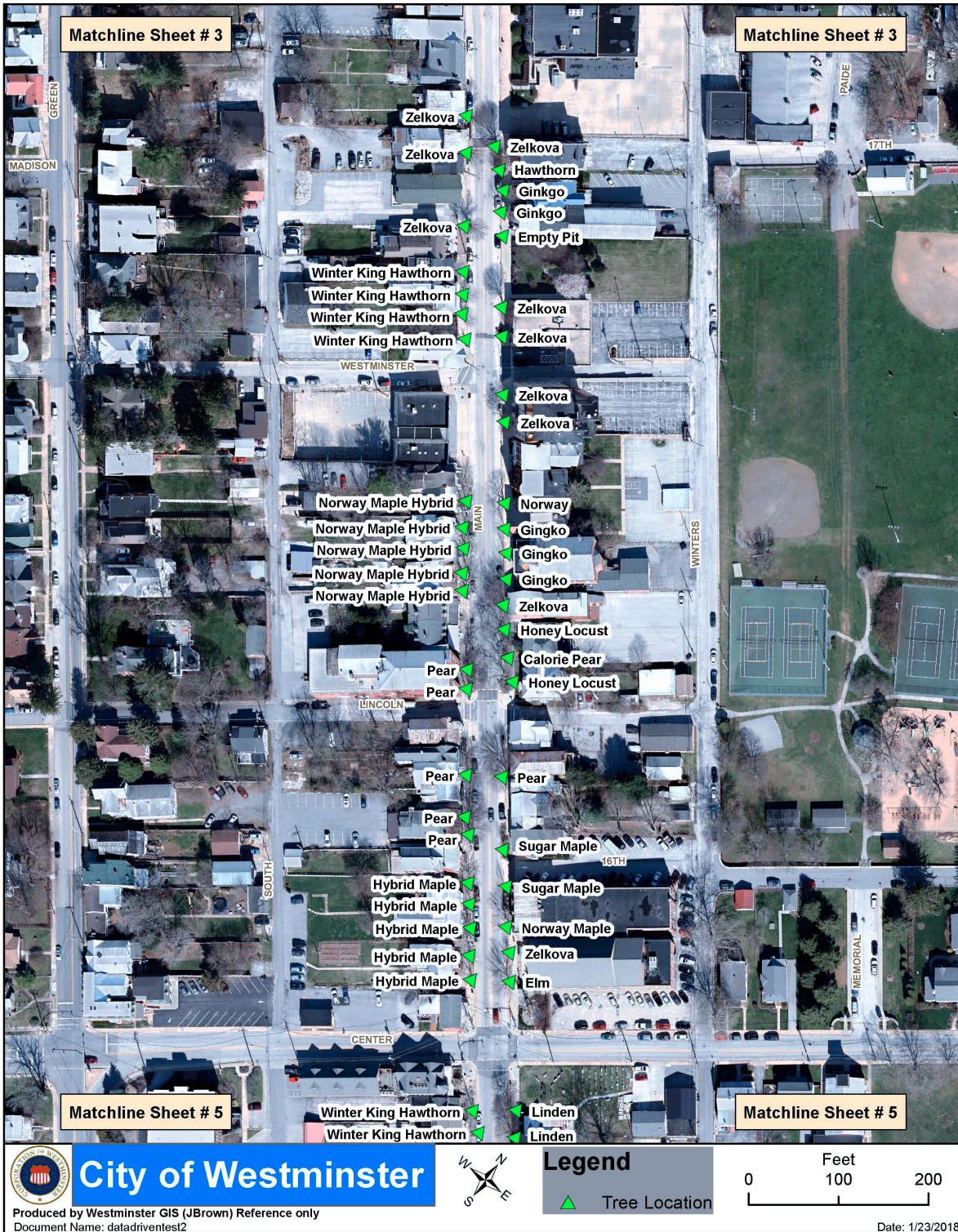
Sheet #3

Tree Information & Location (Westminster, Maryland)



