

1. Introduction to the 2040 Metropolitan Transportation Plan

Executive Summary/Key Points

- The Metropolitan Planning Organization (MPO) Long Range Transportation Plan:
 - Is multimodal to meet the needs of all transportation modes,
 - Plans for the MPOs transportation facilities and services to a 20 year horizon,
 - Is financially responsible and fiscally constrained,
 - Meets Air Quality Conformity standards with our 2040 Transportation network.
- The MPO adheres to 8 planning factors established by federal law.
- The MPO transportation vision and objectives, policies and action agenda were cooperatively developed with our land use and planning partners.
- The MPO long range planning public involvement process is continuous and meets the goals of the Public Participation Policy adopted March 2014.

Table References

Table 1.2.1 Comparison of CTPs and LRTPs

1.1 Overview and Purpose

The planning of transportation has a long history in the Winston-Salem Urban Area. Over 200 years ago, the Moravians laid out our initial communities. A wide variety of transportation facilities and services have been developed through the years from the early wagon and wooden plank roads to the development of railroad and trolley car lines. From Smith Reynolds Airport, the birthplace of Piedmont Airlines, to the multimodal transportation center in downtown and, now, to the future rebuilding of the original Interstate 40 through Winston-Salem. The legacy of planning and building important transportation facilities for our community continues.

What will our community be like in the year 2040? More importantly, how will we grow and what transportation facilities and services will be needed to serve our citizens and the thousands of people who will visit or pass through our community each day? It is our responsibility to plan for the urban area's investments in roads and highways, transit services, bicycle lanes, greenways and sidewalks and other transportation facilities, programs and services to match the growth expected in the into the future. The Winston-Salem Urban Area 2040 Metropolitan Transportation Plan (Plan) is this guiding document.

In this Plan you will find an overview of the Winston-Salem Urban Area Metropolitan Planning Organization (MPO), including Forsyth County, portions of Davidson, Davie and Stokes Counties as well as all the cities, towns and villages with in the Metropolitan Area Boundary (MAB), as well as the regional coordination of transportation in the Piedmont Triad. The Plan includes the MPO vision, policies and actions that guide our transportation programs and projects. The recommendations for roadways, public and private transportation, bicycle and pedestrian facilities are factored into the financial plan and the draft Air Quality Conformity Determination Report. Planning for safety, freight, congestion, and protection of the human and natural environment are integral to our process.

1.2 What is the Plan?

The Winston-Salem Urban Area 2040 Metropolitan Transportation Plan is a federally mandated document that must adhere to specific requirements. The Plan must have a vision that meets our community goals, it must provide for all transportation modes, it must have a minimum twenty year planning horizon, and it must be financially constrained where projected revenues meet the costs of the transportation facilities we have planned. The Winston-Salem Urban Area Plan has been developed as a piece of a larger regional plan for the Piedmont Triad Area, in coordination with the Piedmont Authority for Regional Transportation (PART) and the Metropolitan Planning Organizations for Greensboro, High Point and Burlington-Graham urban areas.

Metropolitan areas in North Carolina prepare two distinct, but related transportation plans:

1. Comprehensive Transportation Plan (CTP) show all of the existing and new and expanded major roads, transit services, bicycle and pedestrian facilities and related transportation improvements that meet the growth and mobility needs as far out into the future as can be envisioned. The CTP is a State requirement and provides the MPO vision of future needs that ties into the North Carolina statewide long range plan - **NCDOT From Policy to Projects - 2040 Plan** found in the Appendix.

2. Metropolitan Transportation Plan (MTPs (formerly called the Long Range Transportation Plan or LRTP)) is a subset of the CTP and shows the new and expanded roads, transit services, bicycle and pedestrian facilities and related transportation improvements that will meet federal air quality standards and can be reasonably assumed to be funded and built by the year 2040.

This document addresses only the MTP (Plan). The following **Table 1.2.1** summarizes the important features and differences between the two plans.

Table 1.2.1 Comparison of CTPs and MTPs

Plan	Winston-Salem Urban Area MPO 2040 Metropolitan Transportation Plan	Winston-Salem Urban Area MPO Comprehensive Transportation Plan
Area Covered	Forsyth and portions of Davidson, Davie and Stokes Counties	Same
Who requires the plan	Federal Government	State Government
Planning Horizon	2040	No Set Year
Fiscal Constraint	Yes	No
Air Quality Conformity	Yes	No

The Winston-Salem Urban Area consists of two counties that have had air quality issues with the pollutants carbon monoxide (CO) and particulate matter (PM 2.5). Forsyth County is considered in maintenance for CO and Davidson County has been designated as non-attainment for PM 2.5 by the United States Environmental Protection Agency. In 1990, the Clean Air Act Amendments tied transportation funding to air quality goals. Due to the air quality issues within the MPO, the Street and Highway portion of the Plan must meet Air Quality Conformity by meeting established pollutant budgets defined by the North Carolina Division of Air Quality and developed for each planning horizon year period. A more detailed discussion of the process and the Air Quality Conformity Determination is provided in the draft document in Chapter 8. The Plan has been developed in coordination with the draft Air Quality Conformity Analysis Report and Conformity Determination and the Fiscal Year 2016-2025 Metropolitan Transportation Improvement Program (MTIP).

