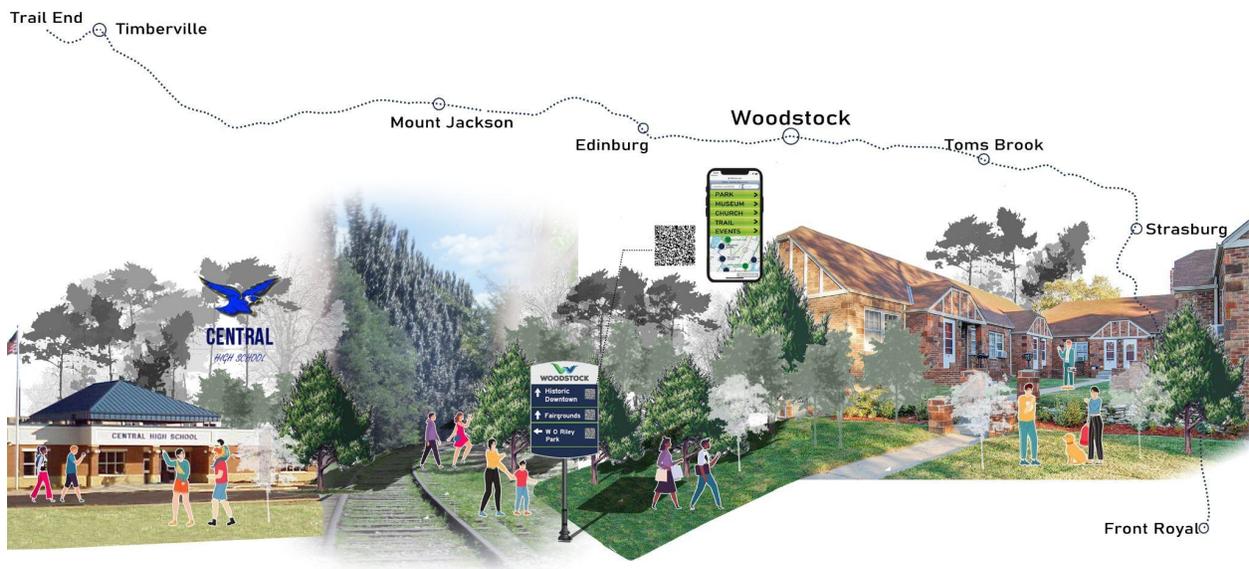


# Visioning Infill in the Town of Woodstock, VA

Prepared by the 2021 MUEP Practicum Class at University of Virginia  
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## Executive Summary

The Town of Woodstock, Virginia is located in the Shenandoah Valley and is home to about 5,000 people. Recently, the town has expressed interest in conducting community charrettes in cooperation with Shenandoah County. One of Woodstock's main focuses has been on infill development of existing parcels within the town, specifically looking at how underused areas can be redesigned to better fit with the town's comprehensive plan. For the project, the town collaborated with three master's students enrolled in the University of Virginia's Urban and Environmental Planning program. After extensive conversations with the town, the project group agreed to focus on three different sites, all of which have different existing conditions and needs. This project is heavily design based and is intended to serve as a visioning exercise for what the town could look like under different infill scenarios. Going forward, the design interventions proposed by our group will likely inform future discussions that the town and county have as they work to update their comprehensive plans.

The three sites for this project consisted of an area south of the downtown which is currently forested, a section of the downtown near the BB&T Bank, and a northern site about 0.5 miles north of downtown. For each site, our group created a base map showing current conditions as well as renderings showing potential design solutions for infill. These included photoshop collages, street plans and sections, as well as aerial views of the proposed conditions. In addition, a 3D model was created for our northern site, with both existing conditions and proposed conditions shown in the models. All of these visuals were presented to the town's planning commission through a slide show. This final report, along with a brochure containing a condensed version of the report, will serve as a guide for the town as it decides how to best carry out infill in the future.

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## Project Overview

The goal of this term project was to create visual examples of what and how infill redevelopment could occur within the Town of Woodstock. Specifically, the Town and County want to investigate how to reuse underutilized spaces, such as empty parking lots or vacant parcels, to spur further growth and development. To quote from an official communique between the officials and this group, “both the County and the Town are interested in seeing documents to both inform the public as well as landowners specifically on how infill will work, basically marketing materials on the ideas you all develop”. Additionally, “The County and Town are also interested in materials that can be used to help facilitate public discussions. The County would like to use these materials in the community charrettes we are planning for each Town and in the meetings across the County to address the future of villages and hamlets” (Hinkle).

When discussing the materials that would be provided to the Town and County, it was agreed that a typical planning report would be submitted, as well as a truncated version in a brochure format to be used for public events, and a presentation to the Town’s Planning Commission. While the traditional planning document will serve as an initial guiding document for planning staff, the brochure will serve as an informational piece for residents during the initial infill outreach events that will be done by Town and County planners. The presentation with the Town’s Planning Commission serves as an initial exposition of the potential of infill in the Town to government officials.

Using sites identified by officials from the Town and County, the group created three different infill visualizations of varying intensity. The aim was to show how various intensities of infill could potentially work in each of the three areas.

For this project, the group was unable to visit the site due to COVID-19 restrictions. This served as an additional limitation and forced us to rely solely on online maps and photos to get a sense of the space.

## Guiding Principles

Throughout the course of this project, the intervention team followed three guiding principles to guide the work. These themes were ensuring minimal disruption to existing uses, maintaining existing urban fabrics, and creating varying scenarios that are detailed but not prescriptive.

### 1. Ensuring Minimal Disruption to Existing Uses

A historic problem of the planning profession has been to facilitate grandiose projects that disrupt and uproot existing communities. The group wanted to avoid this traditional paradigm and explore how infill can complement and create additional value to existing communities.

### 2. Maintaining Existing Urban Fabrics

A major point of consternation among residents in any community is how a new development can alter and potentially conflict with the existing urban form of the area. The project group aimed to create designs that were informed by existing structures and fit within existing aesthetics.

### 3. Creating Varying Scenarios That Are Detailed But Not Prescriptive

The project group wanted to create visualizations of what the Town could look like in the future and communicate that these visualizations only represent only one of the innumerable ways that infill can occur in Woodstock. The idea is that our designs are not prescriptive but that they can create a starting point for community dialogue.

## Background Research: Land Use

The Town of Woodstock is currently a small rural town in the heart of the Shenandoah Valley. Currently, almost 50% of the land in the Town is zoned for either Highway Commercial (B-2), which is concentrated at the Northern and Southern ends of Woodstock, or for Low Density Residential (R-1) (Woodstock, Virginia - Code of Ordinances Chapter 90). Other zoning designations include Medium Density Residential (R-2), High Density Residential (R-3), Commercial-Central Business District (B-1), Institutional, Light Industrial (I-1), Parks & Recreation, and Planned Unit Development/Traditional Neighborhood Development. The Zoning Map can be viewed at the bottom of this section.

The Highway Commercial designation “is intended to provide sufficient space in appropriate locations for a wide variety of commercial and miscellaneous service activities” (Woodstock, Virginia - Code of Ordinances Chapter 90). Permitted uses include restaurants, offices, a varying types of commercial businesses, and public uses.

The other commercial designation, Commercial-Central Business District (B-1), “is intended to encompass the major downtown retail and service center and to provide for the orderly expansion of the central business district and for the conduct of business to which the public requires direct and frequent access” (Woodstock, Virginia - Code of Ordinances Chapter 90). Permitted uses include a wide range of commercial businesses and multifamily dwellings.

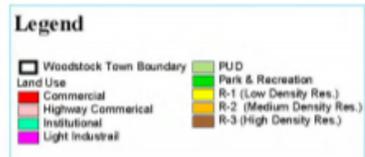
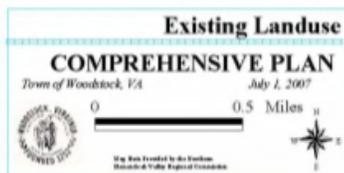
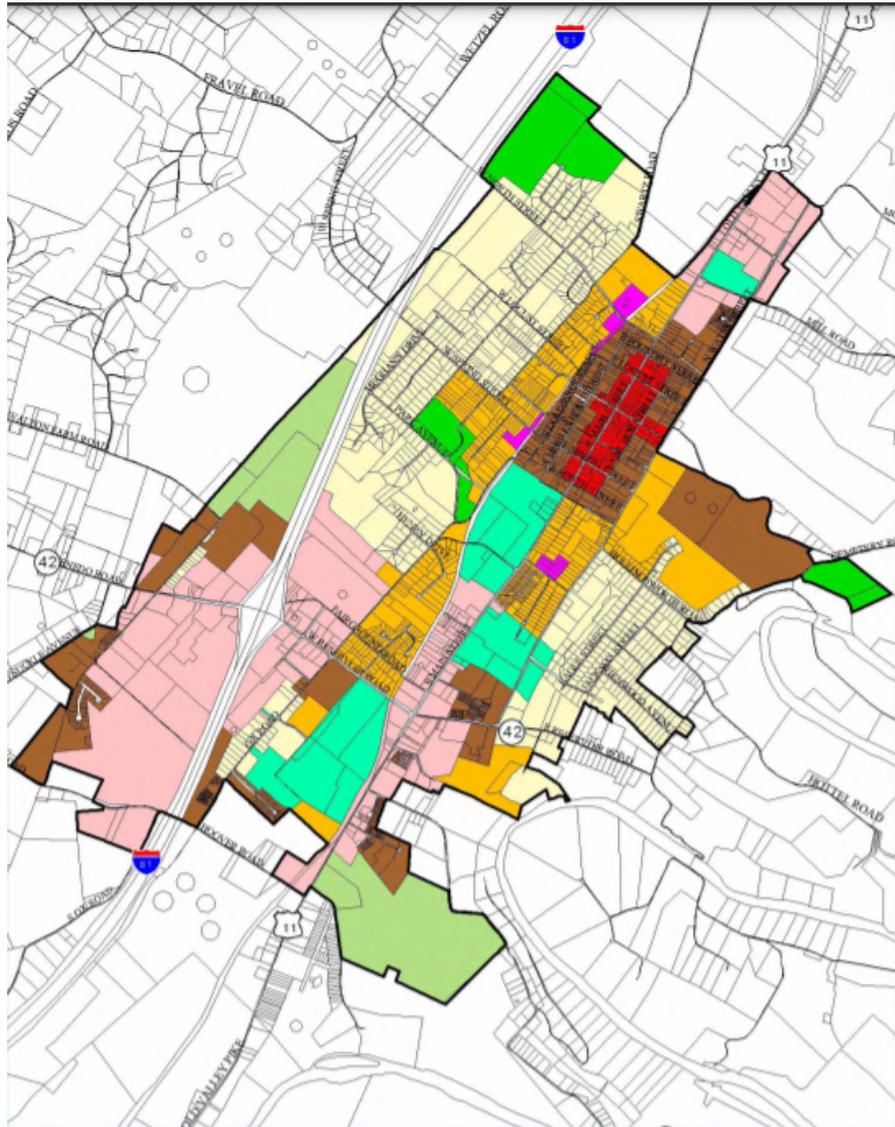
The Low Density Residential designation which is, “composed of certain quiet, single-family residential areas plus certain open areas where similar residential development appears likely to occur” (Woodstock, Virginia - Code of Ordinances Chapter 90). As one of the more restrictive designations, only single family detached dwellings, emergency service squad stations, and public utilities are permitted. The Medium (R-2) and High Density (R-3) zones allow for heavier concentrations of residential development and other forms of residential structures (Woodstock, Virginia - Code of Ordinances Chapter 90).

