



City of Woodstock **Transportation Plan** 2022



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Plan Summary

Overview

The Woodstock Transportation Plan is designed to plan and forecast major road projects, corridor enhancements, and resurfacing projects, as well as sidewalks, crosswalks, parking, and other improvements, over a revolving cycle updated annually. The actual work that is accomplished in future years is always subject to City Council approval, and to the availability of resources in any given year or multiyear cycle. The activities planned herein are in various phases of development, some of which might be speculative for future consideration and approval. Such speculative plans can provide alternatives for both the planning process and for the approval process. This Transportation Plan allows for coordinated long range planning by providing a comprehensive list of current projects and probable plans, based on stated goals and circumstances, while maintaining the flexibility to accommodate the uncertainty of the future.

The Transportation Plan is first based on goals and ideas of civic improvement. It is intended that the enhancements proceed in such manner as to maximize the larger intentions and plans of the overall City. The Plan further serves as a list of possible improvements that are available for consideration on a multi-year period to further aid in the consistency and efficacy of Council decision-making processes over long periods of time.

Major transportation initiatives are pursued with the continual involvement by the City Council, civic leaders, and outside consultants, in addition to the administrative leadership team of the City. The administrative leadership team aids in this process by providing coordination in the decision-making process and by overseeing the fulfillment of the projects according to what has been approved and funded by the City Council.

Goals

The goal of the City is to continually improve the vehicular and pedestrian traffic flow, as well as public parking, in a manner that facilitates convenience and access for the citizens and businesses of Woodstock. However, every individual has different concepts as to what is best, and many of those individual thoughts conflict with one another. It is obvious that the goal of civic improvement must include realistic trade-offs of conditions and possibilities.

The City of Woodstock has experienced a renaissance that includes incredible growth, accompanied by tremendous increases in vehicular and pedestrian traffic, as well as in special events. There are also severe logistical limitations for the possible expansion of streets and sidewalks to accommodate the increase in traffic. In addition to the geographical and property-rights limitations, there are other advisable limits of infrastructure expansion. Long-range planners point to many communities that begin a renaissance, but then react with huge road-widening projects, as well as the destruction of much natural terrain to install traditional suburban parking lots. This reaction has often been shown to stall the initial success prematurely.

The goal of our plan is to raise the issue of trade-offs within the plan itself. The trade-offs are a very important component of the decision-making process and should not be left unsaid. These will be raised along with the suggestions concerning which roads, sidewalks, and parking facilities to build, expand, or repair.





Transportation Conditions

Vehicular and Pedestrian Demand

Vehicular, pedestrian, and parking volumes in Woodstock have skyrocketed since the end of the Great Recession. It is important to characterize this demand with more specificity. Every roadway and section of the City are different. Broad generalization of these matters merely adds to the confusion. Therefore, we will address every corridor in the City separately, as well as discuss the relationships to overall patterns and the residential neighborhoods supported by those corridors.

The volume growth on I-575 and Highway 92 are only marginally associated with the popularity of Woodstock. Those are regional corridors that are controlled by the State of Georgia, and they were designed to be regional thoroughfares. They are absorbing the growth of the entire region, far beyond the City of Woodstock. That growth is a component of sprawl that has been occurring for nearly 100 years across the nation.

The business districts on and along Highway 92 and those close to I-575 (including west Towne Lake Parkway and Ridgewalk Parkway), are considered within this Transportation Plan. The residential neighborhoods throughout the City are considered within this plan as they intersect the local corridors outline herein. Most of the corridors, business districts, and residential neighborhoods directly or closely connected to I-575 or Highway 92 are clearly related to regional commuter patterns that will be addressed within the plan.

The popularity of Woodstock has primarily impacted the downtown district, centered around what can be described as the City Center Main intersection. This includes Main Street and Arnold Mill Road (AMR) / Towne Lake Parkway (TLP). This intersection will hereafter be referenced as City Center Main and the extended cross district of Main Street (Serenade to Ridgewalk) and AMR/TLP (Woodstock Pkwy to Dobbs Rd) will be referenced as City Center District. The congestion associated with this district is an important dilemma facing the City, but it is also a very pleasant dilemma.

These downtown congestion issues are created by the intense popularity of the City of Woodstock. Our City is busy virtually every day of the year. Traffic backs up, automobiles circle the streets in search of a parking spot, and pedestrians are continually walking to and from, in and out of vehicular traffic, ultimately enjoying this fun-filled juggernaut called Woodstock. It would not take long to name many other cities in North Georgia or throughout the nation that are desperately seeking such popularity.

It should also be noted that many of the issues outside the City Center District are related in some way to the flow issues centered on City Center Main. Most flow issues on the corridors of Rope Mill Road, Dobbs Road, Dupree Road – as well as outer sections of Main Street, Towne Lake Parkway, and Arnold Mill Road – are partially the result of traffic attempting to avoid City Center Main and nearby congestion. This even extends all the way to the corridors of Neese Road and Trickum Road. These issues will be discussed throughout the plan.

A special note here is that the Trickum Road corridor – although partially impacted by issues at City Center Main – is more impacted by the lack of north/south alternatives between City Center Main and Highway 140 to the east. The Trickum Road corridor (including the Ragsdale Road and Barnes Road connectors) represents the only realistic option between Main Street and Highway 140 for residents of unincorporated Cherokee County and the City of Holly Springs in southeastern Cherokee County to traverse north/south to Highway 92 and beyond. This limitation is caused by Trickum Road having the only north/south bridge across the Little River in this stretch, thereby creating an hourglass effect with the pinch point occurring near the bridge and the large elementary school.

Limitations

The primary transportation limitations are twofold. First is the metamorphosis of Woodstock from a traditional suburban or exurban bedroom community to a premier example of grassroots, new-urbanism and populism. Second is that our City – like so many other formerly rural areas – is centered on a railroad line. Those two factors combine to form a substantial limitation for vehicular, pedestrian, and parking flows. However, they simultaneously combine to give Woodstock incredible charm and genuineness that is distinct from many other cities attempting to artificially manufacture the ambiance of new-urbanism.

There is no doubt that the original Hedgewood Development in downtown jump-started the new urban environment of Woodstock, but most of the subsequent City Center development has been a hodgepodge of eclectic development around the railroad and around odd corners in such a way as to create an organic ambiance that is genuine and extremely popular. The genuineness is likely to manifest in staying power. This type of organic development – although not recession-proof – is likely to have more anti-fragility than other communities.

These advantages and these limitations are intricately intertwined. The urge to solve every traffic and parking issue with traditional suburban solutions is a substantial dilemma of this Plan. The City Center Main could be substantially widened, large parking areas could be developed from the few remaining undeveloped downtown areas, and the City Center District could become a more commuter-friendly environment for non-citizens cutting through Woodstock on their way to somewhere else. Such solutions may create unintended consequences that should be carefully considered along the way. The intent of this Plan is to fully discuss and describe the various limitations and solutions to facilitate the decision-making process of the City Council, City Administration, and civic leaders.





Traffic Patterns

The Flow Types

The vehicular flow of Woodstock is characterized by a combination of *through* and *destination* traffic. The distinction between the two is crucial:

- **Through Traffic** is essentially commuter traffic from outside the jurisdiction to a destination also outside the jurisdiction. This definition describes most of the traffic on I-575 and Highway 92. Those two routes were designed for that purpose. Unfortunately, it also describes a portion of the traffic at City Center Main and an even a portion of the traffic on the Corridors cutting through to avoid the congestion at City Center Main.
- **Destination Traffic** is traffic coming to start or stop in Woodstock as a resident, visitor, or business stakeholder. This definition describes all our citizens (even if they are commuting to elsewhere) and describes the customers and employees of local businesses. These constituents are navigating traffic, finding a place to park (unless they walk or bike in), and then walking to their destination.

The Through and Destination Traffic have very different patterns and needs. The City also has very different obligations to these diverse groups when it comes to the City-maintained streets, which excludes I-575 and Highway 92. The City has little obligation to Through Traffic, except as a portion of the state and national traffic flow that cannot be completely disregarded. The City has a deep and substantial obligation to the Destination Traffic that constitutes the residences and businesses of the community.

The flow patterns of both the Destination and Through traffic are best described by dividing the overall flow into sub-patterns according to corridor types as follows:

PRIMARY FLOW CORRIDORS

The Major State Corridors of Throughway

These are the heart of Through Traffic and of considerable convenience for Destination Traffic

- (1) **I-575** – the primary north-south corridor of commuter traffic
- (2) **Highway 92** – the primary east-west corridor of commuter traffic

The Major Local Corridors of Destination

These are the heart of Destination Traffic, but also used by Through Traffic to some degree

- (1) **Main Street** – the primary north-south corridor of destination traffic
- (2) **AMR/TLP** – the primary east-west corridor of destination traffic

SECONDARY FLOW CORRIDORS

The Secondary Local Corridors (Majority portions Inside City)

These are the heart of access to residential neighborhoods, but also used by cut-through traffic

- (1) Neese Road
- (2) Trickum Road (from AMR through Cobb Co line) and Ragsdale & Barnes Road spurs
- (3) Dupree Road (from Main St to Stone Bridge Pkwy)
- (4) Dobbs Road
- (5) Rope Mill Road
- (6) Main Street (from Ridgewalk to Little River bridge and Serenade to Cobb Co line)
- (7) Towne Lake Parkway (from Wdst Pkwy to Bells Ferry)
- (8) Arnold Mill Road (from Dobbs Rd to Neese Rd)
- (9) Ridgewalk Parkway
- (10) Woodstock Parkway
- (11) Molly Lane
- (12) Parkway 575
- (13) Buckhead Crossing
- (14) Hames Road

The Secondary [Periphery](#) Corridors (Majority portions Outside City)

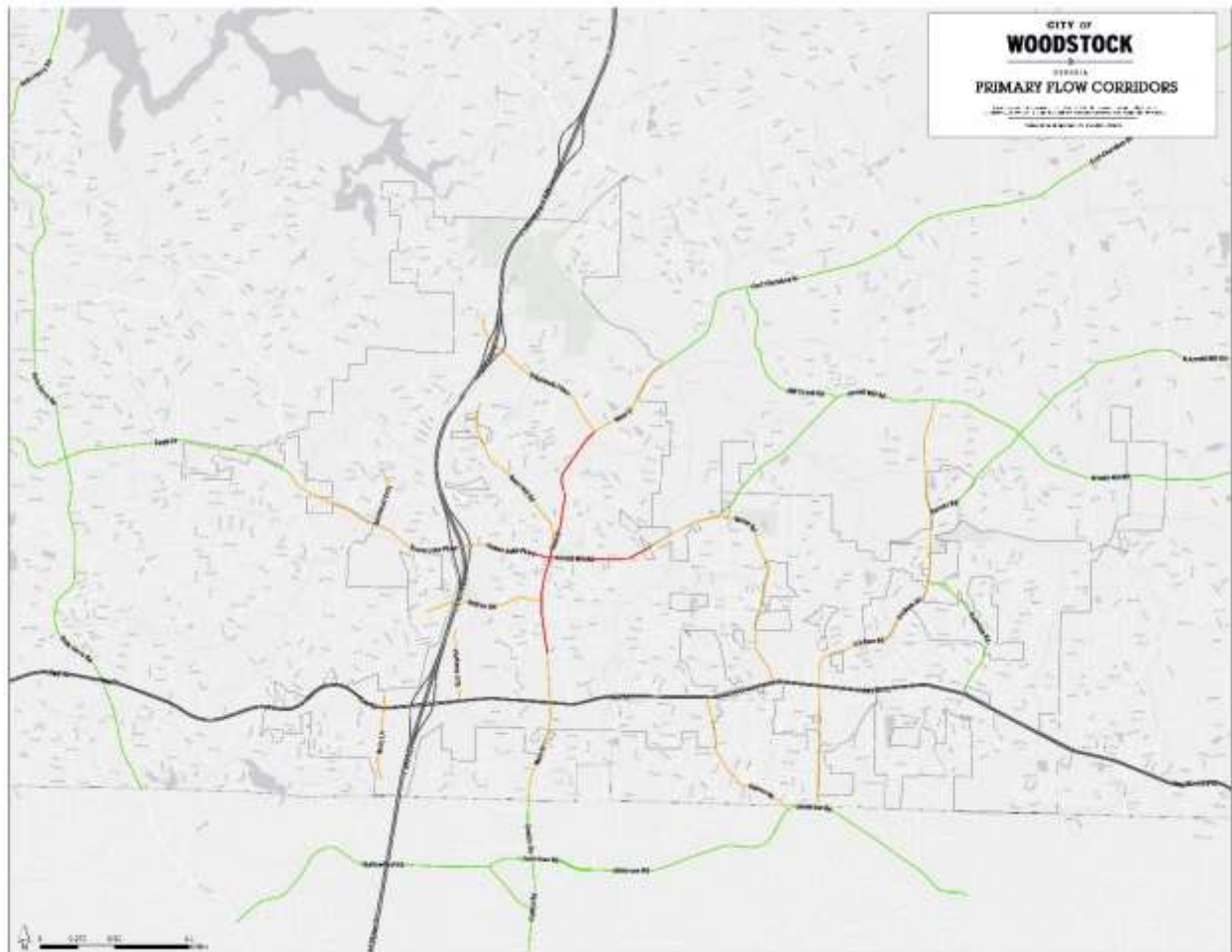
These strongly impact City flows, positively or negatively

East/West

- (1) East Cherokee Dr/Main/Ridgewalk
- (2) Jamerson/Shallowford
- (3) Arnold Mill Road from Neese Rd east to SR 140
- (4) Towne Lake Parkway/Eagle Drive from split to Bells Ferry

North-South

- (5) Bells Ferry Rd
- (6) Trickum (plus Ragsdale)- then split to either - AMR/Mill Creek or Barnes/NAMR



The Various Flow Relationships

The relationships between the four main road types are intricate and diverse. The north/south relationship is in better order mainly because it is supported by a major freeway. And much of this region was built around that limited-access artery which flows toward the Atlanta Metro region. The East/West relationship is not at all in good order, despite Highway 92 flowing reasonably well for a major divided highway with frequent crossings. Some of the blame for this condition can be placed on the railroad that must be crossed east/west, but most of the problem is related to the lack of an Outer Perimeter freeway that would be east/west in our area if it existed. This puts undo pressure on the Towne Lake/Arnold Mill corridor to support not only the Destination Traffic, but too much Through Traffic as well.