Given the limited financial resources at the federal, State and local levels, the rapidly increasing costs of fuel and construction materials, the heightened air quality standards, and the desire by the citizens in the Winston-Salem Urban Area to maintain a high quality of life, the emphasis of the Plan is to provide a better balance of transportation facilities, programs and services that will serve the urban area's future travel needs.

1.3 Eight Planning Factors

Under the provisions of the Moving Ahead for Progress in the 21st Century Act (MAP-21), all MPOs are required to consider eight (8) broad planning factors in the development of multi-modal transportation plans and programs. MAP-21 requires that “the metropolitan transportation planning process for a metropolitan area...shall provide for consideration of projects and strategies that will...” accomplish the following objectives. Each of the 8 planning factors is addressed individually below:

1. SUPPORT THE ECONOMIC VITALITY OF THE METROPOLITAN AREA, ESPECIALLY BY ENABLING GLOBAL COMPETITIVENESS, PRODUCTIVITY AND EFFICIENCY.

The Winston-Salem Urban Area MPO has worked with the North Carolina Department of Transportation (NCDOT) and other State and federal agencies for many years on a variety of transportation projects to support the economic vitality of the area.

One of the most important projects for the urban area is the creation of a regional transportation system for the Piedmont Triad. The Piedmont Authority for Regional Transportation (PART) continues to develop a regional transportation system (regional bus, vanpools, park-and-ride lots, and connections to passenger rail lines, etc.) that will link the Winston-Salem Urban Area with the cities of Greensboro, High Point and Burlington-Graham; Guilford County, the Piedmont Triad International Airport (PTIA), and the outlying communities and counties in the region. For example, PART runs Express Bus Service that provides efficient transportation for hundreds of daily commuters from Piedmont Triad cities to the PTIA. This kind of service, along with the other modes of transportation being developed, helps make the Winston-Salem Urban Area very attractive for large businesses and industries like FedEx, Caterpillar and Herbalife to locate here, and aids in the overall economic vitality and global competitiveness of the urban area.

Another important project to the Urban Area will be the future completion of the Interstate 74 highway. The proposed freeway will provide a direct connection from the industrialized regions of the upper Midwest and Canada to the coastal ports and areas of North and South Carolina. The Urban Area's economy will benefit from the highway with increased tourism and enhanced transportation options for people and goods. Interstate 74 (also commonly called the Northern Beltway, Eastern Section), from US 52 to US 311, is currently under construction by NCDOT and will greatly enhance the efficiency of the urban area's overall street and highway network, particularly on US 52 and Business 40 (US 421) in Winston-Salem.

Other major transportation projects contained in this plan also will aid the movement of people and goods and enhance the economic vitality of the area. For example, the construction of the Research Parkway (also known as the Salem Creek Connector) and the planned improvements to Business 40 (US 421) are geared to improving access into downtown Winston-Salem and will continue to boost the revitalization of the central business district (CBD). Currently under construction, the Research Parkway from US 52 will provide direct access to the growing campus of Winston-Salem State University (WSSU) and to the Wake Forest Innovation Quarter (WFIQ), a campus of biomedical science, information technology, advanced materials and engineering anchored by Wake Forest Baptist Medical Center, Inmar and Wells Fargo that is currently under construction. Up to 30,000 medical and technology jobs are anticipated to be generated in the park, further enhancing the revitalization and growth of the downtown core. This type of development will give the Winston-Salem Urban Area a strong position in the global marketplace.

A couple of other major highway projects are under construction that will provide much better access and traffic flow to business parks, industrial sites, and future development areas. These include the widening of Union Cross Road with the reconstruction of the Interstate 40 and Interstate 74 (US 311) interchanges, and the new Macy Grove Road interchange on Business 40 (US 421) that will improve access to a growing industrial and warehousing area east of Kernersville along East Mountain Street. To complement that project, East Mountain Street/West Market Street has recently been widened to a

four lane divided boulevard in Guilford County from NC 68 to the town of Colfax along that industrial corridor.

2. INCREASE THE SAFETY OF THE TRANSPORTATION SYSTEM FOR MOTORIZED AND NON-MOTORIZED USERS.

The Winston-Salem Urban Area is strongly committed to increasing the safety of the transportation system for motorized and non-motorized users as shown in the following examples. Since 1987, the City of Winston-Salem Department of Transportation (WSDOT) has produced an annual Safety Improvement Report to identify locations in the City of Winston-Salem where the transportation system (primarily street intersections) needs improvements. Studies are conducted on each of the hazardous locations to develop the appropriate solutions. Follow-up studies are also conducted to monitor the progress of the implemented solution. The NCDOT also conducts similar safety improvement studies on streets and intersections in the remainder of the Urban Area. Improved safety of the transportation system also helps to reduce congestion and improves air quality. The Safety Improvement Programs are included as an important on-going strategy in the Congestion Management Processes (CMP) Plan later in this document.