The Planned Unit Development (PUD)/Traditional Neighborhood Development (TND) “provides the regulatory framework upon which the town may consider zoning district amendment applications for traditional neighborhood developments (TND) or other mixed-use forms of land use” (Woodstock, Virginia - Code of Ordinances Chapter 90). This designation allows the town to have some discretion and flexibility in the creation of mixed-use developments within the Town.

Currently, the Land Use chapter of the Town’s Comprehensive Plan has one goal which is to “Encourage well-planned land uses that enhance the town’s unique history and small town character while adding to the town’s tax base” (“Land Use.”). Within these goals, there are multiple objectives that are relevant to this infill visualization. Specifically, objectives 1-3 which discusses redevelopment of vacant land, a balance in uses in new developments, and the creation of mixed-use/Planned Unit Development zones respectively, are key principles to any

infill project in the Town (“Land Use.”). The one of the aims of this project is to visualize how infill can conform with the stated goal and associated objectives.

Regarding the zoning of the analyzed sites. The parcels in the Northern and Southern Sites are all zoned as Highway Commercial. The Downtown Site is zoned as Commercial- Central Business District.

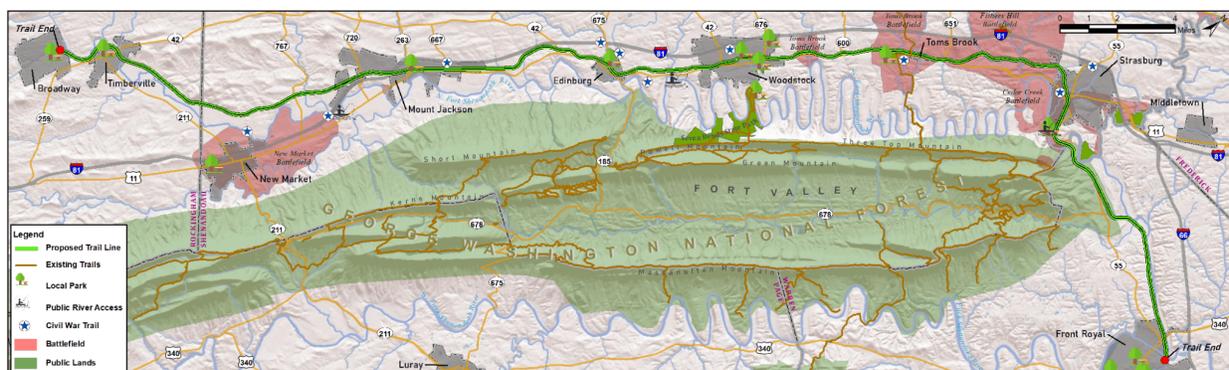


Map 01: Woodstock Zoning Map  
Source: “Land Use.”

## Background Research: Economic

The Woodstock Town Council established a Tourism Zone in 2020, which covers the three sites, in order to promote the continued development and success of the town and to increase awareness and support for tourism. There are some businesses booming in the downtown area. Woodstock Brewhouse is located in a recently renovated industrial-age gem of a building. Originally known by long-time residents of Woodstock as the Casey Jones work clothes factory. The venue provides a grand experience and makes itself a welcoming gathering place for locals and visitors. Suzanne's Studio is on West Court street just steps away from Main Street that now is home to Suzanne's Studio was built somewhere around 1920 according to the National Register of Historic Places. The building facade improvement is sponsored by the Woodstock Economic Development Authority's Facade RENEW Grant program. The art studio is trending because of DIY experience on painting in different materials and becoming one of points of interests of the town.

The rails to trails project will be a turning point of economic development. In 2016, Norfolk Southern Railroad announced discontinuation of services along a 17-mile stretch of railroad track that runs parallel to Interstate 81 from Edinburg to Strasburg, crossing through the heart of Woodstock. The project would connect Woodstock to neighboring towns with a multimodal recreational. Woodstock can be an iconic destination along the trail and facilitate property value increase ("Transform an Unused Railroad Corridor into a Lively Trail"). Localities along the trail corridor would also benefit from mixed-use trails ("Virginia State Parks Economic Impact Report 2018"). Existing tourism related businesses should experience a boost and doors will open for new rural, small-town compatible.



Map 02: Proposed Route of Rail to Trail Project  
Source: Alliance for the Shenandoah Valley

The ecology and healthiness value of rail to trail projects can't be underestimated. The term biophilia was first coined by social psychologist Erich Fromm and defined as "the passionate love of life and all that is alive". The biophilia hypothesis states that people have an innate emotional affiliation to nature and other living beings and hence, derive benefits from contact

with nature("Nature-based activities improve the well-being of older adults"). According to the research from the National Parks Board, there was an improvement in the psychological status, biological markers and immune cell composition of the participants. And elderly showed that participants maintained healthy sleep patterns and psychological health, as well as showed significant reduction in anxiety and improvement in cognitive functioning. The nature-based intervention may improve participants' moods, immunity and moderate geriatric conditions("Nature-based activities improve the well-being of older adults"). Such a bilophila neighborhood will attract more potential residents. And it would definitely facilitate the development of real estate.

## **Background Research: Transportation**

The Town of Woodstock's transportation system is currently made up of arterial roadways as well as a system of local roads. The main roadway of focus for this report is U.S. Route 11, which passes through all three sites of interest. Unlike other streets within the town, Route 11 is maintained by the Virginia Department of Transportation (VDOT). All other roads, with the exception of Interstate 81 and Route 42 are maintained by the town. Much of the transportation infrastructure within the town is centered around automobile transportation. The town is also responsible for the upkeep of sidewalks that are located alongside streets in Woodstock. In recent years, the town has begun to prioritize the construction of sidewalks by requiring new developments to construct sidewalks along at least one side of the street.

### **Site 1: Northern Site**

This site is situated along U.S. Route 11 approximately 0.5 miles north of downtown. Currently, there is one travel lane in each direction with a shared center turn beginning just north of the strip mall and continuing on past the car dealership. Although the road is fairly wide throughout the section there are no designated bike lanes. Additionally, there are sidewalks along both sides of the street; however, they are narrow and quite close to the road in several spots. Navigating the space as a pedestrian can also prove challenging at spots such as the tire shop where the sidewalk is intersected by the entrance to the business. Other areas of this site have low levels of walkability, such as the crosswalks at Mill Road which connect the strip development with the county school and government buildings. The large parking lots in the area make it difficult for someone to easily get from one site to another, such as from the car dealership to the strip mall.

### **Site 2: Downtown**

Of the three sites, downtown is the most walkable and also the easiest place to bike. Much of this section of Route 11 features on-street parking along both sides of the road. Because of this, the sidewalk is often set back further from the travel lanes. Additional traffic calming features such as bulb-outs at the intersections make it easier to get out this site on foot. The town has also taken measures to ensure that pedestrian crossings are visible to drivers by using a red brick design that allows motorists to easily see designated crosswalks. In addition to having wider sidewalks, this site also contains several plaza areas which provide additional space as

well as seating. Landscaping elements such as trees and bushes are also found alongside the street. The relative absence of large parking lots along with the more densely packed businesses allows pedestrians to easily navigate throughout the site.

### **Site 3: Southern Site**

Like the northern site, this area also contains many large parking lots as well as more low density commercial and retail development. The roadway along Route 11 features an extended turn lane for both directions along the road. The result of this design is that there is both a travel lane and a turn lane for north and south traffic, meaning that the roadway is wider than it is in the downtown area. Only one side of the road has a sidewalk, although it is frequently interrupted by driveways and side streets. Even though there is a connection to downtown via the sidewalk, it would be very difficult for a pedestrian to walk down to this site given the distance and also the physical conditions. There is currently no on street parking at this site and bike lanes are also not incorporated into the design. Because of this, the main mode of travel for people visiting this site is the car. The wooded parcel located within this site along with the railroad track provides an opportunity to think about additional transportation options.

## **Precedent Studies**

Before the project group began its visualization exercises, it was imperative for the group to understand what makes infill successful and to see examples of successful redevelopments.

### **General Infill Guidelines**

In the book *Retrofitting Suburbia*, the authors outline three strategies and eleven tactics for infill development. The strategies are re-inhabitation, re-development, and re-greening (Williamson). These strategies increase the activity, liveability, and environmental sustainability of infill areas. Regarding specific tactics, some that are relevant to this project include providing environmental repair, revising the zoning code, creating a more continuous streetscape, using appropriate street types and sidewalks, incorporating multimodal improvements, including future connectivity, and providing diverse housing options. Incorporating these tactics help guide the infill to be accessible to all types of individuals, while also minimizing environmental impact.

The Strong Towns organization has its own guide to suburban rehabilitation. Their recommendations include flexible housing options to accommodate various living situations, creating mixed-use areas where it is easy to conduct business, and creating multimodal and safe streets (Herriges). As with *Retrofitting Suburbia*, good infill redevelopment is designed for all kinds of human interaction, facilitating a flexible space to meet various needs while maintaining accessibility.

Another common theme with both of these guidelines is the creation of different types of housing options to accommodate today's housing norms. Specifically, this entails the inclusion

of what is called missing middle housing, which is housing structures that are denser than traditional single family homes but are not large and imposing apartment complexes. As described on the missing middle housing website, “these house-scale buildings fit seamlessly into existing residential neighborhoods and support walkability, locally-serving retail, and public transportation options” (“The Types — Missing Middle Housing.”). On average, missing middle housing structures have 4-8 units and are 2-2.5 stories. Examples of missing middle housing include various forms of duplexes, triplexes, and fourplexes, cottage courts, townhouses, and live-work structures.

### **Brookhollow Shopping Center**

The project group’s first case study is that of the Brookhollow Shopping Center in Desoto Texas. This project focuses on the redevelopment of a dilapidated commercial strip development by “adaptively reusing the building in a way that would provide uses to foster walkability and serve as a hub for the community to gather” (Kuschel, 7). As shown in the image below, the activation was achieved through the conversion of parking spaces into a pedestrian plaza that accommodates multiple uses, such as food trucks. Additionally, housing units were added on the fringe of the parcel. Some of the outlined “keys to success” were working locally with community stakeholders, keeping costs down, activating the space, focusing on small business, and maintaining great tenant relationships (Kuschel, 10).