The City Center corridors were both used traditionally by Through Traffic, as well as by Destination Traffic. However, north/south conditions are very different from east/west conditions, and changes in streets have also contributed greatly to a divergence. The first and most substantial difference is that the north/south Through Traffic is supported by a limited-access freeway, so Main Street was (since the 1980s) only a very limited alternative to the larger regional flow. This was further changed by aggressively lowering speed limits on Main Street as far north as Ridgewalk Parkway and as far south as Serenade Lane. Finally, the new Streetscapes design of Main Street created a very slow, pedestrian-friendly environment that serves to frustrate most Through Traffic, but not all.

Much of the Through Traffic that remains on Main Street is accidental – disoriented map/GPS followers often mistakenly diverted from I-575 – and is highly unlikely to ever attempt the pattern a second time. There remains a stubborn contingent of Through commuters utilizing Main Street all the way from Holly Springs to the Cobb County line and, although they are a small percentage of overall north/south commuters, most of which use I-575, the actual number remains substantial for such a small two-lane road with a 25-MPH speed limit and 5 traffic signals between Ridgewalk Parkway and Serenade Lane.

The east/west pattern is substantially different. It is supported primarily by Highway 92 which is not limited-access like I-575. It traverses territory with frequent minor road intersections and several large intersections with left turn problems during rush hour. The east/west corridors of Highway 92 and TLP/AMR are also separated by a greater distance from one another than is the separation between I-575 and Main Street. This creates more intense demand (desire) of Through commuters with destinations north of Highway 92, especially the Towne Lake and Bells Ferry neighborhoods on the west side and the Highway 140 and (North) Arnold Mill neighborhoods on the east side. The Through Traffic patterns of these commuters are very diverse, but the predominant Through flow is west-to-east in the morning and east-to-west in the evening, caused by so many residents of Towne Lake/Bells Ferry/Lake Allatoona neighborhoods with workplaces in Alpharetta and north Roswell, along the Ga 400 corridor. (Again, this is traffic that might have been supported by an Outer Perimeter.) This pattern is harder to overcome because the alternatives are unappealing and require a north/south detour on both ends of the commute.

The commuter who lives near the intersection of Eagle Drive and Bells Ferry and works near Winward in Alpharetta instinctively desires to use TLP/AMR as a primary artery of their commute. They do not want to go all the way south to Highway 92 on both ends of the commute, and Highway 20 poses a similar dilemma to the north. The only realistic alternative for such traffic is the intricate combination of East Cherokee Drive/Main St/Ridgewalk Parkway/I-575/Towne Lake Parkway. That pattern is very distinct and is one of the primary reasons for the expansion of the East Cherokee Dr/Main intersection to include dual left turn lanes westbound. This commute is also used by unincorporated neighborhoods of east Cherokee to reach I-575 for commuting toward Atlanta. It is in the best interest of Woodstock to keep that flow as smooth and steady as possible because it diverts through traffic away from City Center Main. Even with that alternative corridor flowing well, there remains substantial east/west demand by Through Traffic on TLP/AMR, mostly because of the lack of obvious and desirable alternatives. This substantial east/west Through Traffic is likely to be impacted by street changes as TLP/AMR (from Woodstock Parkway to Dobbs Rd) becomes more like Main Street over time, with Streetscapes atmosphere, frequent pedestrian crossings, lower speed limits, and more traffic signals or roundabouts.

The Trade-Offs

All the major road enhancements must also be in consideration of probable future developmental growth, as well as the needs of pedestrian traffic, parking availability, and event planning. The decisions involve trade-offs. The primary one is the trade-off between the needs of Through Traffic and Destination Traffic. There is a distinct and substantial difference in the strategies and needs of these two groups.

The Through Traffic patrons are often the most vocal critics of the growth and popularity of Woodstock because the previously uncongested 45-mph commuter route has been transformed into a consistently congested 25-mph destination route. As previously stated, a percentage of Through Traffic patrons have already been dissuaded from their pattern and have sought other alternatives due to the transformation of Woodstock, although occasional blockages on I-575 cause substantial fluctuations. This brings forth a major trade-off issue of how future improvements will impact the dissuasion process of Through Traffic.

The transformation of Downtown Woodstock has been substantial and so has the dissuasion process of Through commuters. It is reasonable to conclude that logical and efficiency minded Through commuters have already been dissuaded from traversing through downtown during their commute. The remaining Through commuters have stronger needs than mere efficiency, such as fear of I-575 and Highway 92, nostalgia, or other emotional motivations. In terms of Pareto Principles, the easy 80% have already been dissuaded, while the remaining 20% represent two similar dilemmas for our road enhancement decisions: (1) Slowing downtown traffic further is unlikely to have much impact in dissuading the remaining hardcore commuters; and (2) Speeding up traffic flows downtown will likely invite a relatively high percentage of previously dissuaded commuters back into the fold.

Another principal trade-off for the City decision-making process of road enhancements involves aesthetics and ambiance. Widening streets and building huge parking areas are legitimate strategy ideas, but they also alter the aesthetic ambiance that has become Destination Woodstock. The popular and congested downtown area requires frequent pedestrian crosswalks and sidewalks, communal parking alternatives, playgrounds for both children and adults, room for events and festivals, and many other components that are at odds with traditional suburban traffic flows and sprawl.

The potential to transform the traffic flows through grid streets, roundabouts, and similar enhancements proceeds based upon opportunities that are often unforeseen in advance. They also involve enhancement decisions that are strategic, constantly changing, and involve complex property rights. The strategy is to add to vehicular and pedestrian flow alternatives in the places where there exist logistical constraints and limited flow opportunities for motorists and pedestrians today. Such logistical constraints are especially acute near City Center Main in all directions. Therefore, alternatives for traversing around and avoiding that intersection within a six-block radius are constantly under consideration and study.

These are many of the difficult and intricate decisions to be made about future road enhancements. They involve how to help Destination Traffic flow smoothly in consideration of more neighborhoods along the local corridors and how to help the new downtown urbanism gracefully expand beyond a four-block radius.





Smart Cities

Overview

The City of Woodstock has participated in the nationwide trend of the Smart Cities approach to municipal administration. This includes the administration of transportation initiatives. The primary transportation-related initiatives with the Smart Cities approach include:

Traffic Volume Pattern Recognition and Predictive Capability
Traffic Signal Operation and Data Collection Dashboard
Traffic Signal Adaptive Software
Connected Vehicle Communications
Parking Management and Wayfinding

Traffic Volume Pattern Recognition and Predictive Capability

The goal for predictive pattern recognition is to utilize software to recognize specific traffic patterns by Time/Day/Season/Event, analyze those patterns and how they change over time in such a way as to rationally predict patterns and volumes in advance. This analysis allows for the most effective planning of infrastructure improvements. Such an analysis requires large amounts of complex data and a software program designed to make use of the data. Traffic counts have been collected periodically in the past at various locations for various reasons. Those counts have been stored in centralized electronic file location. A small amount of more complex data was purchased from StreetLight Data in 2019 and in 2021 that helped staff understand the availability of information and the capability of recognizing patterns.

The patterns can be very complex for a City with a population under 50,000 because the patterns often involve several roads with multiple alternatives associated with each route. As an example, there is a distinct morning commuter pattern that begins outside the City along East Cherokee Drive. Commuters enter this pattern as far north as Highway 140 and travel southwest in the morning toward Main Street, then turn south on Main Street and enter the City Limits at the Little River Bridge, then turn west on Ridgewalk Parkway, and finally turn south on I-575. This pattern utilizes 4 separate roadways on good days, then changes to other alternatives when there is unusual congestion. Analyzing the primary patterns, with the alternatives, begins to multiply the complexity to a level requiring sophisticated software. However, the most sophisticated data collection and software services are generally designed and priced for state DOTs with extensive freeways and limited access points.

Traffic Signal Operation and Data Collection

The traffic count data that has been accumulated over the years has been primarily at intersections with traffic signals. This data was very limited because it was expensive to collect it on an infrequent basis. The first significant introduction of Smart Transportation Technology for the City occurred in 2020 with the installation of GridSmart at traffic signals, of which 3 intersections have been included as of 2021. The equipment at these intersections now provides real time access to traffic counts in every lane, with every turning movement, every moment of every day. And the data will be stored forever as a historical database. The software at these intersections will be upgraded to include full connected signal coordination once the smart technology is installed at more signals. The capability of this technology also includes adaptive techniques and connected vehicles to be discussed next.

Traffic Signal Adaptive Software

An adaptive traffic control system is a mechanism to change signal timing in real time based upon demand data arriving from sensors prearranged in the pavement or from another nearby traffic signal, and eventually in Connected Vehicles. This capability is hindered by the safety requirements associated with traffic signals requiring amber warning times and failsafe internal controls that eliminate the possibility of two simultaneous greens in conflict.

The adaptive software available in the marketplace today was designed for major roadways with limited access. However, we expect the City to be prepared to test a variation of adaptation in the vicinity of City Center Main, probably in 2024 after the Hub Transformation Project and Main/Elm Pedestrian Project are completed. This technology would be particularly helpful on Main Street between TLP and Dupree Road. The traffic signals are currently coordinated, but they suffer from the unique problems destined to be solved by those projects.

Connected Vehicle Communications

The Transportation Plan includes cooperating with the international initiative to established “connected vehicles” that know where other nearby vehicles are, that can receive warning alerts, that can communicate with traffic signals, and can establish unprecedented safety and mobility for the public. This initiative includes establishing the technology within the vehicles by the original equipment manufacturers, but it also includes connectivity to infrastructure such as traffic signals and railroad crossings.

Parking Management and Wayfinding

Smart Parking Technology includes devices and software that can simultaneously track the availability of parking spaces in multiple locations and help guide drivers to parking options without unnecessary circling or delay. It includes the ability to analyze usage trends for maximization of parking infrastructure. Various options are currently under consideration for downtown Woodstock parking management. Also under consideration is a possible system within the new parking deck at City Center for “adaptive parking” that is capable of changing the usage type availability based upon the demand at differing times.





Major Road Projects

Overview

Major road enhancements – widening, roundabouts, grid streets, bypasses, traffic signals, signal coordination, parking decks, etc. – represent significant changes in the overall civic environment. These issues are pursued with continual involvement by the City Council, civic leaders, and outside consultants, in addition to the administrative leadership team of the City. It is the intent of the administrative leadership team to aid in this process by providing coordination in the decision-making process and to oversee the fulfillment of the projects according to what has been approved and funded by the City Council.

The City of Woodstock does not control the Major State Corridors of Throughway and some isolated components of Local Corridors within the City. Therefore, major road enhancement ideas center around improvements of City Center Main/District and the Local Corridors that support the residential neighborhoods throughout the City. Most of these ideas and decisions involve two-lane roads with limited opportunity of width expansion. It is unrealistic to anticipate major widening of these roadways. Most of the ideas involve how to divert and reroute flows, as well as how to lessen logjams caused by left turners. This includes creating grid street designs or multiple routes that offer more alternatives for traffic patterns.

Major road enhancements also include close coordination with GDOT, Cherokee County, and nearby jurisdictions. This includes projects that might cross jurisdictional lines and/or impact multiple jurisdictions. Coordination of such projects often cross over multiple fiscal years.

The following is a list of the Major Road Projects, with conceptual design and brief description:

(City-Exclusive Project)

[illegible]

Arnold Mill Road Project

(City-Exclusive Project)

This is a series of contiguous projects that will extend to the east from where the Hub Transformation Project will be significantly improving the City Center Main intersection. The project will transform Arnold Mill Road from Main Street east to Sandy Circle. It begins with the section between Main Street and Hubbard Road with a complete renovation of the roadway and streetscapes on both sides, including redevelopment at the City Center site, undergrounding of utilities, relocation of the Trail in a way that will become a beautiful addition to the overall downtown experience. The project will then significantly improve the AMR/Hubbard intersection by adding a left turn lane in all four directions, extending Hubbard Road to the north, and creating a new signal-protected entrance for the busy senior-living facility. The project will extend on to the east with the redevelopment project from Bentley Parkway to Sandy Circle.



Neese/Highway 92 Intersection Improvement

(City-GDOT Project)

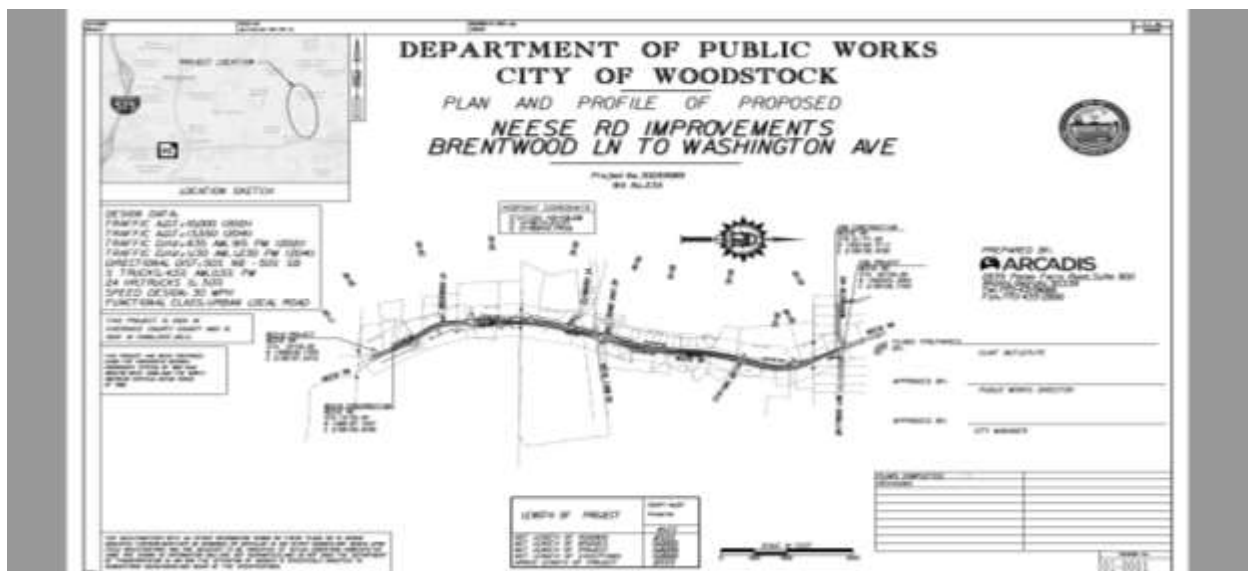
The Highway 92/Neese Road Intersection Project is a joint project between the City and GDOT that is expected to be constructed in 2022 and will be a substantial improvement to a key intersection. This project will add dual left turn lanes from east bound Highway 92 onto Neese Road and dual left turn lanes from southbound Neese Road onto Highway 92 eastbound. The project widens the mouth of Neese Road at the intersection from three lanes to five lanes, while also adding a second left turn lane on Highway 92.