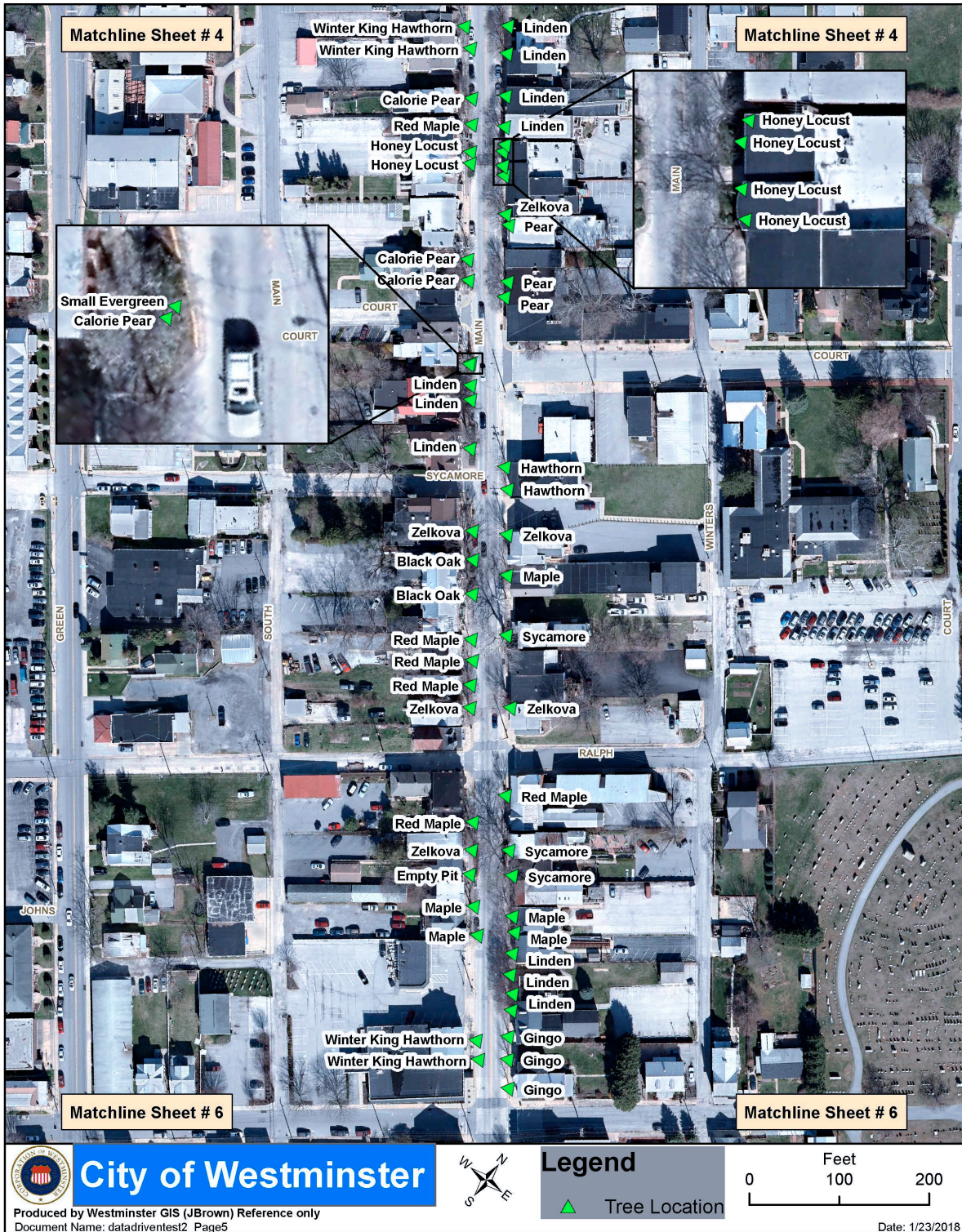
Sheet #4

Tree Information & Location (Westminster, Maryland)



Sheet #5

Tree Information & Location (Westminster, Maryland)