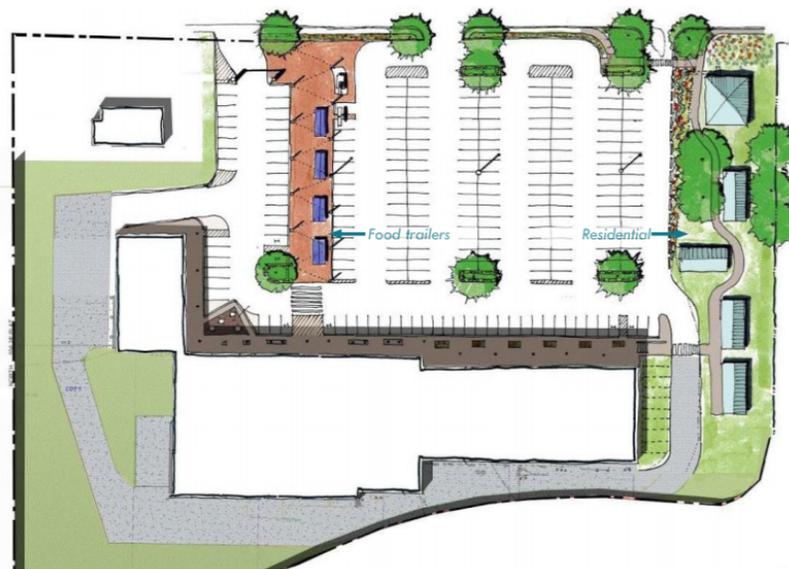


Image 01: Brookhollow Shopping Center  
Source: Kuschel

### **Harrisonburg Downtown Renaissance & Culpeper Renaissance**

Both of these organizations are affiliated with the Main Street America organization, which “offers community-based revitalization initiatives with a practical, adaptable framework for downtown transformation” (“The Approach - Main Street America.” ). In Virginia, the cities of Harrisonburg and Culpeper have their own mainstreet organizations that are affiliated with Main Street America. Currently, the Harrisonburg Downtown Renaissance group provides a multitude of services to the downtown area, such as downtown promotions, events, small business

assistance, design & beautification, and grants (“Current HDR Projects – Harrisonburg Downtown Renaissance.”). The Culpeper Renaissance program has helped fill in vacant businesses while cultivating a town identity (“About Culpeper Renaissance Downtown.”). The biggest takeaway from this precedent is the power of civic buy-in on revitalization and infill projects. The hope is that these visualizations will help facilitate this civic buy-in, generating a community led push to redevelopment.

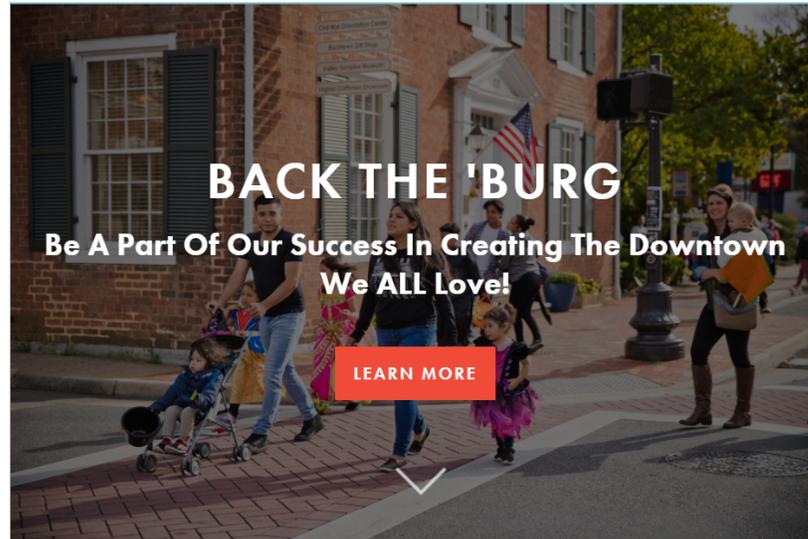


Image 02: Harrisonburg Downtown Renaissance Website  
Source:“Current HDR Projects – Harrisonburg Downtown Renaissance.”

## Methods

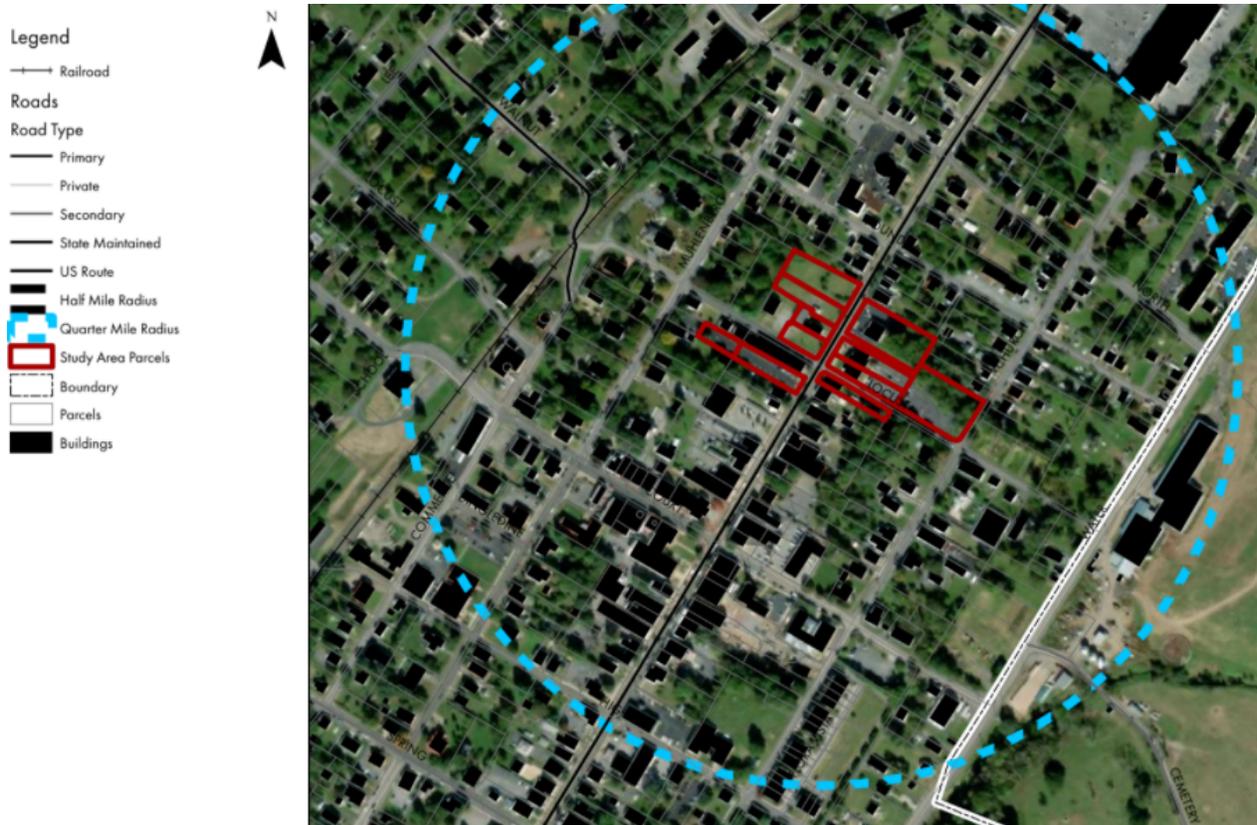
For this project, a variety of different programs were used to create the visuals seen in the report. Many of the site photos included in the base maps showing existing conditions were taken by Shenandoah County planner Tyler Hinkle. The base maps were created in ArcGIS Pro with data layers that were provided by the county. The maps were then taken into Adobe Illustrator where they were further edited and refined. The images showing the site conditions were then added to the maps. The maps showing the proposed conditions for the 3 sites were also done in part with ArcGIS as well as Illustrator.

For the street section cuts and sections, measurements were taken from GIS and also Google Earth to determine the dimensions of the sites. After measuring the different components, a combination of stock images, drawings, and SketchUp models were used to create the visuals. Further editing was done in Illustrator and Photoshop to make them appear neat and professional. Afterwards, outlines of people were added to the sections in order to give a better sense of what the scale is.

One of the most involved portions of the project was the 3D models produced in SketchUp. For these models, dimensions and measurements were taken from the base maps and used to draw the shapes of the buildings within the model. Roads and some topography were also added. The interventions were then created through a combination of imports from the SketchUp warehouse and also from additional drawing in the program. These imports included additional buildings to show the plaza and also the missing middle housing. Trees and vehicles were also added in order to give a better sense of the scale. After completing all of these different types of visuals, everything was combined into this final report. A brochure, produced in Adobe InDesign, was also produced.

# Scenarios

With the initial meetings with the Town and County planners, they provided us three different study areas to showcase what infill could look like. As shown in the maps below, the project group looked at the area at the intersection of Main Street and Locust Street, which will be referred to as Downtown, the area at the intersection of Main Street and Reservoir Road, which will be referred to as Southern, and the area at the intersection of Main Street and Mill Road, which will be referred to as Northern.



Map 03: Downtown Site Study Area  
Source: Hinkle



## Downtown Site

### Existing Conditions

The downtown Site is one of the most popular sites in town. There are points of interests like the Historic Courthouse, Woodstock Museum, restaurants and brewhouse that attract visitors. Future Bicycle and Pedestrian trail network and the future rail to trail projects are going to bring more tourists to town. There is a trend that more and more tourists choose to bike to Woodstock and explore around. The aesthetic of red bricks decorate and organize the intersection space. It will be nice to extend the aesthetic to further areas. There are excessive parking spaces and underutilized green spaces along the street, which are potential spaces for future improvement.