Neese Road Southern Segment Enhancement Project

(City Project, with County Participation)

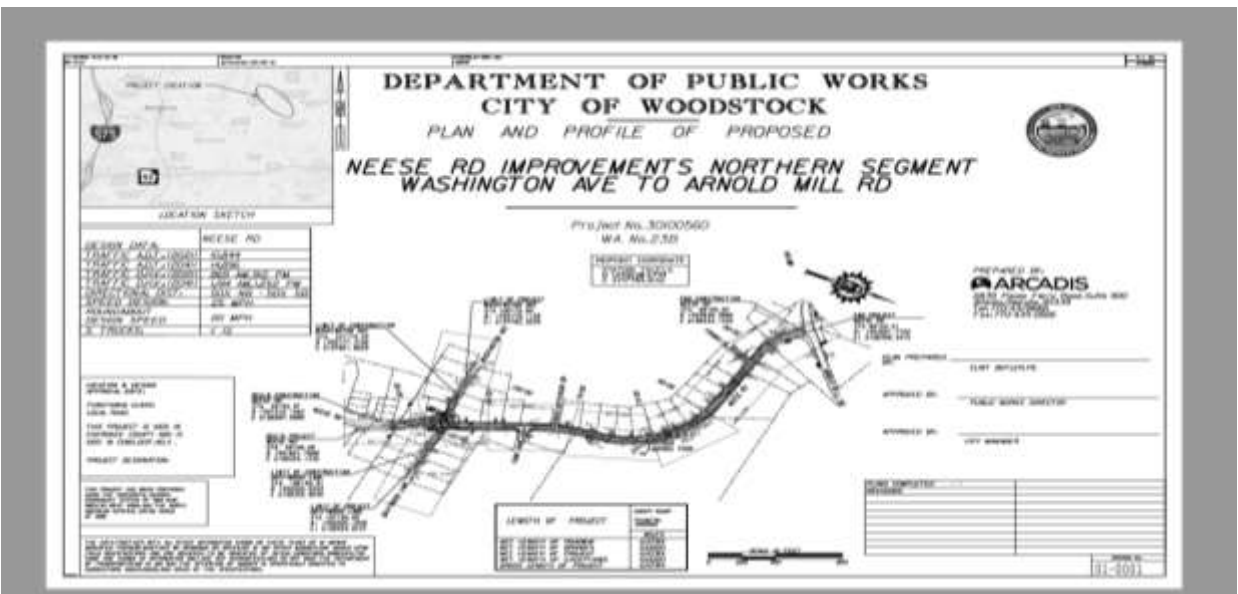
This is an important transportation project that will significantly improve Neese Road from the edge of the Intersection Project on the previous page to the edge of the new development named Marlowe. This project is expected to be constructed in late 2022. This project makes more efficient use of the wider section of Neese Road to the south of Neese Farm Drive and then dramatically improves the narrow section of Neese Road to the north of Neese Farm Drive that will include sidewalks for pedestrians.



Neese Road Northern Segment Enhancement Project

(City-Exclusive Project)

This is an important transportation project that will significantly improve Neese Road from the edge of the new Marlowe development northward to Arnold Mill Road. This project is expected to be completed in 2023 or 2024. The project includes two roundabouts: Neese/Washington/Driftwood intersection that replaces the inefficient 4-way stop; and Neese/Arnold Mill intersection that replaces the inefficient 3-way traffic signal. The project includes sidewalks and trail access for Dupree Park.



I-575 Ridgewalk Parkway Interchange Project

(GDOT/City/County Project)

The I-575 Ridgewalk Parkway Interchange Project is a joint project with GDOT, Cherokee County, and the City of Woodstock. The project converts the interchange into a diverging diamond design (DDI) in a way that maximizes the limited width of the bridge, while transforming the pedestrian experience across the interchange. The predominant commuter traffic pattern will be significantly enhanced by reducing the number of traffic signals to traverse on the bridge from two to one.



I-575 Towne Lake Parkway Interchange Project

(GDOT/County/City Project)

The I-575 Towne Lake Parkway Interchange Project is a joint project with GDOT, Cherokee County, and the City of Woodstock. The project adds a second left turn lane from eastbound Towne Lake Parkway to I-575 northbound; it adds a second right turn lane from southbound I-575 to westbound Towne Lake Parkway; it adds a second left turn lane from Towne Lake Parkway eastbound to Woodstock Parkway northbound; and it adds two additional travel lanes on Towne Lake Parkway east of Woodstock Parkway to the limits of the project.



Trickum Road/Highway 92 Intersection Improvement

(GDOT/County/City Project)

The Highway 92/Trickum Road Project is a joint project with GDOT, Cherokee County, and the City of Woodstock. This will be a substantial improvement to a key intersection. This project will add dual left turn lanes from westbound Highway 92 onto Trickum Road and dual left turn lanes from northbound and southbound Trickum Road onto Highway 92. The project widens the mouth of Trickum Road at the intersection, while also adding a roundabout at the Trickum/Gunnin intersection.



Highway 92/Main Street Intersection Improvement

(GDOT-Exclusive Project)

The Highway 92/Main Street Project is a GDOT-exclusive project that is designed to relieve excessive congestion on southbound Main St turning left onto Highway 92. This is an evening commute pattern that begins in Marietta where some commuters exit I-75 at Canton Road and travel north to Highway 92, where they then proceed west to reenter the freeway at I-575 and Highway 92. The large number of commuters in this pattern has caused significant backups on both Main Street and Highway 92. These backups occur on every weekday of the year and have become serious sources of gridlock on Thursday and Friday evenings, when commuter traffic mixes more heavily with destination traffic.



Dupree/Main Intersection Project

(City-Exclusive Project)

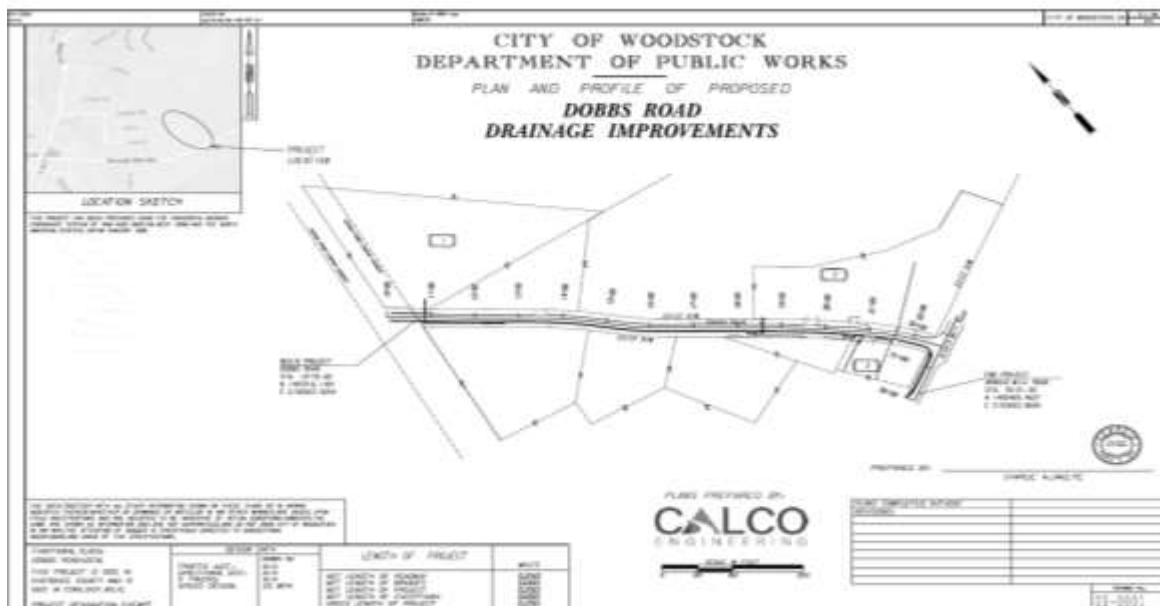
This intersection project provides a significant expansion and extension of this key entrance into downtown Woodstock. The project is very complex and is expected to be completed over multiple years beginning in 2022. The project begins with establishing a signalized pedestrian crossing across Dupree Road on the western side of Main Street in early 2022. The project will later expand the width of Dupree Road to add a much-needed left turn lane on Dupree Road eastbound onto northbound Main Street. It will eventually extend Dupree Road through Main Street and across a new railroad crossing upon redevelopment anticipated east of the railroad tracks, with an accompanying new left turn lane for southbound Main Street onto eastbound Dupree Road. The project will include extensive ROW acquisition and Utility Relocation, which is also why the project will extend over multiple years and why the time horizon is more than similar sized projects.



Dobbs/Arnold Mill Road Roundabout

(City-Exclusive Project)

This intersection project plans for a roundabout to be constructed at the Dobbs/AMR intersection as part of the concept of two roundabouts along Arnold Mill Road (Neese and Dobbs) that will serve as gateways into Woodstock from the east. These roundabouts will serve to allow for continual flow of vehicular traffic, while simultaneously slowing the speeds and creating a pedestrian-friendly environment much farther to the east than has traditionally existed. The Dobbs/AMR roundabout concept is contingent upon additional ROW and it is still in conceptual phase prior to Conceptual Design. It would be coordinated with the remainder of Dobbs Road Enhancements, including the eastern segment below.



Ridgewalk Parkway Lane Extension Project

(City-Exclusive Project)

This project extends both dual left lanes to the west to expand the storage space for these turn lanes by approximately 200%. It was not included in the original project due to the impact on the railroad gate, which would have delayed the original project significantly.



South Main Street Master Pedestrian Plan

(City-Exclusive Project)

This master plan includes enhancing the westside pedestrian experience on Main Street from Fowler Street (where Streetscapes II was completed) to the south to the edge of South on Main near Brighton Boulevard. This will be accomplished through a series of individual projects in various segments. Projects will include Streetscapes IV, Dupree/Main Intersection Project, and Ingram/Main Pedestrian Project. Other sections will be included until the entirety of the stretch has been completed. This section is extremely difficult to complete because the proximity of the railroad on the east side of the street restricts the flexibility on the west side of the street. The sections closest to the intersection with Barnesdale Terrace represent the most challenging logistical dilemmas.

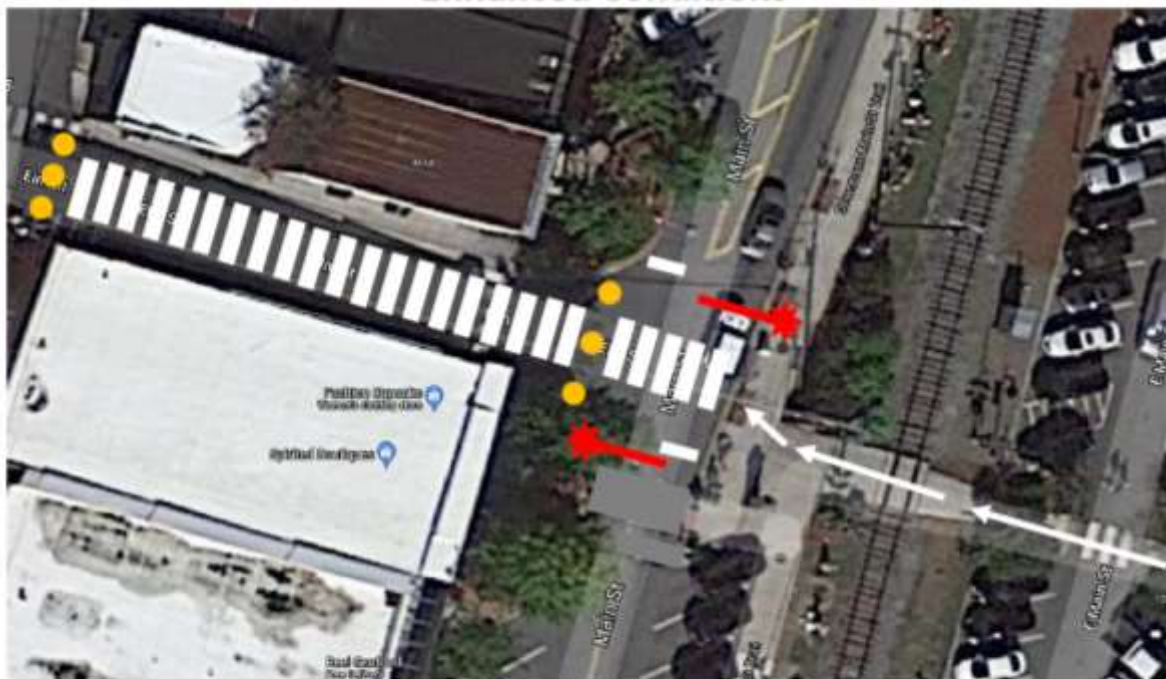


Main/Elm Pedestrian Project

(City-Exclusive Project)

This project is expected to proceed after the completion of the Hub Transformation Project. It is intended to protect and control pedestrians crossing Main Street between Towne Lake Parkway and Fowler Street, primarily at the mid-block crossing near Elm Street. There are currently three mid-block pedestrian crossings in this area that contribute to extreme vehicular delays and congestion during prime entertainment times for the popular downtown entertainment district. There is strong pedestrian traffic using the railroad crossing near Elm Street that is an important part of the pedestrian balance between the eastern and western business districts. The concept of this project is to create a new pedestrian crossing of Main Street at Elm Street (just a few feet away from the existing crossing), signalize this crossing in synch with the traffic signals to the north and south, discontinue all three mid-block crossings in this area, convert Elm Street (Main to Wall) as pedestrian-only, discontinue vehicular turns off Main Street at Elm Street, and discontinue vehicular delays caused by pedestrians. Likewise, some adjustment of northbound on-street parking might also be considered in this plan.