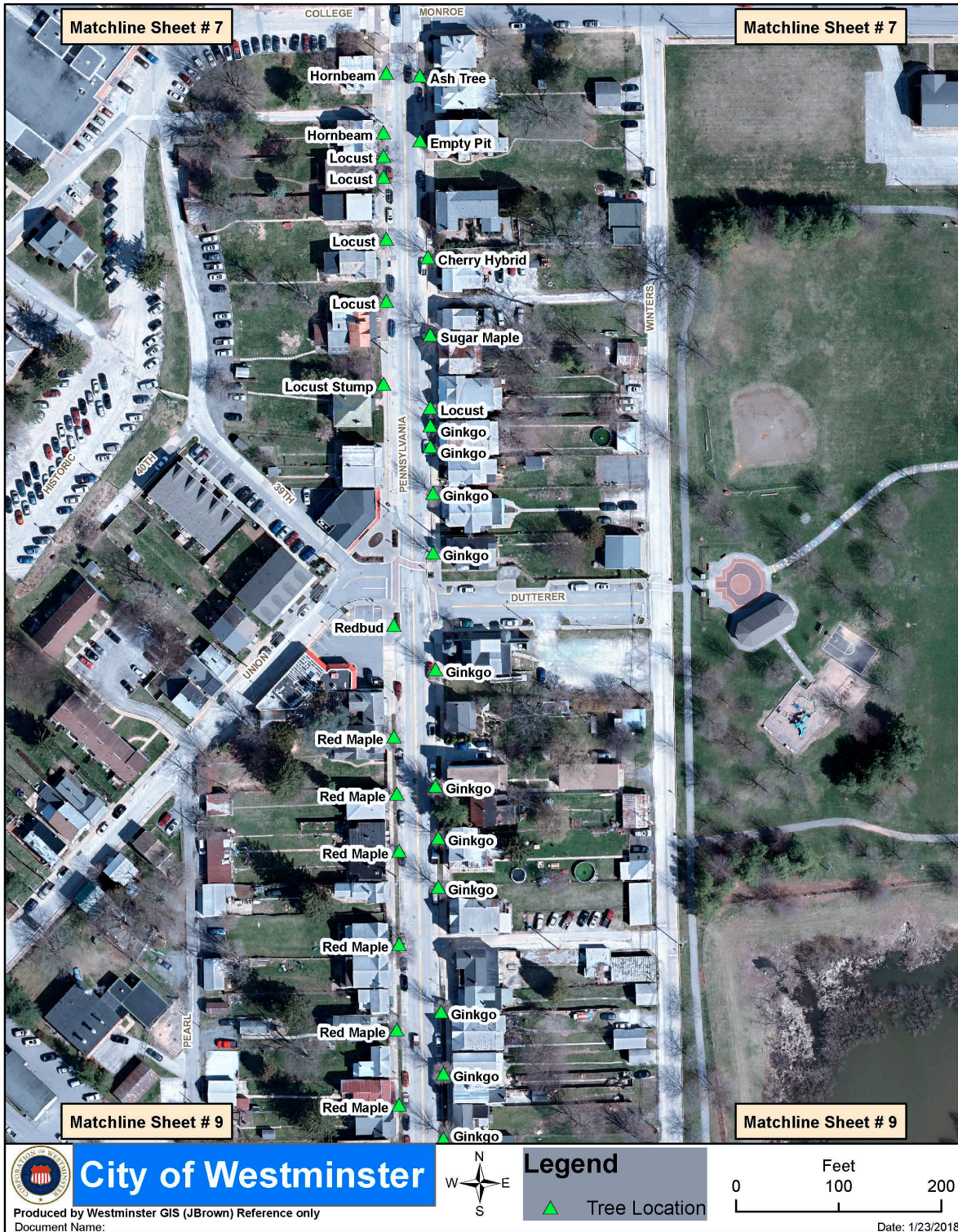
Sheet #7

Tree Information & Location (Westminster, Maryland)



Sheet #8

Tree Information & Location (Westminster, Maryland)