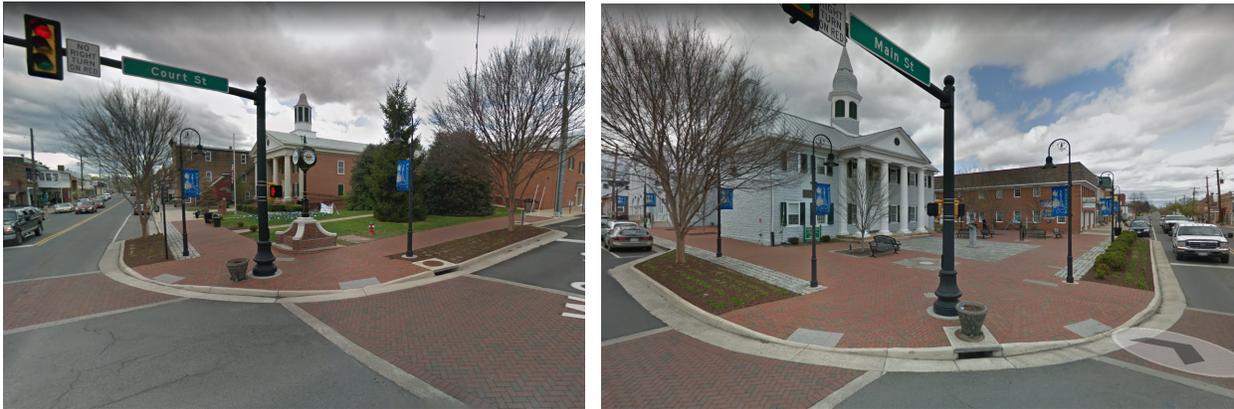
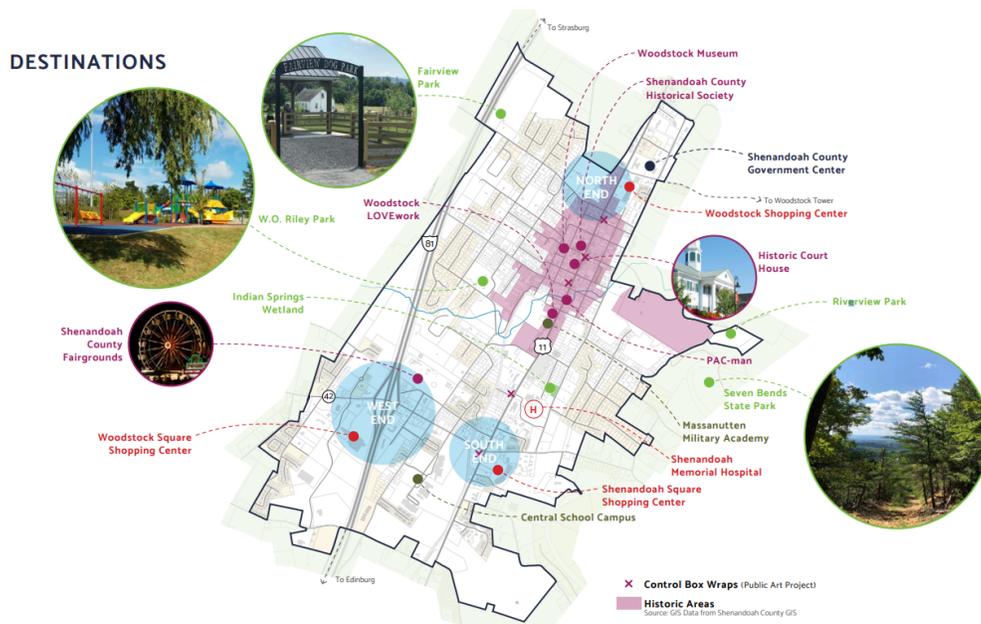
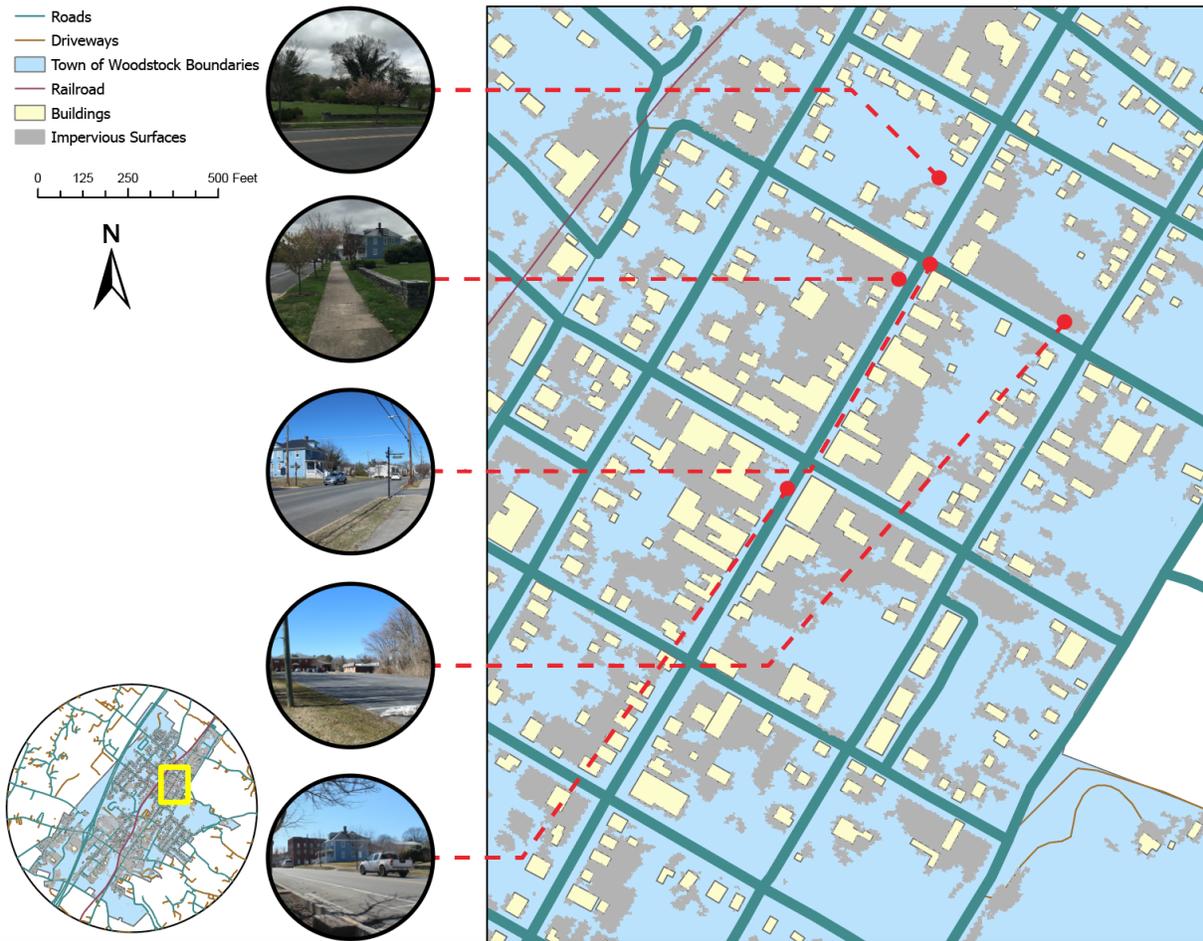


Image 03&04: Intersection of Main Street and Court Street  
Source: Google Map



Map 06: Destinations in Downtown Area  
Source: Bicycle and Pedestrian Master Plan

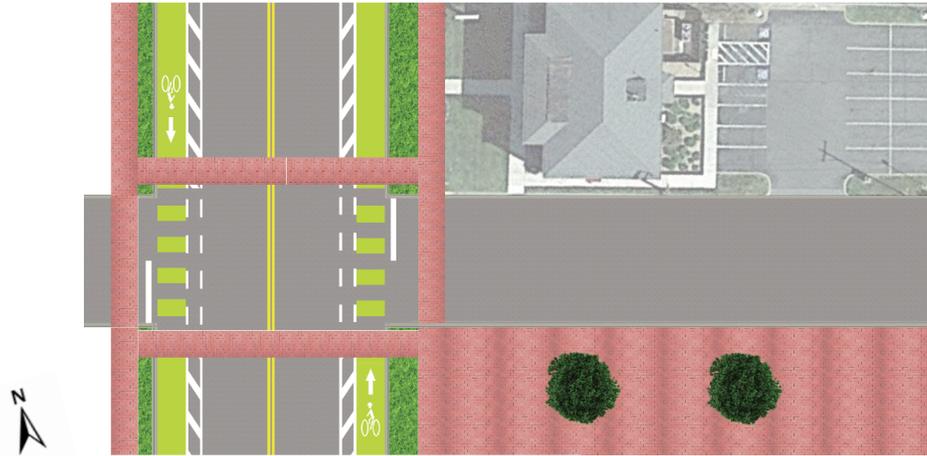
The downtown site is isolated from the north and south sides. The street system lacks sidewalks with enough width and bike lanes. Additionally, there are no crosswalks at some intersections to cross Main Street safely, such as the intersection of Main Street and Foundry Street. The street system may decrease expectation of staying and exporting downtown Woodstock, and steer potential tourists away from the site.



Map 07: Current Condition for Downtown Site

### Interventions

The excessive parking lots next to the creek can be redeveloped into duplex buildings, the first floor is commercial use, second and third floors can be residential or commercial use, depending on future needs. The parking lane along main street can be removed and redesigned to include bike lanes and buffer area. There will be one vehicle lane and one bike lane on each side, with buffer areas in between. The sidewalk on the northeast side will be widened to provide walkable space. The aesthetics of the red bricks will be extended to the intersection of main street and Locust Street, it also involves crosswalks to ensure the priority of pedestrians and cyclists.



Map 08: Detailed Map of Street Design  
Source: Project Group



0 125 250 500 Feet

Map 09: Downtown Site Plan  
Source: Project Group

## Revamp of Main Street Park

The Main Street park is centrally located in the downtown area, which enables it to serve as a recreational pocket park along the Main Street and enhance connectivity. Plants gather at the northwest part of the park, showing the biodiversity and vitality. Currently, Main Street Park is an underutilized green space with limited shade and facilities, making it hard for visitors to stay and use the space. There is no buffer area between the park and surrounding buildings like the BB&T Bank and residential houses. It lacks a border and exit making it a plain lawn next to the sidewalk.



Map 10: Main Street Park Site Plan

Source: Project Group

The revamp of Main Street Park includes making it a therapeutic park and dealing with the relationship between the park and surrounding circumstance.

The Therapeutic Park is designed to meet the physical, psychological and social needs of park users, incorporating design principles derived from scientific evidence, enabling visitors to experience a range of health benefits such as the relief of mental fatigue, reduced stress and an overall improvement to emotional well-being. There are some excellent precedents from Singapore, such as Bishan-Ang Mo Kio Park (Pond Gardens), Choa Chu Kang Park. The design features of a therapeutic garden include the use of plants to evoke the senses, ignite memories and bring about mental well-being; and universal design for accessibility and other user centric amenities. The gardens offer physical and emotional comfort, providing choices of both serene restorative spaces with an immersive ambience amidst nature, as well as invigorating active spaces with facilities for therapeutic horticulture programmes. Plants that

elicit a calming effect are selected for the restorative spaces, whilst those in the active spaces come in warm bright colors to energize the users.