Enhanced Conditions

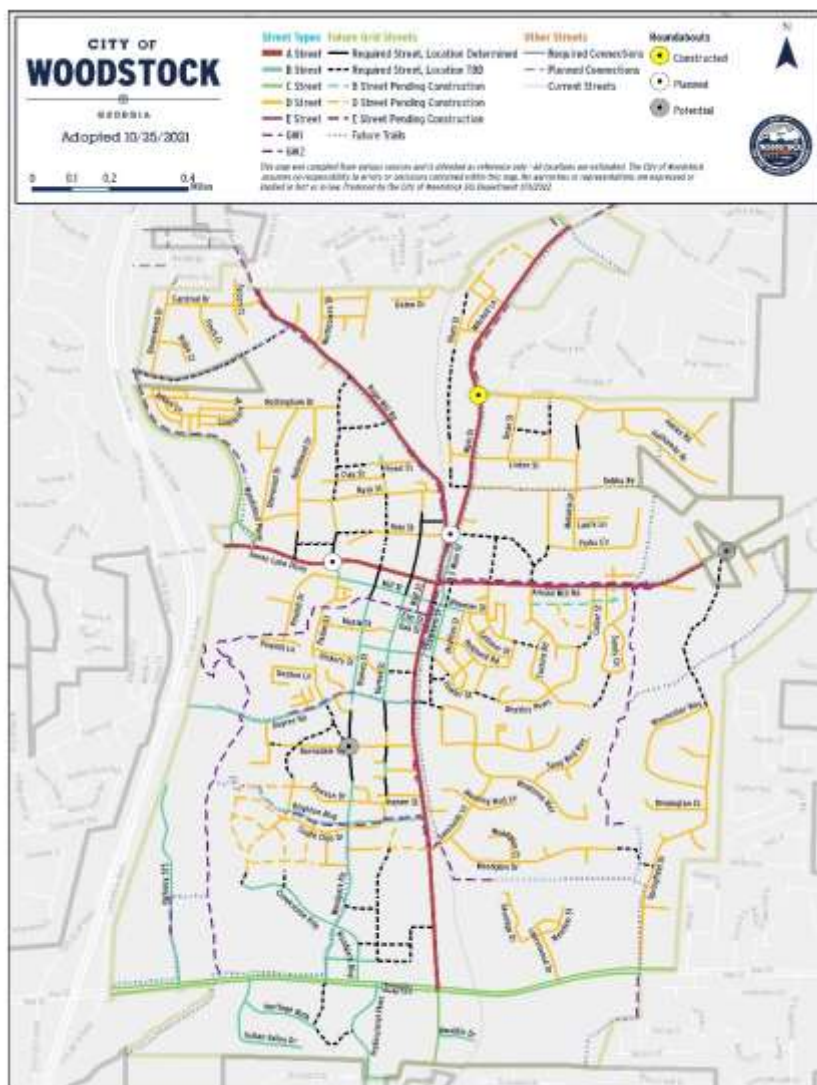


Enhanced Conditions: (1) Pedestrian flow is protected by Walk/Don't Walk signal; (2) Easier/wider route across Main; (3) Vehicle delays eliminated; (4) Pedestrian flow is straighter and more visible

Grid Streets Program

(City-Exclusive Project)

The Grid Streets Program began as a concept to add flexibility for traffic flows to dissipate into many different streets with multiple routes instead of concentration on major arteries that are frequently congested, and subject to gridlock. The program expanded significantly with the development of the Woodstock West by Walton Project. That project included the establishment of several new grid streets, most prominently including Market Street, Reeves Street, and Paden Street. The development of these three grid streets provided efficient new north/south connections between Mill Street and Dupree Road. Additional connections were subsequently proposed in all directions to create the overall Grid Street Map.



A significant sectional addition was completed in 2020 with the extension of Reeves Street through the new South on Main neighborhood and connecting to Woodpark Place that already connects to Highway 92 with a traffic signal. This addition means that more than 50% of the distance of this grid street from Towne Lake Parkway to Highway 92 has now been completed and opened to the public. Importantly, the Serenade and Woodglen neighborhoods have also been connected to the Grid Streets Project by the extension of an east/west connection from Reeves Street to the expanded Serenade/Main intersection.

An important enhancement to the Grid Streets Plan will be completed within the Hub Transformation Project by converting Mill Street back to two-way traffic. The current efficiencies of the Market/Reeves/Paden grid streets are severely constricted by being bordered to the north by a one-way street. Once this Mill Street is converted back to two-way, the Market/Reeves/Paden grid street pattern will gain significant efficiencies and fluidity. The extension of these three north/south grids streets is continually being pursued, as is the possible extension of Mill Street, after it converts to two-way.

Such additional segments are continually being added and adjusted according to the conditions of development, venues, and traffic patterns. The intent is to connect new development areas to existing developments in ways that serves both new and existing traffic patterns. The planning map of grid streets is constantly being adjusted. Some of the most significant future additions to Grid Streets include Mill Street, Lyndee Lane, and Hubbard Road extensions featured on the three following project pages.



Reeves Street Extension to Woodpark

Mill Street Extension to Wheeler

(City-Exclusive Project)

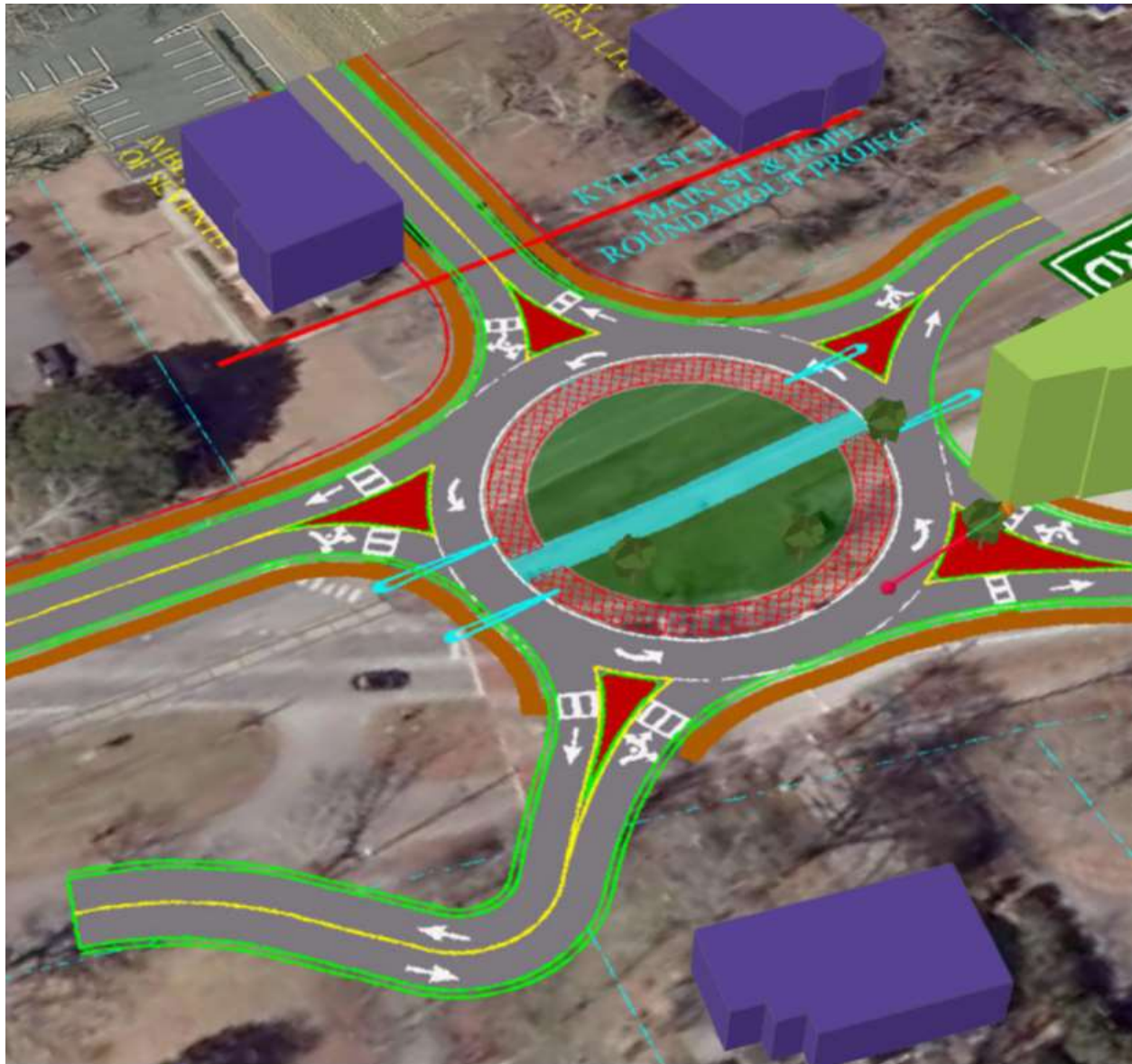
Mill Street will be converted back to 2-way traffic in 2022 with the Hub Transformation Project. The Mill Street Extension to Wheeler is proposed herein to proceed immediately after the completion of the Hub Project to connect Mill Street to Wheeler Street and dramatically add accessibility to the business district in the southeast quadrant of the downtown area that will soon be joined with the new City Center Project. That SE Quadrant District has long been subject to congestive traffic due to minimal egress, as well as excessive circling for parking. This Mill Street to Wheeler connection will add a crucial signalized egress that will allow more district patrons to exit the area without traversing through the residential neighborhood in search of an exit.



Main/RMR Roundabout

(City-Exclusive Project)

This roundabout would incorporate the intersection of Main Street, Rope Mill Road, and East Main Street, as well the railroad crossing. This project was originally proposed by Arcadis in the Downtown Traffic Study. This new roundabout is designed to coordinate the unusual current flows, plus connect to a widened Kyle Street, that will then be connected to the Lyndee Lane extension and the roundabout at Mill/TLP, to provide an important new grid street series of connections.



(City-Exclusive Project)

[illegible]

Hubbard Road Extension

(City-Exclusive Project)

The Hubbard Road Extension will proceed from the northern edge of Hubbard Road at Arnold Mill Road (Amphitheater parking entrance) and extend to the north and then to the west to meet Main Street. This project was originally proposed by Arcadis in the Downtown Traffic Study. It has since been altered slightly to connect to Innovation Way. This project will begin as a component part of the Arnold Mill Road Project previously listed, with the northern extension of Hubbard Road into the amphitheater parking area, and with a complete widening of the AMR/Hubbard intersection. This will eventually provide accessibility with the neighborhoods to the north, providing additional traffic flexibility by providing another way to avoid the City Center Main intersection.



Trickum/Nocatee Intersection Project

(City/County Project)

The Trickum/Nocatee Project will include the establishment of an entrance to Little River Park to make this a full four-way intersection. There is currently an entrance onto Nocatee Trail on the western side of Trickum Road. This intersection is hindered by very heavy traffic on Trickum Road making it extremely difficult for left turns out of the neighborhood. There are also no impediments on Trickum Road between Ragsdale and Barnes, which causes excessive speeding in this stretch, making it difficult to turn left into or out of Nocatee Trail. Arcadis established a northbound Trickum left turn PM Peak of 42 left turns without a turn lane, backing up traffic and creating safety issues. The pre-design plans call for establishing either a full four-way signalized intersection or a roundabout at this location, depending on engineering standards appropriate for the topography. The first pre-design shown below identified the addition of the left turn lane only.



SR 92 Pedestrian Improvements

(City/GDOT Project)

This project provides a 10' Multi-Use Trail along the northern shoulder of SR 92 that connects the existing Noonday Creek Trail to the Woodpark Place Intersection. This trail will provide improved pedestrian facilities for the developments on Woodpark Place as well as the commercial properties along SR 92. This project is in coordination with the Multimodal Safety & Access Grant that GDOT has approved.







Other Road Enhancements

Overview

Smaller road enhancements primarily include the addition of brief left turn lanes, the slight widening of streets where ruts develop, and changes in signage and striping that add to safety. These actions within the corridors have been found to be very helpful in improving the overall flow of vehicular and pedestrian traffic. (Within neighborhoods, such activity will be covered in the Traffic Calming section of this document).