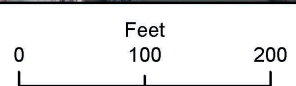
City of Westminster

Produced by Westminster GIS (JBrown) Reference only
Document Name:



Legend

▲ Tree Location



Date: 1/23/2018

Sheet #9

Tree Information & Location (Westminster, Maryland)



Appendix No. 2

Main Street Drone Data

Multispectral Five Band (Multi)

Normalized Difference Vegetation Index (NDVI)

Land Surface Temperature (LST)



Sheet No. 1 – Multi – McDaniel College to Anchor Street

Sheet No. 2 – LST and NDVI - McDaniel College to Anchor Street

Sheet No. 3 – Multi – Anchor Street to Maryland Route No. 27

Sheet No. 4 – LST and NDVI – Anchor Street to Maryland Route No. 27

Sheet No. 5 – Multi –Maryland Route No. 27 to Westminster Avenue

Sheet No. 6 – LST and NDVI –Maryland Route No. 27 to Westminster Avenue

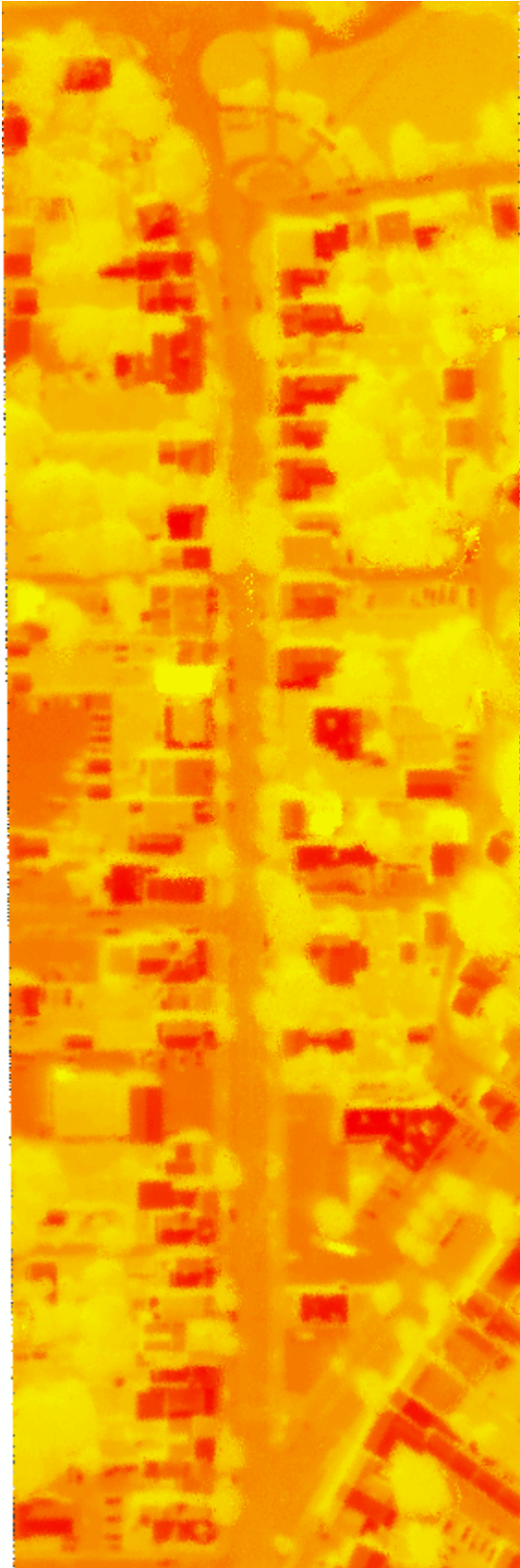
Sheet No. 7 – Multi – Westminster Avenue to Court Lane

Sheet No. 8 – LST and NDVI – Westminster Avenue to Court Lane

Sheet No. 9 – Multi – Court Lane to Old Washington Road

Sheet No. 10 – LST and NDVI – Court Lane to Old Washington Road





City of Westminister, Maryland