There are 4 different zones in the park. Fragrance zone located at the entrance, this zone features a selection of fragrant flowering plants to invite park users into the garden by engaging their sense of smell. The plants enhance the boundary that connects to the sidewalk and shape the main exit. The other three borders will be covered with trees with low and medium height, ranging from 10 to 25 feet. It provides buffer areas for surrounding buildings, which also protect privacy and stop noise. The biodiversity zone keeps all existing trees and features a wide collection of plants that attract biodiversity such as butterflies and birds into the heart of the park. It provides a visual treat for visitors of the park. In the Colors and Textures zone, visitors will be surrounded by diverse colors and textures of flowers and foliage, which will engage the senses of sight and touch. Herbs, fruits and vegetables in Edibles and Medicinal Zone tantalise various senses and spark cultural memories among visitors. They will recognize the familiar sights, smells and even tastes that are widely available in local markets and home kitchens. In terms of the small plaza and shelter adjacent to the Edibles and Medicinal Zone, they can provide space for gardening workshops, promoting education of the general public on proper tree-care practices, which also be brought up as a goal in Urban Tree Canopy Plan, Town of Woodstock. All plants are picked from Recommended Trees and Shrubs for Urban Plantings compiled by Woodstock Tree Board.

### **Digital Wayfinding System**

The Town of Woodstock is about to launch a community wayfinding signage program to replace and add supplemental directional roadside signage that will inform our community members and visitors about areas of interest in and around Town.

If a QR code can be added, the current system can be upgraded to a digital wayfinding system. It will link visitors to maps and points of interest through their cell phones. And the QR codes eliminate the need for printing physical maps, allow for editing information without needing to reprint, and are easily accessible by anyone with a smartphone. Using QR codes will save money and allow tourism information to be up to date. And the digital wayfinding system will stimulate tourists to move around and explore the downtown area, and enhance the connectivity with other parts of the town.

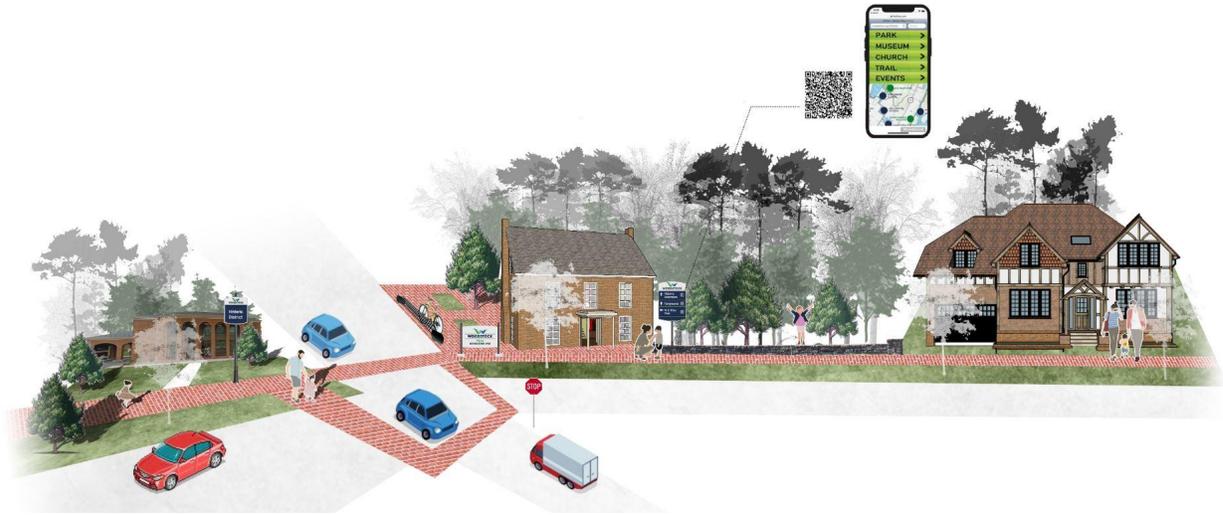


Image 05: Collage of Downtown Site

Source: Project Group

## Southern Site

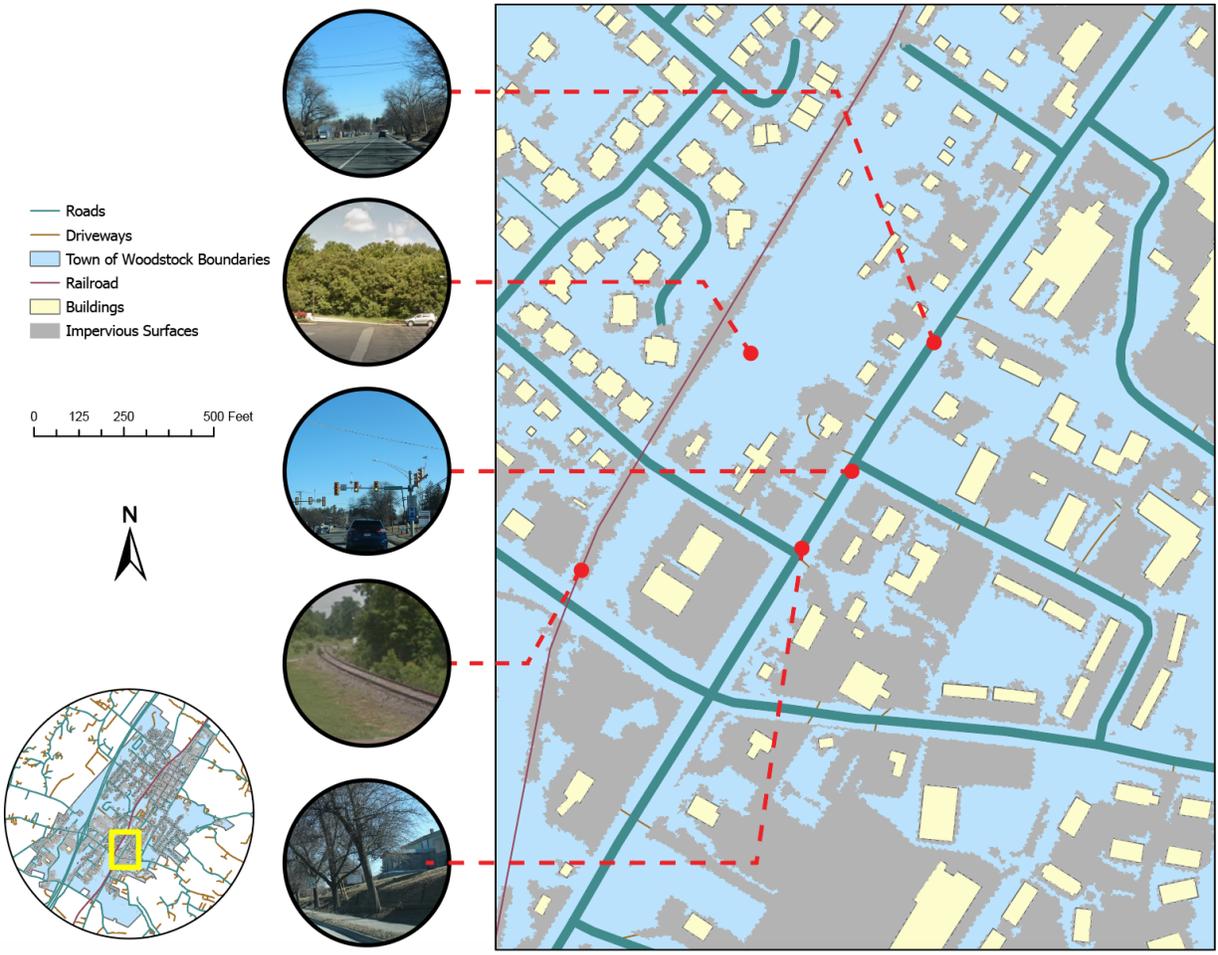
### Existing Conditions

The southern site is the farthest site from downtown meaning that it has several unique challenges. One of the biggest issues for this site is its lack of connectivity to the other two sites. Additionally, the wide roadway on this portion of the site makes it difficult for pedestrians and cyclists to easily access the downtown. Currently, there are a number of businesses located within this area, including a space occupied by two food trucks. There is also a wooded parcel adjacent to the railroad tracks and the owners of this parcel are hoping to develop it in the near future. The site is relatively close to the local high school as well as the medical center.



Images 06&07: Current Conditions for the Southern Site  
Source: Project Group: Hinkle, Google Maps

Images showing the current conditions for the southern site. Overall, walkability is low and there is little bike and pedestrian infrastructure.



Map 11: Current Conditions for Southern Site  
Source: Project Group

**Interventions**

The wooded parcel for this site provides a lot of opportunity in terms of development. The proposed design consists of a courtyard-style development located on the parcel that is currently wooded. This development would help to address the housing needs of the area while also retaining a buffer of trees between the development and the nearby existing structures. The courtyard development's proximity to the railroad tracks means that in the future a connection with the rail with trail would be very feasible if the town decided to pursue this. The proposed development would also be only a short distance from the school and other shopping areas. In addition, since the courtyard development will be oriented around an open green space in the middle, there will be natural elements included within the site. A road would provide connection to Fairground Road. This design would allow the area to become more walkable while also ensuring that the southern site is not drawing any business away from the downtown area. In

addition, this design would not result in the removal of any existing businesses, making it less intensive than the design for the northern site. As with the downtown area, wayfinding signs would also be put up if there is a rail with trail connection. This would allow users to better orient themselves and also discover interesting sites nearby.

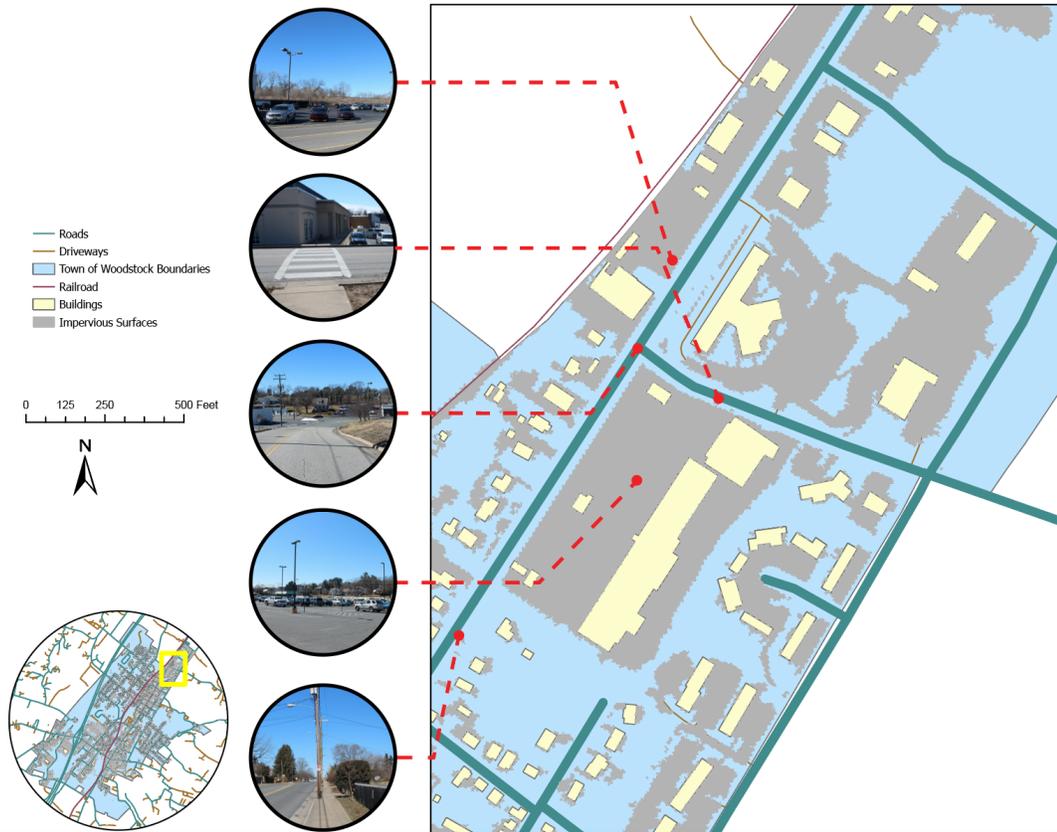


Map 12: Southern Site Plan  
Source: Project Group

## Northern Site

### Existing Conditions

As shown on the provided site map, the project group looked at how infill could develop at the strip mall and at the car dealership. Additionally, since the intersection connects these two parcels, the project group looked at intersection redesign as well. The overall goal for our interventions here was to investigate how to utilize the abundant and underutilized parking areas for additional development and facilitate pedestrian activation.