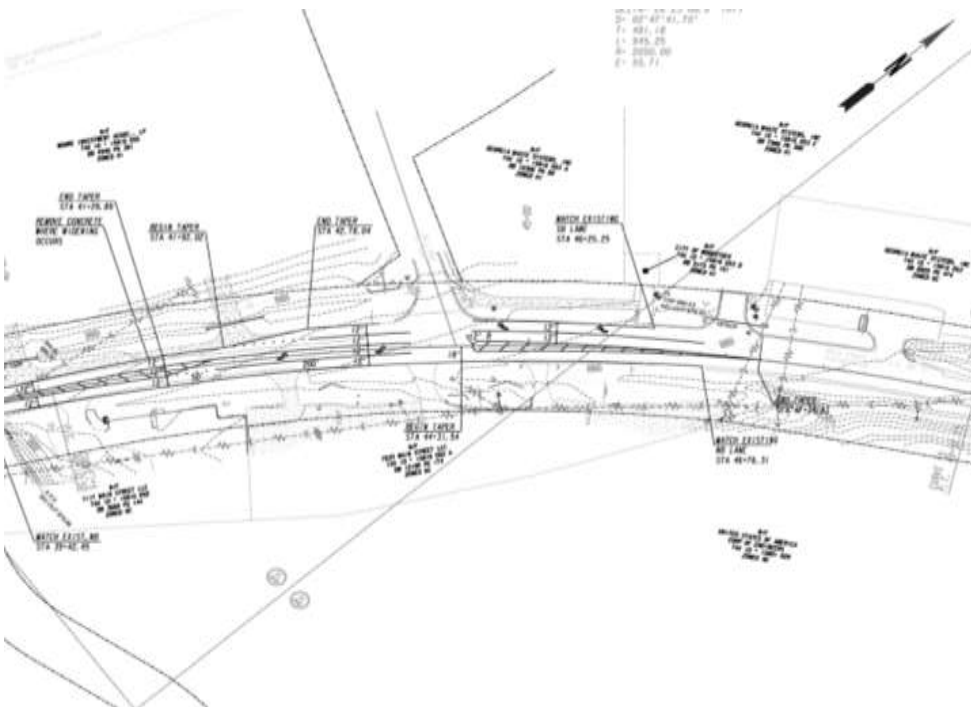
The addition of brief left turn lanes is a very important component of this overall plan. Blockage caused by left-turners is a major component of the traffic congestion on two-lane roads. This strategy has evolved because of the success found in previous projects to install turn lanes. Although these turn lanes can often only accommodate two cars or one truck, that has been found to take care of over 50% of turners and sometimes the percentage is nearing 100%. These short lanes are also more feasible from available right-of-way and can sometimes be easily incorporated within other road repairs or resurfacing work.

The following are examples of successful brief turns of the past couple of years:

Main St Left Turn Lane to Rope Mill Road and Rope Mill Road Turn Lane to Main St



Main St Left Turn Lane to Bell Parkway

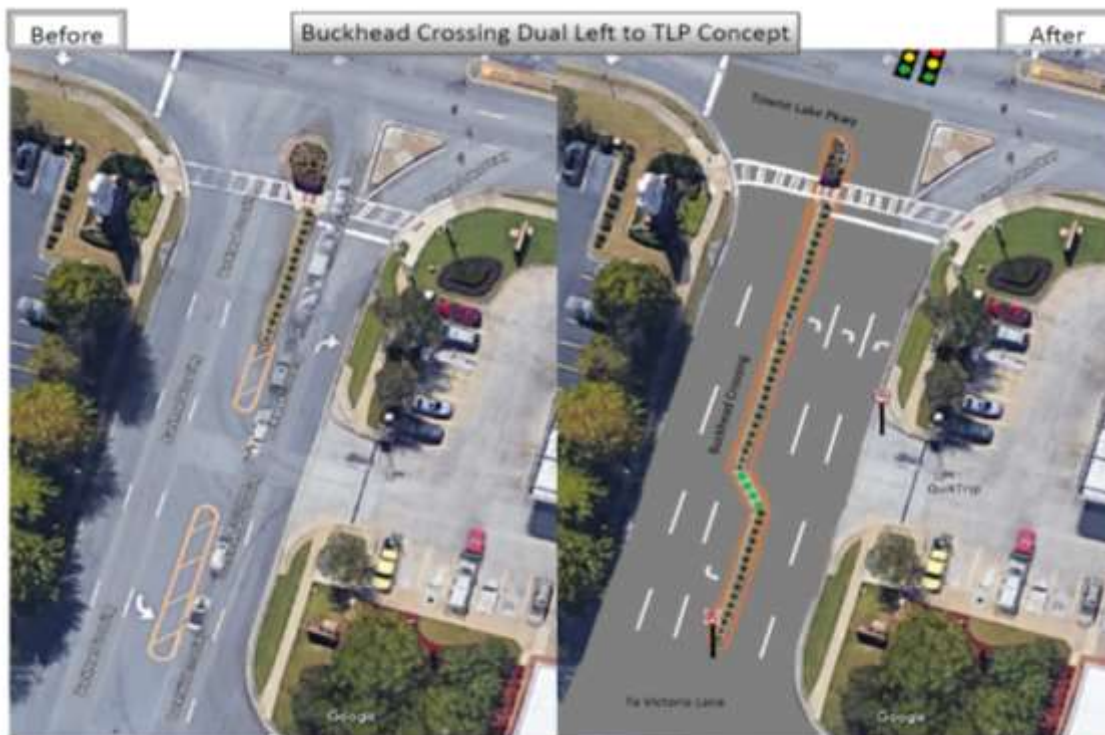


CITY OF WOODSTOCK (PHASE 2)
MAIN STREET AT SERENADE LANE
PROPOSED INTERSECTION AND LANE CONFIGURATION LAYOUT

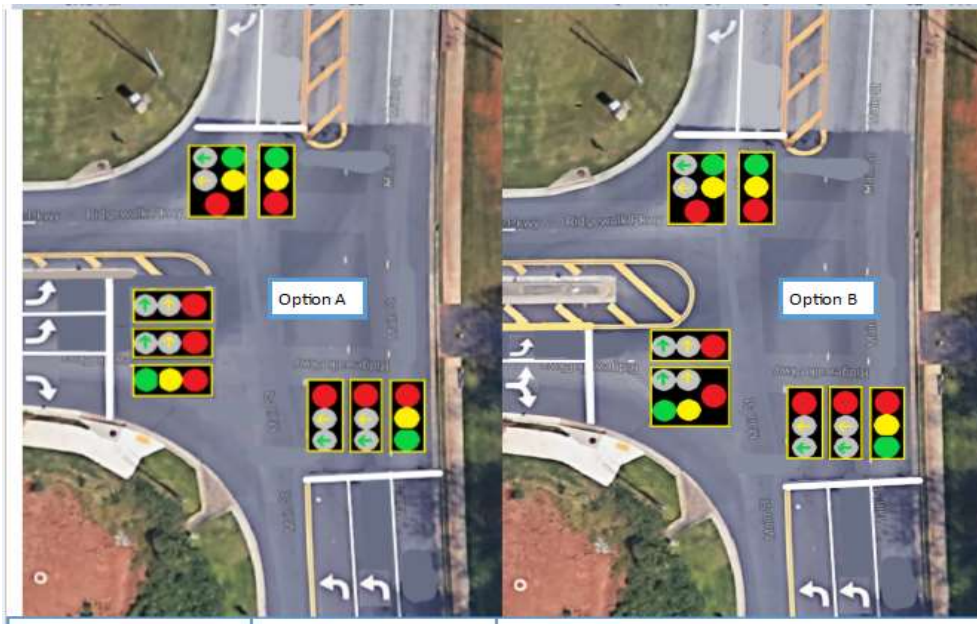
ARCADIS Engineering & Construction

OCTOBER 2018

Dual Left at Buckhead Crossing



Dual Left at Ridgewalk Parkway and at Main in Double Project



TLP Left Turn at Tag Office



Left Turn Lane Strategy

The City corridors are largely two-lane roads. Two-lane roads can accommodate 1900 vehicles per lane per hour, if the traffic is not being blocked by traffic signals, stop signs, left-turners, on-street parkers, or pedestrians. The City Center extended corridors of Main between Ridgewalk and Serenade and TLP/AMR between Woodstock Parkway and Dobbs Road include only six traffic signals and no stop signs. The primary short-term strategy for improvement in congestion is to coordinate the signals to foster smooth, unstopped patterns and to create as many brief left turn lanes as feasible to lessen temporary blockages. This strategy is likely to increase the potential flows much closer to pure capacity of two-lane roads and provide more immediate relief while longer-term grid streets, roundabouts, and alternative routes are developed over time. However, there are severe limitations to north/south flow improvements on Main Street due to the extreme volume of pedestrians, as well as space limitations that make left turn lanes onto Elm Street and Oak Street unrealistic.

The list for past and future turn lanes includes:

Recently Completed 2018 and After

- **Northbound Main Street** turning northwest onto **Rope Mill Road**
- **Southbound Rope Mill Road** turning north onto **Main Street**
- **Northbound Main Street** turning west onto **Bell Parkway**
- **Southbound Main Street** turning east onto **Johnston Farm Lane**
- **Westbound AMR** turning south onto **Sandy Circle**
- **Westbound AMR** turning south into **AME Church**
- **Eastbound AMR** turning north into **Senior Center/FS14**
- **Dual Southbound Buckhead Crossing** turning east onto **TLP**
- **Westbound TLP** turning south into businesses at **Tag Office area**
- **Rope Mill Road** southbound turning east into **WES Bus Entrance**
- **Dual Eastbound Ridgewalk Pkwy** turning north onto **Main Street**
- **Dual Northbound Main Street** turning west onto **Ridgewalk Pkwy**
- **Southbound Main Street** turning east onto **New Unnamed Road at Ace**
- **Southbound Main Street** turning east onto **Brook Boulevard**
- **Northbound Main Street** turning west into **Transfer Station**

Current Project List

- **Eastbound TLP** turning north onto **Main St (FY22 Hub Transformation)**
- **Westbound TLP** turning south onto **Mill Street (FY22 Hub Transformation)**
- **Northbound Main Street** turning west onto **Mill Street (FY22 Hub Transformation)**
- **Eastbound AMR** turning north into **Amphitheater (FY22 AMR Project)**
- **Westbound AMR** turning south onto **Hubbard Rd (FY22 AMR Project)**
- **Northbound Hubbard Road** turning west onto **AMR (FY22 AMR Project)**
- **Eastbound Dupree** turning north onto **Main St (FY23 Main/Dupree Project)**
- **Southbound Main St** turning east onto **Dupree Rd (FY23 Main/Dupree Project)**
- **Northbound Main Street** turning west onto **Barnesdale Terrace**
and businesses due north (**partial FY23**)
- **Eastbound AMR** turning north onto **Dobbs Road or roundabout (FY24)**
- **Westbound AMR** turning south onto **Arnold Mill Way or roundabout (FY24)**
- **Southbound Dobbs Rd** turning east onto **Arnold Mill Road or roundabout (FY24)**
- **Eastbound AMR** turning north into **229-233 AMR west entrance (FY25)**
- **Eastbound AMR** turning north into **229-233 AMR east entrance (FY25)**
- **Westbound AMR** turning south into **238 & 240 AMR shared entrance (FY25)**





Master Corridor Enhancement Plans

Overview

The first two corridors listed below are controlled by the State, while the remainder are controlled by the City (in part or in total). Each of these have tentative long-range plans as described below and/or as described in the Projects section. They are listed herein for coordination purposes.

I-575

The through travel lanes of I-575 are considered as regional flow matters that are coordinated across many jurisdictions, so the primary local input concerns interchanges. There are three I-575 interchanges within the footprint of the City. The Hwy 92 interchange involves one State Roadway intersecting another, so changes there are pursued by the State. The City and County have jointly pursued substantial changes to the two interchanges that include local roads, Towne Lake Parkway and Ridgewalk Parkway. These major projects were listed in a previous section with conceptual designs and shown in smaller form below.



Additionally, the City is also pursuing two GDOT Quick Response Projects designed by Arcadis, one at Towne Lake Parkway and one at Ridgewalk Parkway. These projects are designed to proceed before the larger projects and provide for some improvement of traffic congestion until the larger projects can be completed.



Highway 92

The Highway 92 Corridor continues through the entire east/west jurisdictional lines of the City. It is controlled by the State of Georgia, with input from the City primarily at the intersections where City streets are crossed. The enhancement plan described herein concerns mostly the numerous intersections.

Three intersection projects have been completed in the past two years (Ragsdale Rd, Molly Ln, and Woodstock Sq) and have provided very positive impact for traffic flow. Three more intersection projects are designed and in various stages of development. These are the Main, Neese, and Trickum Road Intersection Projects as shown below and with more detail in the Projects section.



The intersections along the Highway 92 corridor need to be continually analyzed and included in future planning. Current planning analysis has identified one more major intersection improvement at Parkway 575 to plan for dual lefts to be established for existing the City street onto the State highway. Additionally, many current intersections need to add dedicated turn arrows on the side streets to improve safety.

The through travel lanes of Highway 92 will be continually analyzed and improved by the State, mostly within the context of the nearby intersection projects. Regular resurfacing of the roadway is also necessary. Approximately 50% of the corridor within the City jurisdiction was resurfaced in 2018 (from the western city limits through the railroad crossing). The eastern 50% is in disrepair and should be resurfaced in the next 5 years. However, a portion of that resurfacing will be completed as a component of two of the intersection projects (Neese and Trickum).

A significant percentage of Highway 92 traffic is Through Traffic using a regional artery as it was designed. As previously stated, Highway 92 from Acworth to Roswell (as combined with Holcomb Bridge Rd and Jimmy Carter Blvd) serves as the only East/West through corridor north of I-285 and south of SR 20. As such, it will remain congested, and it will be heavily influenced by improvements (or lack thereof) on both I-285 and SR 20.

North Main Street (from Ridgewalk to Little River Bridge)

The North Main Street corridor is one of the highest traffic volume corridors within the City street system. This is a significant commuter route for regional Through Traffic to reach I-575 at Ridgewalk Parkway. There is a solid waste transfer station within the corridor and an unusually high volume of heavy truck traffic. The City has recently enhanced this corridor by adding 7 new left turn lanes, adding one new traffic signal, and completely resurfacing the corridor during the 2018-2021 period. This type of renovation should be planned in the future in 10-year cycles to maintain this heavily traveled section. The photos below show the results of the most recent projects.





South Main Street (Serenade to Cobb Co line)

The South Main Street corridor is dominated by the intersection with Highway 92, which is discussed in other sections herein. The primary design change currently planned is for the addition of the first triple left turn in the region. This is designed to reduce the extreme congestion associated with a regional commuter pattern of Through Traffic.



This is an evening commute pattern that begins in Marietta where some commuters exit I-75 at Canton Road and travel north to Highway 92, where they then proceed west to reenter the freeway at I-575 and Highway 92. The large number of commuters in this pattern has caused significant backups on both Main Street and Highway 92. These backups occur on every weekday of the year and have become serious sources of gridlock on Thursday and Friday evenings, when commuter traffic mixes more heavily with destination traffic.

This South Main Street corridor also includes the traffic signals and intersections at Sam's Club and Mauldin Drive. Both intersections are subject to change as redevelopment occurs in these areas. The principal congestion through these intersections is associated with the same evening rush hour northbound flow described above. The northbound congestion at Mauldin Drive should be significantly reduced by the triple left turn project at Highway 92 because there is sufficient storage for commuters to the south of Mauldin Drive. The storage for southbound traffic at Sam's Club intersection has not been sufficient and should be replanned in the 2022 planning cycle for better alternatives.

Towne Lake Parkway (from Wdst Pkwy to Eagle Drive)

The Towne Lake Parkway corridor is controlled by the County and is dominated by the I-575 interchange. There are currently two projects designed for the Interchange, one is the larger long-range project (described in Projects section), and the other is a shorter-range project, to be described below. Interchange projects are notoriously time consuming because of the State and Federal involvement. Therefore, the City has proposed a Quick Response Project to the State at this interchange. This Quick Response Project is designed to alleviate the eastbound TLP congestion associated with the northbound I-575 entrance. The original interchange was constructed with an obvious emphasis on southbound I-575 traffic patterns. More recently, traffic patterns have grown for northbound traffic due to the regional growth north of Woodstock. This has created intense congestion for eastbound TLP traffic waiting to turn north onto I-575. There is existing space within TLP to establish a dual left to the northbound entrance ramp, in combination with some entrance ramp widening, that could relieve much of the congestion that backs up eastbound TLP regularly to Buckhead Crossing and sometimes to Eagle Drive or worse.



Additional improvements within this corridor will be planned by the County as necessary. The City-maintained Buckhead Crossing will be discussed within a separate corridor analysis.

Arnold Mill Road (from Dobbs Rd to Park Ave)

The Arnold Mill Road corridor Dobbs to Park Ave segment is currently planned to include a roundabout at both primary intersections, as outline in the Dobbs/AMR Project and the Neese Road Master Plan – Northern Segment. These roundabouts are intended to serve as the new eastern gateway into the City, along with the extension of the slower, pedestrian-friendly 25mph speed zone to cover the bulk of the City. Dupree Park is also planned to be extended all the way to Arnold Mill Road and into parcels on the north side near the intersection of Neese Road.

The conceptual designs of these roundabouts are not yet complete and will be produced in early 2022. This corridor will also include a plan to extend sidewalks on the south side of Arnold Mill Road from the current dead end at AMR/Washington to the west and across Rubes Creek with a pedestrian bridge to the west side and to a future sidewalk connection. The site of the pedestrian bridge is shown below.

Rubes Creek at Arnold Mill Road, site of planned pedestrian bridge



Neese Road

The Neese Road corridor is planned for complete renovation from south to north beginning in 2022. All three segments of the renovation plan have been included in the Projects section. They are highlighted again below.

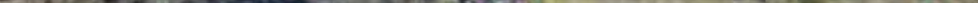


Trickum Road

Most of the Trickum Road corridor is controlled by the County, and the intersection with Highway 92 is controlled by the State. The City coordinates with both entities to keep this vital corridor operating efficiently.

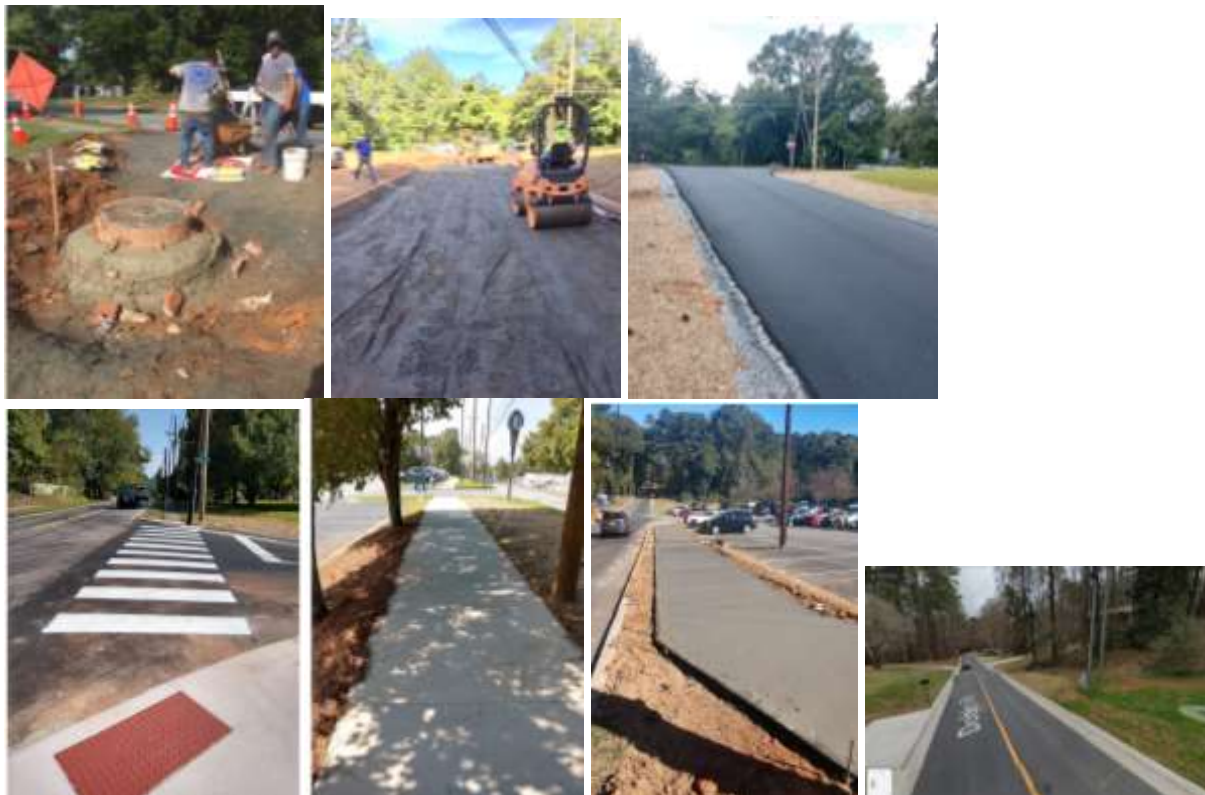


Dupree Road



Dobbs Road

The Dobbs Road corridor is a mix of corridor and grid street. It has been used as a cut-through corridor for at least 30 years, and that corridor traffic has increased during the most recent growth of the City. Yet, Dobbs Road remains mostly a grid street with a 25mph speed limit and two all-way stops, serving residential neighborhoods. Dobbs Road has been recently upgraded from a very old substandard street, and this renovation is still under construction, one section at a time. First, the intersection of Dobbs/Main was improved by raising up the last several feet of Dobbs to create an improved line-of-sight. A trail-size sidewalk was established from Main Street past the Chat Tech parking area to meet the planned Amphitheater Trail. Storm drains, curbs, and gutters were established from Melanie Lane most of the way to AMR, which simultaneously added 4' additional width to the road. Similar improvements will occur from Melanie Lane back to Main Street, as well as planned sidewalks on both sides of the street. The intersection of AMR/Dobbs is planned to become a roundabout and the intersection of Main/Dobbs is planned to become signalized unless the next block to the north (Main/Linton) is selected for that purpose instead. Either way, this will provide relief for vehicles attempt to enter Main Street from Dobbs Road.



Rope Mill Road

The Rope Mill Road corridor has been significantly renovated in 2020-2021. This included widening over 0.5 miles of roadway and parking area by 6', substantial trail extension from Ridge Trail south to Rusk Street, including a logistically difficult portion near Angela Court that has included a park like setting, as well as an actual pocket park near Ridge Trail. The corridor enhancement also included adding a bus turn lane at the elementary school and lowering the speed limit to 25mph from Main Street to Ridge Trail. The entirety of Rope Mill Road was also resurfaced and restriped. The remaining plans call for the addition of a traffic calming median, the connection of a new grid street (between Wdst Pkwy to RMR), adding sidewalks, and lowering the speed limit, all in the northern most section between Inwood Walk and the roundabout.



Ridgewalk Parkway

The Ridgewalk Parkway corridor is a well-constructed four lane divided corridor. The primary changes planned for this corridor include enhancement projects on both ends that were highlighted in the major projects section. The I-575 Interchange project will provide a very substantial improvement, but it will take time. Therefore, a GDOT Quick Response Project has also been planned. At the other end of the corridor, the new dual left turns need to be extended to the west to add approximately 200% more queuing space to accommodate afternoon drive-time volume.



Woodstock Parkway

The Woodstock Parkway corridor changed dramatically with the development of the outlet mall. The southern connection to Towne Lake Parkway will be enhanced as a component of the I-575 Interchange Project. The southernmost component will also include an important trail extension described in the Pedestrian Flow Section, to connect Woodstock Parkway to downtown for pedestrians. There will also be trail extensions toward the north, plus a new Trailhead at the new Faith Church with a public parking agreement. The roadway between Towne Lake Parkway and the Mall Roundabout will be enhanced with turn lanes and curb/gutter/stormwater improvements, as necessary.



Molly Lane

The Molly Lane corridor is sufficiently wide from Highway 92 through the intersection of Long Drive. A sidewalk project is underway, with new sidewalk and elevated crosswalk installed just south of Long Drive in 2021. Additional west sidewalk extension is planned from Long Drive to the existing sidewalk closer to Highway 92 in 2022. Roadway repairs were completed in 2021 and more extensive resurfacing should be completed within 3 years.



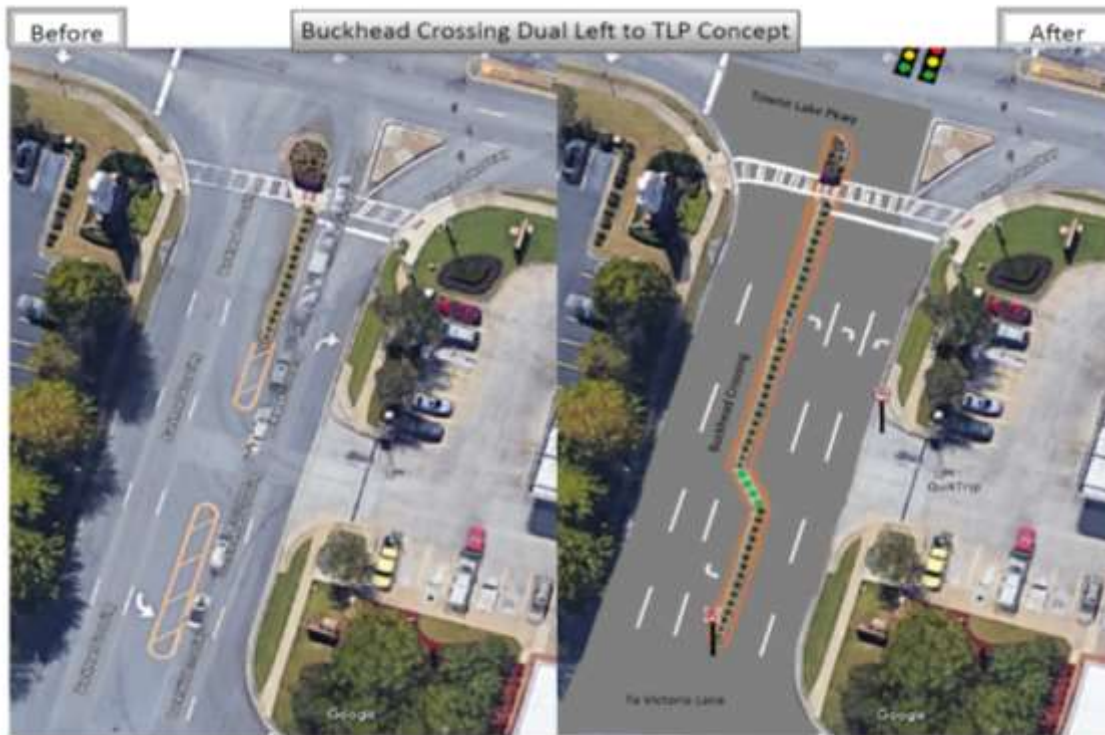
Parkway 575

The Parkway 575 corridor was enhanced significantly in 2019 and 2020 with the addition of a sidewalk from the hotel district to Highway 92. This also include a number of various driveway improvements. The future plans call for a major roadway improvement that would be a joint GDOT project to install a southbound Parkway 575 dual left exit onto Highway 92.



Buckhead Crossing

The Buckhead Crossing corridor was significantly enhanced in 2020 with the establishment of a dual left exit and a raised median restricting dangerous vehicular movements. The remainder of the roadway has sufficient width and will be scheduled for resurfacing within the next 5 years.



Hames Road

The Hames Road corridor is maintained by Cherokee County. The county has an extensive Hames Road Improvement Project on their planning schedule.







Resurfacing Plans

Overview

The Transportation Plan includes the resurfacing of City streets with new asphalt and striping. The City participates in the State of Georgia Local Maintenance Improvement Grant (LMIG) program. This program divides up gasoline tax receipts between the state, counties, and municipalities for use in road maintenance, most of which is used for resurfacing projects to keep roadways smooth and safe. The division of receipts is based upon overall road miles and population totals.