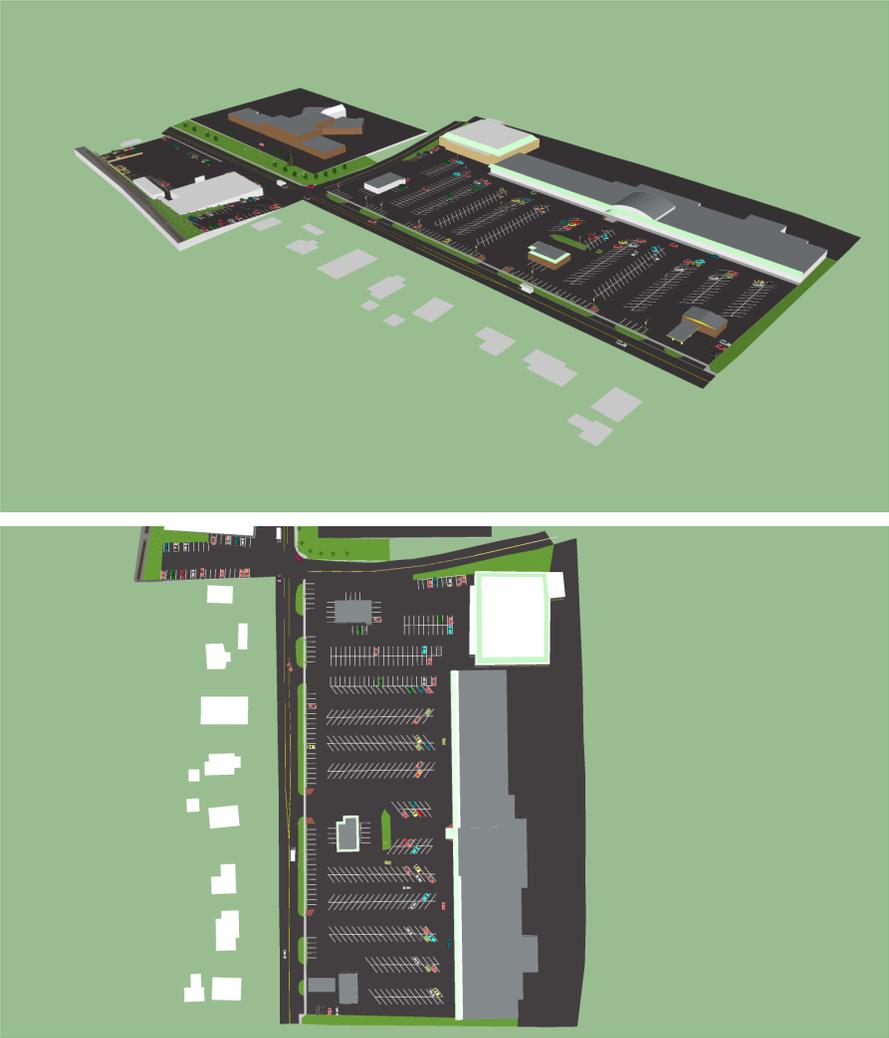
Map 13: Current Conditions for Northern Site

Source: Project Group

In analyzing strengths, the Northern site serves as a great site for potential infill development. It is within a half mile of the core Woodstock Downtown area, closeby to Town and County offices, and has potential to connect to the future Rail Trail. Additionally, there is plentiful underutilized space to promote redevelopment with limited impact on existing uses.

Regarding the current weakness of the strip mall, as seen in the provided renderings, there is an overabundance of impervious parking areas that are usually fairly empty. Additionally, the small structure at the center of the parcel is abandoned, wasting potential space. Another

concern is that this site is detached from the existing pedestrian infrastructure, breaking up the urban fabric that starts in the Downtown area, creating aesthetic inconsistency.



Images 08&09: Existing Conditions Renderings For Strip Mall  
Source: Project Group

There are also multiple weaknesses associated with the intersection and the car dealership. Regarding the intersection, there is limited pedestrian infrastructure, such as crosswalks and crossing signals. For the car dealership, there is a large mass of impervious space used for car storage, and an incomplete sidewalk that ends halfway through the parcel. Maintaining these auto-centric conditions near the potential Rail Trail would be a missed opportunity to create a destination.



Images 10&11: Existing Conditions Renderings For Intersection and Car Dealership  
Source: Project Group

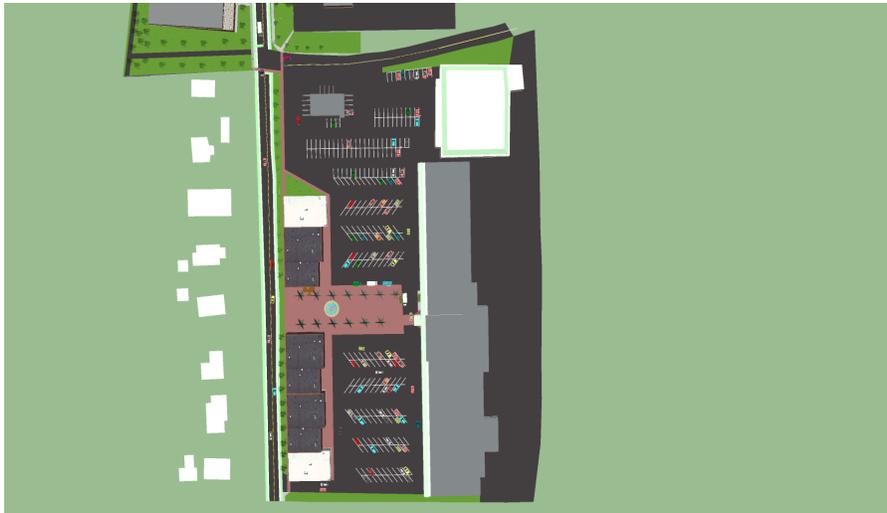
## Interventions

When creating the visualizations the project group wanted to create a space that really activated the space and created a new sense of community. Additionally, the project group did not want to disrupt the existing uses on the site, primarily the existing businesses in the strip mall. To accomplish this, the project group worked with the concept of ensuring that existing tenants benefited from infill as well.



Map 13: Northern Site Plan  
Source: Project Group

For the strip mall, the project group aimed to repurpose underutilized space for additional development, multimodal improvements, and civic engagement. Additionally, it was deemed necessary to activate the sidewalk with new mixed-use structures that have an urban form similar to the existing downtown area. Finally, the project group believed it was important to include multimodal infrastructure such as shuttle stops, bicycle lanes, and additional pedestrian improvements.

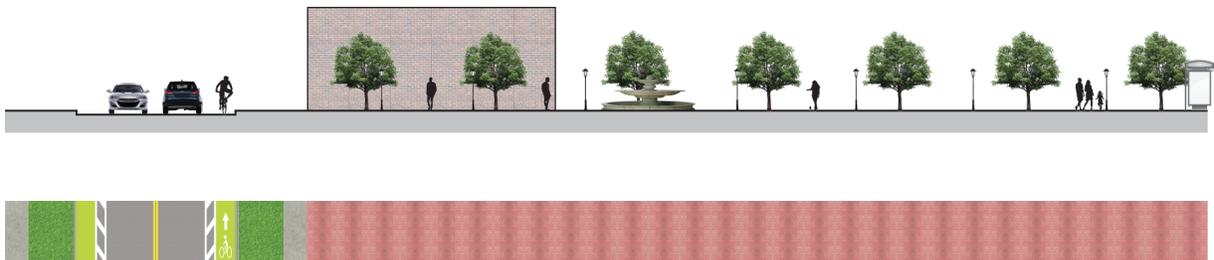


Images 12&13: Intervention Renderings For The Strip Mall  
Source: Project Group

One of the major focuses of this intervention was the creation of a plaza that serves as a connection between the sidewalk and the existing stripmall. This ensures that existing businesses are not hidden behind the newly constructed structures along Main Street. Additionally, this plaza can serve as a place of civic engagement, where events can occur such as informal music performances or food truck nights. Finally, a portion of the plaza would connect to the existing businesses in the form of a crosswalk, balancing pedestrian and vehicular needs. The shuttle stops for the potential countywide shuttle would be located here as well.



Images 14&15: Intervention Renderings For The Strip Mall  
Source: Project Group



Map 14: Street Section  
Source: Project Group

For this redesign, the intersection received much needed attention to create a safe and multimodal space. It was imagined that the intersection would serve as a key connector

between the two parcels and the potential Rail Trail. As a key connector, it was envisioned that the intersection would be signalized to handle the potential increase in traffic and provide safe crossing times for pedestrians. Additionally, this intersection, and much of Main Street generally, would include bike lanes to encourage alternative transportation. There would also be a new sidewalk connection to the government offices up on the hill.



Image 16: Intervention Rendering For The Intersection  
Source: Project Group

The car dealership would undergo drastic changes, with the parking lot across from the intersection becoming an entryway onto the Rail Trail. Additionally, the main structure of the lot would be reused to house commercial businesses, such as restaurants. Excess space could then be used for re-naturalization and the inclusion of missing middle housing. With the inclusion of housing along mainstreet, the sidewalk would be completed to provide additional pedestrian connectivity. These changes would increase the attractiveness of the area and provide new amenities and safety for pedestrians and bicyclists, while creating additional housing and business opportunities.



Images 17&18&19: Intervention Renderings For The Car Dealership  
Source: Project Group

## **Recommendations**

Since this is a visualization production, the project group can only suggest what should occur next. It is up to government officials and the community as a whole to decide how to move forward.