Long Term Funding

It is necessary for the LMIG funds to be augmented by additional local funds to proceed with resurfacing at the rate for each roadway over the lifespan of the asphalt. The gasoline tax receipts are not sufficient alone, but the percentage of additional funding needed has been improving based upon the new growth pattern of Woodstock. A study of the density of growth in 2020 showed a 62.53% improvement (lower cost per ERU) over the life cycle of streets when comparing the older suburban density to the newer urban density pattern of recent years. This means that the financial burden for Woodstock will be dramatically less of a financial burden than faced by traditional suburban cities.

Prioritization of Surface Conditions

Which roadways need resurfacing and when is primarily dependent surface conditions, traffic counts, and other road usage issues. As a simplistic average, low-traffic neighborhood streets require resurfacing every 20-25 years and high-traffic corridor roads require resurfacing every 10-15 years. The decision-making process necessitates continual assessments of roadway conditions, as well as long-term planning due to the high costs associated with paving projects.

The complexity of this decision-making process for Woodstock includes the timing of past growth. The roads we have today were not constructed proportionally over time. The City has experienced phenomenal growth since the mid-1990s, but this growth has been in spurts, especially the 9-year period (1998-2006) prior to the Great Recession and the 9-year period (2012-2021) since then. The pace of development within the spurts was also not evenly dispersed. This means that many roads will be due for resurfacing in the coming years and the scheduling and budgeting process will become increasingly intense.

The City instituted an automated road condition assessment system in 2019, and the streets have been assessed annually for three consecutive years. This assessment is used to prioritize the streets to be included in the planning of coming years. The 10-Year Resurfacing Plan includes two plan segments that separate Corridors and Neighborhoods. This resurfacing plan is outlined in brief detail below that summarizes the primary multi-year resurfacing plan. The plans will be re-calibrated each year based upon City Council decisions, funding alternatives, road conditions, development growth, traffic changes, and economic conditions. The strategic list below was compiled primarily by using a cost-effective automated road assessment technology and that began in April 2019. As of FY21, the plans within the ten-year period include:

Corridors/Commercial/Projects

Rope Mill Road (completed 2020 and 2021 in two segments)
Main Street from Ridgewalk to City limits (completed 2021)
Neese Road (anticipated 2022 and 2023 in two segments)
Remaining sections of Arnold Mill Road, Towne Lake Parkway (anticipated 2022)
Woodpark Place and Woodpark Blvd 2023
Molly Lane 2024
Woodstock Parkway 2025
Hames Road (county project 2023)
Buckhead Crossing 2026

Neighborhoods

Brookshire - Kingsgate I and II - Wellington Manor - Sherwood Forest
Nowlin Hall - Colony Woods - Arnold Mill Estates - Park Place Estates
Driftwood Forest - Bell Park – Woodlands – Magnolias - Whitfield
Parkview – Serenade – Weatherstone - Stonecroft - Woodstock Station
Joshua Landing - River Park - Moccasin - North Towne
Preserve at Woodlands - Regency

There are strategy issues of importance in the selection of projects as outlined above. The primary issue is whether to complete whole neighborhoods at one time or split up activity in any given year among numerous neighborhoods. The strategy as of 2022 is to resurface whole neighborhoods at a time (to the degree feasible) because:

- (1) It is logistically more feasible from the standpoint of site deployment and management; and
- (2) Partial completion and long delays within a neighborhood lead to more citizen dissatisfaction due to the day-to-day visibility of the issue.

10 Year LMIG Projections									
	Projected FY21	Projected FY22	Projected FY23	Projected FY24	Projected FY25	Projected FY26	Projected FY27	Projected FY28	Projected FY29
	107.0	110.0	112.0	114.0	116.0	117.0	118.0	119.0	120.0
	33,039	34,500	36,000	37,500	39,000	40,500	42,000	43,500	45,000
	30%	30%	30%	30%	30%	30%	30%	30%	30%
\$ 277,996.99	\$ 321,113.82	\$ 334,288.64	\$ 348,495.88	\$ 364,768.45	\$ 380,027.05	\$ 395,509.68	\$ 411,180.33	\$ 423,076.92	\$ 434,440.37
\$ 83,399.10	\$ 96,334.15	\$ 100,286.59	\$ 104,548.76	\$ 109,430.53	\$ 114,008.12	\$ 118,652.90	\$ 123,354.10	\$ 126,923.08	\$ 130,332.11
\$ 361,396.09	\$ 417,447.97	\$ 434,575.23	\$ 453,044.64	\$ 474,198.98	\$ 494,035.17	\$ 514,162.58	\$ 534,534.43	\$ 550,000.00	\$ 564,772.49
23.0769%	23.0769%	23.0769%	23.0769%	23.0769%	23.0769%	23.0769%	23.0769%	23.0769%	23.0769%
30.0000%	30.0000%	30.0000%	30.0000%	30.0000%	30.0000%	30.0000%	30.0000%	30.0000%	30.0000%
\$ 163,920,900	\$ 184,000,000	\$ 188,000,000	\$ 192,000,000	\$ 196,000,000	\$ 200,000,000	\$ 204,000,000	\$ 208,000,000	\$ 210,000,000	\$ 212,000,000
108,300.00	108,575.00	108,650.00	108,725.00	108,825.00	108,950.00	109,050.00	109,150.00	109,200.00	109,200.00
0.0988%	0.1013%	0.1031%	0.1049%	0.1066%	0.1074%	0.1082%	0.1090%	0.1099%	0.1108%
10,617,423	10,750,000	11,000,000	11,200,000	11,300,000	11,400,000	11,500,000	11,600,000	11,700,000	11,700,000
0.3112%	0.3209%	0.3273%	0.3348%	0.3451%	0.3553%	0.3652%	0.3750%	0.3846%	0.3932%
0.1696%	0.1745%	0.1778%	0.1815%	0.1861%	0.1900%	0.1939%	0.1977%	0.2015%	0.2049%
0.0659%	0.0675%	0.0687%	0.0699%	0.0711%	0.0716%	0.0721%	0.0727%	0.0733%	0.0739%
0.1037%	0.1070%	0.1091%	0.1116%	0.1150%	0.1184%	0.1217%	0.1250%	0.1282%	0.1311%
0.1696%	0.1745%	0.1778%	0.1815%	0.1861%	0.1900%	0.1939%	0.1977%	0.2015%	0.2049%
10 Year Other Funding Projections									
	Projected FY21	Projected FY22	Projected FY23	Projected FY24	Projected FY25	Projected FY26	Projected FY27	Projected FY28	Projected FY29
\$ 315,000.00	\$ 330,750.00	\$ 347,287.50	\$ 364,651.88	\$ 382,884.47	\$ 402,028.69	\$ 422,130.13	\$ 443,236.63	\$ 465,398.46	\$ 488,668.39
10 Year Total Resurfacing Projected Expenses									
\$ 676,396.09	\$ 748,197.97	\$ 781,862.73	\$ 817,696.52	\$ 857,083.45	\$ 896,063.86	\$ 936,292.71	\$ 977,771.07	\$ 1,015,398.46	\$ 1,053,440.87





Pedestrian Flow and Sidewalks

Woodstock has experienced extremely rapid growth in pedestrian activity. This is mostly due to the popularity of Destination Woodstock, but it is also an outgrowth of an international trend toward live/work/play communities and a health-conscious public. The City has invested heavily in a spectacular Trail System and the trails often lead directly into shopping, entertainment, and residential districts with sidewalks and crosswalks designed to enable pedestrians.

The Long-Term Pedestrian Plan includes:

Developmental Planning – Requiring new developments to include ample sidewalks, trail connections, crosswalks, accessible ramps, pedestrian bridges, boardwalks, and other pedestrian infrastructure as feasible depending on terrain, density, and zoning requirements.

Sidewalks – Continued replacement of older and damaged sidewalks with wider, more pedestrian-friendly walkways, as well as Trail Extensions, as feasible. Continued installation of new sidewalks where they were never installed and the continued creation of accessible ramps throughout the City.

Completed Sidewalk Projects since 2018:

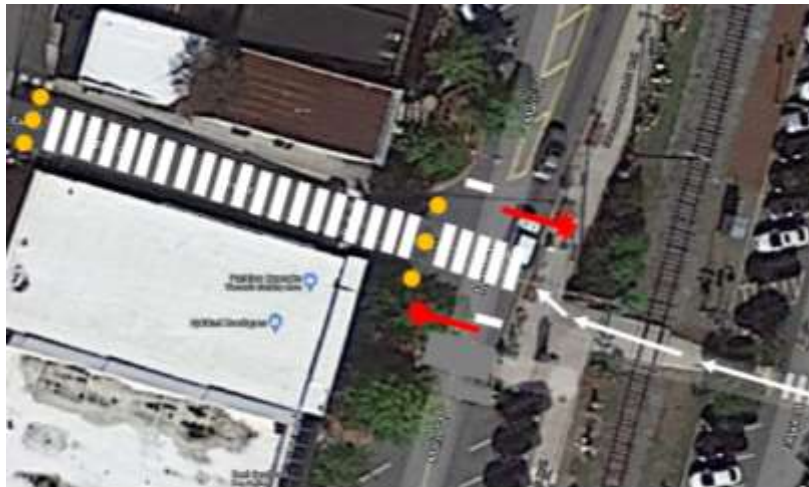
- Arnold Mill Road north side (Trail sidewalk)
- Towne Lake Parkway north side (along City Center Parking)
- Towne Lake Parkway north side (along retail center)
- Dobbs Road south side (along Chat Tech)
- Parkway 575 switching sides as necessary (entirety)
- Ridge Trail extension
- Olde Rope Mill Pk Rd east side (from aux parking to park)
- Rope Mill Road

Current Target List of major sidewalk Gap Program extensions:

- Main Street (from Henderson north to Rope Mill Road) 2021 & 2022
- Mill Street 2022
- Neese Road 2022 and 2023
- Rope Mill Road 2019, 2020, and 2023
- Molly Lane 2021, 2022, and 2023
- Dobbs Road 2018, 2023-2026
- Towne Lake Parkway 2018, 2022, 2024
- South Main Street 2022 and 2023
- Arnold Mill Road (south side) 2022
- Dupree Road 2018, 2021, and 2023
- Woodstock Parkway 2019, 2022, and 2023

Main/Elm Pedestrian Project

The most substantial planned pedestrian project was highlighted in the major project section earlier. This project is intended to protect and control pedestrians crossing Main Street between Towne Lake Parkway and Fowler Street. This would be accomplished by creating a new pedestrian crossing of Main Street at Elm Street (just a few feet away from the existing crossing), signaling this crossing in synch with the traffic signals to the north and south, discontinuing all three mid-block crossings in this area, convert Elm Street (Main to Wall) to pedestrian-only, discontinue vehicular turns off Main Street at Elm Street, and discontinue vehicular delays caused by pedestrians.



Enhanced Conditions: (1) Pedestrian flow is protected by Walk/Don't Walk signal; (2) Easier/wider route across Main; (3) Vehicle delays eliminated; (4) Pedestrian flow is straighter and more visible

Gap Program Highlights

Main Street from Serenade to Downtown Connection –

This project has already been highlighted as the South Main Street Master Pedestrian Plan. The project proceeds in this area only on the west side of Main Street because of the railroad on the east side. The section along South on Main has been completed, then next section covers the portion between SOM and Ayden Park. The portion between Ayden Park and the Dupree Road intersection project will be another section that is not yet designed due to potential redevelopment. The Dupree Road intersection project will be first in early 2022 and will include a signalized pedestrian crossing of Dupree. Then Streetscapes IV will cover the section from the intersection project to Fowler Street.

Woodstock Parkway to Downtown Connection –

This project includes the extension of the trail-size sidewalk from the southern edge of Haddenstone southward to Towne Lake Parkway, then utilizing the existing signalized crossing at TLP and the existing sidewalk to the east in front of the Tag Office and office park, then further extending that sidewalk from the current eastern terminus through the nicely wooded area to connect to Mill Street near Paden.

Main Street from Ridgewalk to Downtown Connection –

This project includes establishing a Trail on the west side and sidewalk on the east side on Main, all the way from Ridgewalk Parkway to downtown. The most prominent section is complete from the Library to the Roundabout with a great pedestrian experience and a beautiful gateway entrance into the heart of Woodstock. The newest extension to the roundabout will be extended again to the south to meet the new sidewalk at Adair Park and will continue to the south on both sides as feasible.

Crosswalks

Continued replacement of older and damaged crosswalks with more pedestrian-friendly walkways and access as feasible. Continued installation of new crosswalks where they were never installed and the continued creation of accessible ramps throughout the City. The City has dramatically improved pedestrian crossings in the most recent years.

Completed Signalized or Actuated Crossings since 2018 –

- Across Main St at TLP (Rootstock Crossing)
- Across AMR at E Main (Morgan's Crossing)
- Across AMR at Hubbard Rd
- Across Main St at Fowler St
- Across AMR at Fire Station 14
- Across Main St at south side of Ridgewalk Pkwy
- Across RMR near Rusk St (since relocated to the north)
- Across Main St at Linton St
- Across Rope Mill Rd at Inwood Walk (not yet actuated)
- Across Serenade Lane extension at Main (signalized)

Current Target List for Crossings:

- In-Roadway illuminated Main St near Ipps restaurant 2022
- In-Roadway illuminated Towne Lake Pkwy at UMC 2022
- Across Dupree Rd at Main St (signalized) 2022
- Actuated addition Rope Mill at Main 2023
- Actuated addition Main at East Main 2023





Public Parking

Overview

Public parking is a very significant component associated with vehicular and pedestrian traffic flows. The City Center District is faced with consistent parking dilemmas. The demand for parking is acute during special events, and challenging during warm weather weekends, but much less so during non-peak times. There is a constant trade-off between efficient utilization of public parking space and the peak demand load of special events. Most communities attempt to build public parking to accommodate the every-week or weekend peak demand and choose other alternatives to accommodate less frequent special events.

Conditions and Plans

The public parking available for current consistent weekend demand is sufficient, though not to accommodate the growth anticipated in coming years. The dilemma faced currently is that patrons are not consistently utilizing the two larger facilities (Chambers at City Center & Chattahoochee Tech) consistently enough. Many patrons became used to parking adjacent to their favorite establishment during the Great Recession and have not familiarized themselves with or utilized these larger alternatives just a couple of blocks away. The Plan calls for pursuing alternatives to popularizing and maximizing these facilities in the short run.

In the long run, additional parking facilities will be necessary. However, the locations of such facilities will be a crucial part of the plan, as will the type of facility (surface or deck) and the size of facility (scattered or concentrated). The most realistic long-term parking plan includes the addition of multiple deck/lots, with small footprints, and spread out

within multiple quadrants of the City Center District (usually in conjunction with private new development). Such a plan would allow for the addition of parking on an as-needed basis, without undue impact on the utilization of prime acreage within Destination Woodstock or the ambiance of the area. The most impactful plan is to target all four quadrants with additional parking, beginning with the most acute southeast quadrant. The deck for the southeast quadrant is tentatively planned to be within the new City Center development in that quadrant, to be constructed in 2022 or 2023. Additional decks and lots will be considered on an as needed basis and dependent on the success of that first deck. The second deck will most likely be in the southwest quadrant, which is also experiencing acute need.

The long-term plan also includes establishing methods to publicize the location of existing parking and to help visitors park quickly and easily. The improved accessibility, safety, and attractiveness of parking facilities is an important component of this plan. “Smart Parking” programs should be utilized to reduce unnecessary circling and maximize the existing spaces.

Alternative Parking

Other parking alternatives have been and will continue to be added for PTVs and motorcycles, as conditions demand. The first PTV/Motorcycle spaces were installed in 2019 at the Elm Street Green, the Chambers at City Center, and on East Main near Freight. Temporary PTV/Motorcycle spaces have also been established at the City Center Development site. The spaces near Elm Street Green have been used very consistently. Demand is most acute in that area. Additional spaces are planned in that area for installation in early 2022.





Traffic Calming and Speed Limits

Traffic Calming

The City of Woodstock has established a Traffic Calming Program to analyze and facilitate physical changes within roadway right of way that are designed to enhance public safety in a consistent manner in tune with the neighborhoods and corridors of the City. The program includes a Traffic Calming Application process to coordinate requests, analyze circumstances, ensure certified engineering review, manage physical implementation, and proceed according to the ordinances, policies, and practices of the City.

This has been designed as a deliberative process because it involves conflicts between the various desires of citizens. Many participants in the application process have strong opinions about the severity of the traffic issue at hand and potential solutions. They are often unaware of different opinions and potential unintended consequences of various solutions. This process is like most other civic issues. The most vocal and active participants have strong opinions and desires for action. These most active participants generally attract other citizens with similar views and together they come to reinforce these views as the overwhelming majority opinion. Less active citizens may have opinions in conflict, but these opinions are less likely to be known or made public until action is already taken. Unfortunately, the volume of opposing ideas and opinions is rarely understood in advance.

Traffic calming issues within neighborhoods are frequently sources of ongoing turmoil, especially when they proceed so fast that they circumvent the deliberative process. It is best to proceed slowly and to communicate widely, with a great deal of study of the facts of the case and broad consideration of the various alternatives. The history of traffic

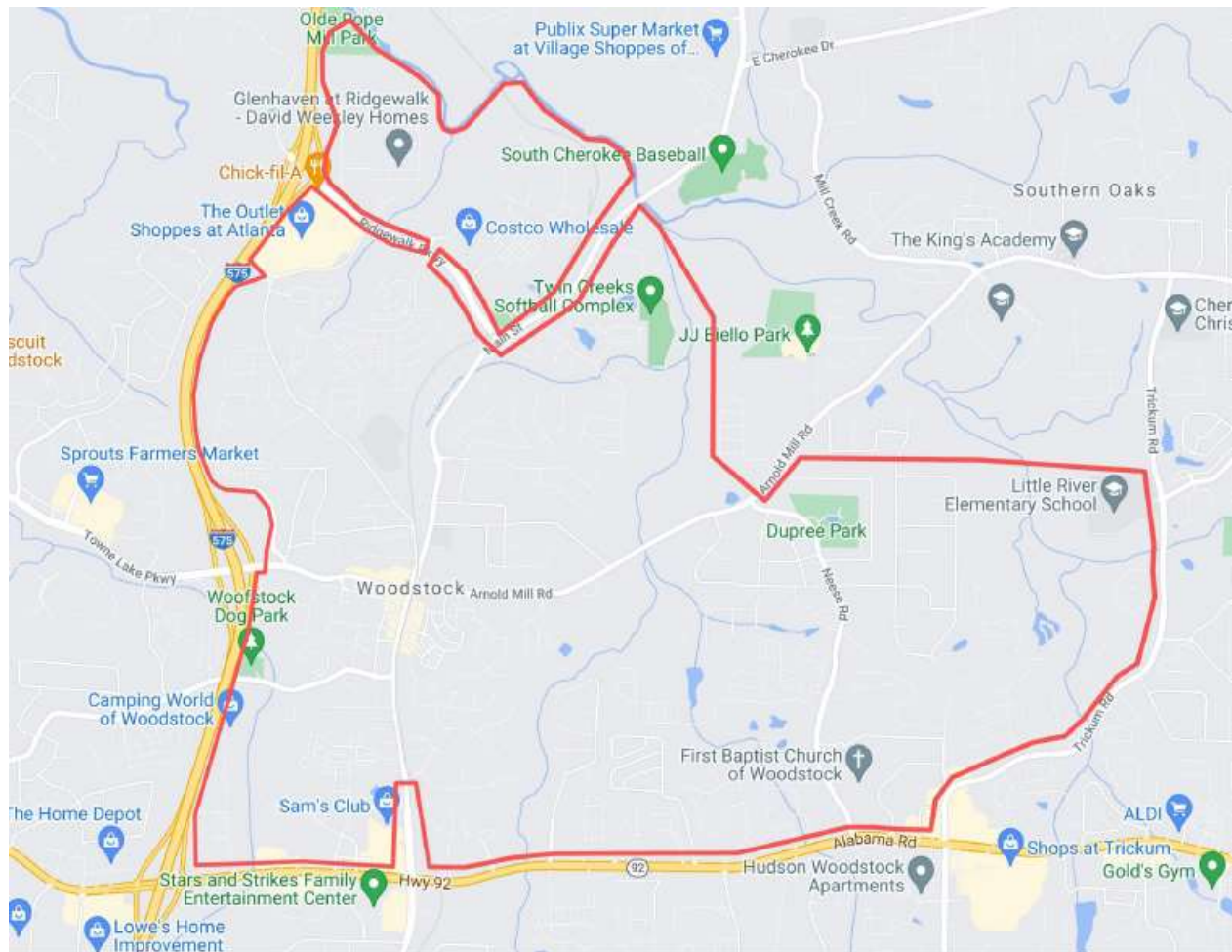
calming requests in the past has included cases where the solutions turned out to be worse than the original problem. Overuse of some traffic calming techniques can dramatically impact the overall character of a neighborhood and thereby impact the property values of every property owner.

These are communitywide impacts that require communitywide communication and consideration. There are also issues of community cohesiveness and conflict involving the original traffic issues and potential reactions to proposed solutions. There are many examples where neighborhoods with well-established cohesiveness have been disrupted by divisive conflicts over speed humps and other traffic calming solutions. It is imperative to maintain deliberative processes to minimize similar unintended consequences.

The history of traffic calming has included efforts over the past few decades to share ideas across jurisdictions and to share statistical data as feasible. However, it is important to emphasize that every community and every roadway is different. This makes the topic very complex. The Traffic Calming process within neighborhoods with HOAs proceed as a communitywide initiative in communication with the HOA. Traffic Calming on corridors and in neighborhoods without HOAs proceed through the deliberative process with as much public involvement as feasible.

Speed Limits

This Transportation Plan includes the design of an eventual 25mph zone (or lower) within the major portions of the City Limits east of I-575, except for state highways and the commuter corridors of north Main Street, south Main Street, and Ridgewalk Parkway. The map of that zone is shown below.



The process of setting and changing speed limits is complex because it involves two separate jurisdictional authorities. The City Council sets speed limits on City Streets. The Georgia Department of Public Safety regulates the radar permit on City streets and state highways. The radar permit establishes the areas of realistic speed enforcement by the Police Department. Therefore, the two processes need to be in synchronicity to allow for effective enforcement.

The radar permit process is the most complex component because of the standards used to determine acceptable permitted speed limits. Most citizens are in favor of lowering speed limits on City streets for safety purposes. However, the permitting process is designed to restrict the setting of lower speed limits in favor of protecting motorists from potential speed traps. The standards used by GDOT as the primary condition to lower speed limits is that the local jurisdiction must prove that 85% of traffic is already traveling at lower speeds. This is the opposite of what most individuals imagine the process entails.

Therefore, this Transportation Plan recommends the periodic use of outside engineering firms to help gather evidence of why other factors should be in consideration for the protection of the public. This strategy was successfully used in 2019-2020, as major sections of Rope Mill Road, Arnold Mill Road, and Towne Lake Parkway were lowered to 25mph. The remainder of the mapped segment listed above should be accomplished in a similar way.





Other Aspects

Landscaping/Beautification/Cleanliness/Art

The Transportation Plan includes considerable attention to the landscaping in rights-of-way (ROW) and the overall beautification and cleanliness of the community. The ROWs require continual cutting and trimming during the growing season, as well as litter and critter removal year-round. These areas are also considered for additional landscaping that will add to the ambiance of the community.

The plan is to add landscaping and art each year in small, cost-effective ways that maximize the use of limited public funds. This requires a design plan that identifies the most appropriate plants and trees for the locale and the consistent use of these plants and trees (as well as planters, benches, art, lighting, and monument signage), so the public landscaping can gain greater continuity around the entire City.

The primary areas of the design include the 4 quadrants of entrance into downtown (Main Street North, Main Street South, Arnold Mill Road East, Towne Lake Pkwy West), as well as nearby corridors of Rope Mill, Dobbs, and Dupree. The design is best exemplified by the work completed to date along Main Street North near the library. There have been significant improvements between the Roundabout and Ridgewalk Pkwy that has resulted in a picturesque approach to downtown as travelers continue south from Ridgewalk Pkwy.

Another recent example is on Rope Mill Road between Inwood I and Cardinal Woods on the west side, as well as in smaller pockets within the Rope Mill Road corridor. In these locations, there were limited opportunities for landscaping, so those few opportunities were maximized by installing attractive landscaping and benches where feasible to create

a parkway feel along the roadway, designed to enhance both the pedestrian and vehicular experience.

Such continued improvements will help establish a “look & feel” for Woodstock that is as important as logos, street signs, and other identifying features. This plan will be coordinated with the departments responsible for planning/zoning, parks, trails, downtown coordination, and other entities intimately involved in the greenery associated with public spaces.

Winter Weather Events, Natural Disasters, Special Events

This Transportation Plan also includes preparations and clearing of roads and sidewalks during winter weather events and other natural disasters such as flooding and downed trees on public property. The plan calls for the continued improvement of this process through industry benchmarking, automated tracking of activity, and systematic process controls during emergency conditions. It also includes full participation in and support of the Incident Command process of the City.

Signage and Street Marking

The Transportation Plan includes considerable attention to the signage within the public right-of-way and the markings on roads and in public parking areas. The Plan includes the intention to continue systematic standardization of signage according to the overall plan of the City. Part of this plan is to minimize the unnecessary or ineffective use of signage, and to ensure the inclusion of community-friendly messaging where feasible. The plan also calls for the creation of an inventory database of every City sign on a GIS mapping system.

Public Involvement

Public input and involvement in traffic flow issues is very important to long-term success. The input of the public can often uncover opportunities that are frequently identifiable only to those closest to the flow itself. The eyes of citizens that live at an intersection or drive the same corridor multiple times per day can be incredibly valuable in ways that can never be duplicated by raw statistics of traffic volumes. However, average citizens have other daily concerns in life and rarely concentrate on specific traffic circumstances, therefore the input received – while very valuable on average – is also widely dispersed on a sliding scale of value. Much of the public input is received only during times of

controversial development cases. It is the intent of this Plan to continually improve the informational access of the public and the usage of the information collected from the public.

One such improvement is to devise and disseminate a set of key issues and trends impacting traffic and citizens. This allows citizens to become more familiar with the issues at hand and possible alternatives as they are thinking through the individual issues motivating their key input. Much of this information will help citizens provide even keener insight into the traffic issues closest to them.

Staff/Data/Equipment Strategy

The Transportation Plan includes long-term planning for the staffing and equipment levels necessary to complete the approved tasks as efficiently and effectively as feasible. This includes very carefully determining the feasibility of outsourcing some of the functions when appropriate. It also includes the decision of equipment purchasing and very carefully determining the feasibility of renting equipment for the functions that are less frequent in usage. Most importantly, the plan calls for the accumulation of data on traffic, speeds, and location of infrastructure to facilitate the decision-making processes involving transportation issues effectively.

City Coordination and Funding Sources

The Transportation Plan includes the constant need to coordinate activities with the other various departments within the City. This includes the important activities of the Police and Fire Departments, which involve enforcement of traffic laws and emergency access requirements. It also includes the coordination with Community Development Department and Economic Development Office for the planning and development of new streets, sidewalks, and parking. The Parks and Recreation Department requires coordination of streets, sidewalks, and parking associated with the various approaches to the parks and trails. And the coordination with the Downtown Development Authority is essential because the primary crossroads are in the Downtown District with the unique conditions associated with retail/entertainment activity, as opposed to residential-only.





Conclusion

This Transportation Plan is a working document and subject to constant revision. The recommendation is to establish this as an Annual Plan presented to City Council every January for review. The revisions will be memorialized by volume number identification that includes the date of the latest volume.