The next step would be for government officials to begin the initial outreach to the community and start setting up future conversations about how infill could work in Woodstock. While input should come from the entire community, additional efforts should be made to include property owners and existing tenants on proposed infill sites. Additional effort should be made to include nearby property owners and tenants as well.

Regarding zoning, the only existing zoning designation that could accommodate any kind of mixed-use infill would be the PUD/TND designation mentioned in the land use background. The Town could proactively rezone these areas as PUD/TND in anticipation for redevelopment. Additionally, it could create another zoning designation similar to the B-1 designation, which already allows certain kinds of commercial and multifamily housing. However, the PUD/TND designation affords the town more discretion over development.

## **Concluding Remarks**

Each of three sites examined in this report have unique conditions and needs which guided the design of the visuals. The maps identifying the existing conditions are meant to highlight some potential places within each site which could be improved through the use of infill. The work produced by this group is intended to be a visioning exercise to demonstrate what infill could look like in the town rather than a binding document showing what will be built. By providing a wide variety of different infill proposals and solutions, the group has provided the town with a better understanding of how infill could be applied in a local context.

This report, along with the brochure is intended to serve as both a tool and a resource for the town and the county as they move forward with community charrettes. Town officials and local residents will have the ultimate say on how infill development will play out in the future. Additionally, what is proposed in this report may evolve throughout the charrettes process. Through the use of visuals and the accompanying report, this group has sought to provide the Town of Woodstock with a deeper understanding of how infill development can be implemented successfully.

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# Appendices

## MOU



### Memorandum of Understanding:

#### Suburban Retrofit in the Town of Woodstock, Virginia

The following Memorandum of Understanding sets out the responsibilities and expectations of the parties involved in the Suburban Retrofit Project in the Town of Woodstock, Virginia. Shenandoah County Planner Tyler Hinkle, Urban Designer & Neighborhood Planner for Woodstock Lemuel Hancock, and Deputy Town Manager of Woodstock Aaron Grisdale will be the primary client contacts. Professor Suzanne Moomaw will serve as the faculty advisor. Harrison Premen will serve as the main contact point for the project group.

#### **A: Consultant and Mission**

The Team consists of three graduate students in the Urban and Environmental Planning program at the University of Virginia. Our group is committed to providing innovative and professional planning solutions that strive to improve the quality of life for community residents. Team members include:

Harrison Premen: Master of Urban and Environmental Planning

Jinzhao Chen: Master of Urban and Environmental Planning

Kyle Kelly: Master of Urban and Environmental Planning

#### **B: Scope**

The University of Virginia is partnering with the Town of Woodstock to develop planning solutions for the town as it considers ways to improve accessibility and connectivity between different areas. This project will seek to provide input on a variety of different issues, including transportation planning, land use, and economic revitalization.

The Town of Woodstock is located in Shenandoah County, Virginia which lies within the larger region known as the Shenandoah Valley. Woodstock has a population of approximately 5,000 people and features many design elements found in towns of a similar size, such as a compact downtown area.

For this project, the main focus will be on the US Route 11 corridor just north of the downtown area. Currently there is an abundance of parking found in the commercial strip development along the corridor. Additionally, the soon-to-be-former car dealership provides a unique opportunity to consider ways in which this area can be better connected with downtown.

A secondary focus of the project, detailed in the Tier II deliverables, will be on the intersection of US Route 11 and US Route 42, located on the southern end of Town. Currently there is a mix of vacant and suburban single lot developments in the area, with high levels of impervious surface. Currently the landowner of multiple lots in the study area is interested in redevelopment and ideas for shaping potential improvements to the site would be invaluable.

This project aims to create a detailed analysis of the site in the form of a final report which will help to inform the town on potential planning solutions for the sites of interest.

**C: Term**

This project shall begin on the 1st of February and will most likely end during the first week of May, with the specified date to be determined. The project will culminate with a presentation to the class and a separate presentation to the Planning Commission of the Town of Woodstock.

**D: Responsibilities**

To establish a productive environment and working relationship, the client and the consultant will uphold to the following responsibilities and expectations:

- The consultant shall have monthly meetings with the client starting in March. The dates will be on 3/11 and 4/8 at 10am.
- The consultant shall have meetings every other week with their advisor starting on 2/23.
- The consultant shall present their findings and deliverables to the Planning Commission of the Town of Woodstock on 4/26.
- The products developed by the group can be used by the Town of Woodstock and Shenandoah County moving forward with credit attributed to the team members.

**E: Deliverables**

The final deliverables will be split into two sets of deliverables. Tier I Deliverables will be provided to the Client at the end of the work period, while Tier II Deliverables might be provided but are not guaranteed or promised.

Tier I Deliverables: A report of the redevelopment plan including background research, precedents, plans with different scenarios as well as visualizations, and a brochure that explains the infill to the public and landowners. As stated in an email from the client, "Both the County and the Town are interested in seeing documents to both inform the public as well as landowners specifically on how infill will work, basically marketing materials on the ideas you all develop," and that, "The County and Town are also interested in materials that can be used to help facilitate public discussions. The County would like to use these materials in the community charrettes we are planning for each town and in the meetings across the County to address the future of villages and hamlets." We will present these findings to the town's planning commission.

Tier II Deliverables: An analysis of the second study area with comments, graphics, and materials to both provide the landowner, Town, and greater public a better understanding of the potentials for the site as well as to provide a model for similar locations across the County. Such documents may outline the process of working with a landowner who is open to the process, how to address greenfield sites within a Town's boundary, and how to maximize the use of a site in an infill-based context.

**F: Preliminary Budget**

As of this MOU, the only anticipated costs will be travel reimbursements for a site visit. Currently we are in the process of determining if the Department of Urban and Environmental Planning can reimburse us for travel related expenses.

**G: Warranty**

Nothing in this Memorandum shall be construed as consent by either party to enter into a contract, subcontract or other business relationship. Activities (if any) in which the parties wish to engage pursuant to this Memorandum will not be binding unless agreed to in a separate written document executed by an authorized representative of each party, including an authorized signatory in the University of Virginia Office of Sponsored Projects. Neither party will be liable for any incidental, consequential or special damages under this Memorandum.

**H: Intellectual Property**

Any intellectual property, materials or other work product jointly created by a Student Consultant and one or more employees of the Shenandoah County Department of Community Development and Town of Woodstock (such that they would be joint inventors or joint copyright holders under relevant intellectual property law) will be jointly owned by both parties, with each party able to use the jointly-created work without accounting to the other and without the consent of the other.

**I: Conclusion:** This MOU, while not legally binding, represents an agreement to make every effort to fulfill the tasks and responsibilities listed above.

**Signatures:**

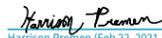
**Town of Woodstock and Shenandoah County, Client**

  
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Tyler Hinkle, County Planner of Shenandoah Date 2/22/2021

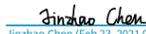
  
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Lemuel Hancock (Feb 22, 2021 15:32 EST)  
Lemuel Hancock, Urban Designer & Neighborhood Planner for Woodstock Date

  
\_\_\_\_\_  
Aaron M. Grisdale (Feb 22, 2021 15:43 EST)  
Aaron Grisdale, Deputy Town Manager of Woodstock Date 2/22/2021

**MUEP Practicum Project Group, Consultant**

  
\_\_\_\_\_  
Harrison Premen (Feb 22, 2021 18:29 EST)  
Harrison Premen Date

  
\_\_\_\_\_  
Kyle Kelly Date 02/22/21

  
\_\_\_\_\_  
Jinzhao Chen (Feb 23, 2021 09:14 GMT+8)  
Jinzhao Chen Date 02/22/21

  
\_\_\_\_\_  
Suzanne Moomaw Date 02/22/21

Recommend tree list



**RECOMMENDED TREES AND SHRUBS FOR URBAN PLANTINGS**

*Compiled by*  
**WOODSTOCK TREE BOARD**

**Low Height Zones – Plantings Under Utility Lines**

Trees that usually do not exceed 20' in height

Common Name	Latin Name	Ave. Mature Height	Multi-stem Y/N	Average Crown Spread		Tree Form	Fall Color	Bloom Y/N	Bloom Color
				10 yr	20 yr				
Amur maple	Acer ginnala	15'-18'	Both	8-10'	12-15'	Round	Red	N	---
Japanese maple	Acer palmatum Cultivar: Bloodgood	15'-20'	Y	8-10'	12-15'	Round	Red	N	---
Service berry	Amelanchier arborea	15'-30'	Y	10-12'	14-16'	Upright oval	Orange	Y	White
Service berry	Amelanchier canadensis & grandiflora Cultivars: Autumn Brilliance Robin Hill	20'-30'	Y	10-12'	15-20'	Upright Oval	Red/orange	Y	White
Chinese fringetree	Chioanthus retusus	15'-25'	Both	8-10'	10-15'	Round	Yellow	Y	White
White fringetree	Chioanthus virginicus	10'-20'	Both	8-10'	10-12'	Round	Yellow	Y	White
Pagoda dogwood	Cornus alterniflora	15'-25'	Both	8-10'	10-12'	Oval to round	Maroon	Y	White
Stellar Dogwood	Cornus floridaxkousa	15'-25'	N	8-12'	17-20'	Pyramidal	Red	Y	White to soft pink

*Compiled, February 2015  
Revised, April 2019*

Common Name	Latin Name	Ave. Mature Height	Multi-stem Y/N	Average Crown Spread		Tree Form	Fall Color	Bloom Y/N	Bloom Color
				10 yr	20 yr				
	Cultivars: Constellation Stellar Pink								
Cornelian Cherry	Cornus mas Cultivar: Spring Glow	20'-25'	Both	6-8'	8-12'	Round	Red/ Purple	Y	Yellow
Little gem Magnolia	Magnolia grandiflora Cultivars: Edith Bogue	10'-20'	Y	8-10'	10-15'	Pyramidal upright	Evergreen	Y	White
Star magnolia	Magnolia stellata	6'-20'	Both	5-7'	8-10'	Oval-spreading	Yellow	Y	White
Flowering Crabapple	Malus spp. Cultivar: Adirondack	10'-30'	N	8-12'	10-15'	Oval to round	Yellow to orange	Y	White
Flowering Crabapple	Malus spp. Cultivar: Prairie fire	15'-20'	N	8-12'	12-17'	Rounded	Orange	Y	Deep pink to red
Flowering Crabapple	Malus spp. Cultivar: Snow Drift	15'-20'	N	8-12'	12-17'	Rounded	Dull yellow	Y	White
Flowering plum	Prunus cerasifera Cultivar: Thundercloud	15'-20'	N	8-10'	12-15'	Oval	Purple	Y	White
Flowering plum	Prunus cerasifera Cultivar: Krauter Vesuvius	15'-20'	N	8-10'	15-20'	Oval	Blackish-purple	Y	Pink
Flowering plum	Prunus cerasifera Cultivar: Newport	15'-20'	N	8-10'	15'-20'	Vaselike to round	Purple	Y	White to pale pink
Redbud	Cercis Canadensis Cultivar: The Rising Sun	8'-12'	N	5-6'	7-8'	Rounded	Golden-orange	Y	Lavender-rose
Redbud	var.texensis Oklahoma	15'- 20'	Y	10-12'	12-20'	Rounded	Yellow	Y	Rose-purple
Redbud	Cultivar: Forest Pansy	15 – 20'	Y	10-15'	15-20'	Rounded	Yellow	Y	Rose-pink

Compiled, February 2015

**Low Height Zones – Plantings Under Utility Lines**

***Shrubs*** that usually do not exceed 20' in height

Common Name	Latin Name	Ave. Mature Height	Multi-stem Y/N	Average Crown Spread		Tree Form	Fall Color	Bloom Y/N	Bloom Color
				10 yr	20 yr				
Crape myrtle	Lagerstroemia Indica	10'-25'	Y	6-8'	12-15'	Vase-shaped	Red-orange	Y	Pink-purple
Chastetree	Vitus agnus-castus	8'-15'	Y	6-8'	10-15'	Round-spreading	Brown	Y	Purple
Common Witch Hazel	Hamamelis virginiana	15'-20'	Y	6-8'	10-15'	Spreading	Yellow	Y	Yellow
Witch Hazel "Arnold Promise"	Hamamelis x intermedia Cultivar: Arnold Promise	15'-20'	Y	6-8'	10-15'	Rounded	Yellow-orange	Y	Yellow
Witch Hazel "Diane"	Hamamelis intermedia Cultivar: Diane	8'-10'	Y	5-7'	8-10'	Spreading	Orange	Y	Bronze-red
Vernal Witch Hazel	Hamamelis vernalis	6'-10'	Y	4-5'	6-8'	Rounded	Yellow	Y	Yellow-orange-red

**Medium Height Zones – Plantings Near Utility Lines**

**Trees** that generally exceed 20' in height

Common Name	Latin Name	Ave. Mature Height	Multi-stem Y/N	Average Crown Spread		Tree Form	Fall Color	Bloom Y/N	Bloom Color
				10 yr	20 yr				
Trident maple	Acer buergeranum	20'-25'	N	8-10'	12-15'	Oval	Red/yellow	N	---
Hedge maple	Acer campestre	25'-35'	N	8-10'	12-15'	Upright oval	Yellow	N	---
Flame maple	Acer ginnala	20'-25'	N	8-10'	12-15'	Round spreading	Red	N	---
American hornbeam	Carpinus caroliniana	20'-35'	Y	10-12'	12-15'	Oval	Red	N	---
White Redbud	Cercis canadensis Cultivar: Texas White	20'-30'	N	10-12'	13-16'	Spreading flat-top to rounded	Yellow	Y	White
Kousa	Cornus	20'-30'	Y	10-	12-	Rounded	Red/	Y	White

*Compiled, February 2015*

Common Name	Latin Name	Ave. Mature Height	Multi-stem Y/N	Average Crown Spread		Tree Form	Fall Color	Bloom Y/N	Bloom Color
				10 yr	20 yr				
dogwood	kousa			12'	15'		orange		
Crimson cloud hawthorne	Crataegus laevigata Cultivar: Crimson cloud	20'-25'	N	8-10'	10-15'	Pyramidal	Brown	Y	Dark pink/white center
Winter King hawthorne	Crataegus viridis Cultivar: Winter King	15'-22'	N	8-12'	15-20'	Spreading	Red	Y	White
Carolina silverbell	Halesia diptera	30'-40'	N	10-15'	20-30'	Spreading	Lt. Yellow	Y	White
Golden-rain tree	Koelreuteria paniculata	25'-35'	N	8-10'	12-15'	Column to round	Golden	Y	Yellow
Flowering crab apple	Malus sp. Cultivar: Robinson	20'-25'	N	8-12'	14-18'	Upright to spreading	Yellow	Y	Deep pink
Sourwood	Oxydendron arboreum	20'-40'	N	8-10'	10-12'	Irregular	Red	Y	White
Persian parrotia	Parrotia persica	20'-40'	Both	8-10'	10-12'	Upright oval	Red/orange	Y	Red
Chinese pistache	Pistacia chinensis	30'-35'	N	10-15'	15-30'	Oval	Orange	N	---
Yoshino cherry	Prunus x yedoensis	20'-40'	N	8-10'	10-13'	Upright spreading	Yellow	Y	Pink
Mt. Fuji Cherry	Prunus serrulata Cultivar: Shirotae	20'-25'	N	9-12'	12-15'	Oval	Yellow	Y	White
Kwanzan cherry	Prunus serrulata Cultivar: Kwanzan	18'-22'	N	8-10'	12-16'	Upright-spreading	Yellow-orange	Y	Double pink
Japanese stewartia	Stewartia pseudocamellia	20'-40'	N	6-8'	10-12'	Pyramidal to oval	Red/purple	Y	White
Japanese snowbell	Styrax japonica	20'-30'	N	8-10'	12-15'	Broad	Yellow	Y	White
Japanese tree lilac	Syringa reticulata Cultivar: Ivory Silk	20'-30'	Both	6-8'	10-12'	Rounded	Poor fall color	Y	Off-white
Eastern Redbud	Cercis canadensis	25-30'	Both	10-15'	15-20'	Rounded	Yellow	Y	Rose-pink
Black Gum	Nyssa sylvatica Cultivar: Wildfire	25-30'	N	10-12'	12-15'	Upright oval	Red	N	-

Compiled, February 2015

**Medium Height Zones – Plantings Near Utility Lines**

Tall trees - greater than 30' - narrow crowns, can be used near utility lines

Common Name	Latin Name	Ave. Mature Height	Multi-stem Y/N	Average Crown Spread		Tree Form	Fall Color	Bloom Y/N	Bloom Color
				10 yr	20 yr				
Red maple	Acer rubrum Cultivars: Armstrong Bowhall Red Sunset Sun Valley	40'-50'	N	12-15'	15-20'	Upright/ Broadly columnnar Oval	Red/yellow	N	---
Sugar maple	Acer saccharum Cultivars: Legacy Majesty	30'-50'	N	12-15'	15-20'	Oval	Orange/ red	N	---
River Birch	Betula Nigra Cultivar: Duraheat	35'-40'	Y	12-15'	20-25'	Pyramidal	Yellow	N	---
European hornbeam	Carpinus betulus Cultivar: Fastigiata	30'-50'	N	10-12'	12-15'	Upright	Gold	N	---
Ginko	Ginko biloba	40'-60'	N	8-10'	10-13'	Upright oval	Yellow	N	---
English oak	Quercus Robur Cultivar: Fastigiata	40'-50'	N	6-8'	8-10'	Columnnar	Light yellow	N	---

**Tall Height Zones – Plantings in Open Yards Away From Utility Lines**

Tall trees - greater than 35'

Common Name	Latin Name	Ave. Mature Height	Multi-stem Y/N	Average Crown Spread		Tree Form	Fall Color	Bloom Y/N	Bloom Color
				10 yr	20 yr				
Honey locust	Gleditsia triacanthos Cultivars: Shademaster Skyline Sunburst	30'-70'	N	12-15'	20-25'	Rounded	Yellow	N	---
Sweet gum	Liriodendron styraciflua	40'-50'	N	12-15'	15-20'	Pyramidal	Orange/ red	N	---

*Compiled, February 2015*

Common Name	Latin Name	Ave. Mature Height	Multi-stem Y/N	Average Crown Spread		Tree Form	Fall Color	Bloom Y/N	Bloom Color
				10 yr	20 yr				
	Cultivars: Moraine Ward								
London Planetree	Platanus acerifolia Cultivar: Bloodgood	70'-85'	N	12-15'	20-25'	Pyramidal to spreading	Poor fall color – yellow	N	---
Swamp White Oak	Quercus bicolor	50'-60'	N	10-15'	17-25'	Broad-rounded	Copper to red	N	---
Scarlet oak	Quercus coccinea	60'-75'	N	10-15'	17-25'	Upright to rounded	Russet to scarlet	N	---
Pin oak	Quercus palustris	60'-75'	N	10-15'	17-25'	Oval to gumdrop	Russet to red	N	---
English oak	Quercus robur	50'-70'	N	10-15'	17-25'	Round to broad	Leaves drop green or turn brown	N	---
Lacebark elm	Ulmus parvifolia Cultivar: Lacebark	40'-50'	N	12-15'	20-25'	Rounded-oval	Yellow	N	---
Japanese Zelkova	Zelkova serrata Cultivars: Green vase Village Green	50'-70'	N	10-15'	17-25'	Vase to rounded	Brown-red	N	---
American elm	Ulmus americana Princeton Valley Forge	50'-70'	N	10-15'	20-25'	Vase	Yellow	N	---
<b>Evergreens</b>									
Arborvitae "Green Giant"	Thuja (standishii x plicata) "Green Giant"	60'	N	9-12'	14-16'	Upright	---	N	---
Japanese cryptomeria "Yoshino"	Cryptomeria japonica "Yoshino"	50'	N	8-10'	13-15'	Upright	---	N	---
Eastern redcedar	Juniperus virginiana	40-50'	N	6-8'	8-15'	Upright-columnar	---	N	---
Norway spruce	Picea abies	40-60'	N	12-20'	25-30'	Pyramidal	---	N	---
Canaan fir	Abies balsamea var. phanerolepis	40-55'	N	10-15'	20-25'	Pyramidal	---	N	---
Colorado blue spruce	Picea pungens	40-50'	N	10-15'	15-25'	Pyramidal	---	N	---
Dawn redwood	Metasequoia glyptostroboides	70-100'	N	15-20'	25'	Pyramidal	Bronze *This tree is a	N	---

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Common Name	Latin Name	Ave. Mature Height	Multi-stem Y/N	Average Crown Spread		Tree Form	Fall Color	Bloom Y/N	Bloom Color
				10 yr	20 yr				
							deciduous conifer*		
Sugar Maple	Acer saccharum Cultivar: Fall Fiesta	60-70'	N	15-20'	25-30'	Upright rounded	Orange	N	---
Red Horse Chestnut	Aesculus x carnea Cultivar: Fort McNair	30-40'	N	10-15'	20-25'	Rounded	Yellow	Y	Pink
Katsura Tree	Cercidiphyllum Japonicum	50-60'	Both	15-20'	20-30'	Oval rounded	Yellow-apricot	N	---
Tulip Poplar (Yellow Poplar)	Liriodendron Tulipifera	60-80'	N	10-15'	20-25'	Pyramidal Broad oval	Yellow	Y	Yellow
Willow Oak	Quercus phellos	50-60'	N	10-15'	15-25'	Oval to rounded	Yellow	N	---

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