In addition to the Safety Improvement Programs, other steps are taken to ensure that safety is considered. The MPO considers safety as one of the most important factors in analyzing and selecting projects for funding and implementation. In the biennial prioritization process projects are evaluated and ranked using NCDOT's accident history data as an indicator of a safety deficiency. An analysis of pedestrian and bicycle accidents was conducted in 2012, and is described in the Bicycle and Pedestrian Element. Proposed development plans are reviewed with an eye towards improving safety, and sites are checked for existing crash patterns. Developers may be asked to complete work that will help mitigate crash problems.

The Urban Area also supports the implementation of a number of other projects to ensure the safety of its users including: the construction of median guardrails on all freeways in the urban area, replacement of deficient bridges and structures, a safe and convenient multi-modal transportation center in downtown Winston-Salem, and the construction of sidewalks, pedestrian bridges, greenways and other facilities for the safe movement of bicyclists and pedestrians.

For the Winston-Salem Transit Authority (WSTA), safety is of the utmost importance to its operations. From the delivery of regular route transit services, Trans-Aid, nighttime and weekend transit options, the safety of its passengers and drivers is critical. WSTA takes great pride in maintaining an excellent safety record for all of its staff including the management and bus maintenance personnel.

3. INCREASE THE SECURITY OF THE TRANSPORTATION SYSTEM FOR MOTORIZED AND NON-MOTORIZED USERS.

With regard to security, the WSDOT is a member of Forsyth County's Homeland Security Domestic Preparedness Task Force, representing the interests of all the public works agencies within the county and has helped in the preparation of various vaccination plans for pandemic diseases for the entire urban area and is available to complete other planning and traffic operations work.

WSTA, as described above, participates in local efforts to improve security. WSTA is part of Forsyth County's emergency service plan and will provide transportation on an as-needed basis if an incident occurs. WSTA also is a member of Forsyth County's Homeland Security Domestic Preparedness Task Force. WSTA management, in conjunction with the City of Winston-Salem Police Department, has developed plans to evacuate the downtown Transportation Center in the case of a threats, emergencies or incidents. The Police Department and WSTA continue to refine plans to deal with incidents on individual buses. Finally, WSTA continues to study other options to increase the security of its system and for its patrons.

4. INCREASE THE ACCESSIBILITY AND MOBILITY OPTIONS AVAILABLE TO PEOPLE AND FOR FREIGHT.

Increasing the accessibility and mobility options available to people and for freight is one of the most important objectives to the Winston-Salem Urban Area. The Urban Area's options are substantially enhanced by the transportation planning process and system improvements proposed in this plan. This will come about in two ways: better land use and transportation planning and providing the necessary resources to enhance the existing transportation system. Through better land use and transportation planning, land use policies will need to be implemented to support transit usage, walking and bicycling, and reduce our dependency on the automobile. More compact development patterns at activity centers and along transit corridors will make the transit system more economically self-sustaining. In the neighborhoods, transit-oriented design emphasizing a mix of uses and easy pedestrian access to shopping and services will lessen the need to drive.

The Urban Area has been active in planning for and providing safe and efficient freight distribution routes. Understanding the relationship between urban goods movement and land use planning has improved the Urban Area's ability to plan for new road facilities and improve existing streets and highways, replace deficient bridges in a timely manner, make necessary railroad crossing improvements, and route vehicles to minimize impacts in residential neighborhoods.

While the automobile continues to be a major means of travel in the Urban Area, the provision of sufficient financial resources to increase the availability of convenient and affordable public transportation including buses, vanpools and rail will be critical for travel between neighborhoods, retail and employment centers, and will assist to reduce congestion on the streets and highways. For example, the successful use of federal Job Access and Reverse Commute (JARC) funds provides various public and private agencies the needed resources to provide needed transportation services beyond WSTA's scope of operations.

5. PROTECT AND ENHANCE THE ENVIRONMENT, PROMOTE ENERGY CONSERVATION, IMPROVE THE QUALITY OF LIFE AND PROMOTE CONSISTENCY BETWEEN TRANSPORTATION IMPROVEMENTS AND STATE AND LOCAL PLANNED GROWTH AND ECONOMIC DEVELOPMENT PATTERNS.

For decades, the Winston-Salem Urban Area has supported efforts to protect and enhance the human and natural environment, promote energy conservation, and improve the quality of life for citizens with its transportation investments.

An early example of this commitment was made in the mid-1950's when the City of Winston-Salem, working with NCDOT, designed and built a bypass around the core of Old Salem, a historic Moravian town. The road project enabled the area to divert large volumes of trucks and other vehicles off of Main Street (at the time this was US 52), providing an opportunity to protect the historical and cultural significance of the area. With this project, Old Salem has become nationally known for its preservation and restoration of this historic community. A similar road project, the Bethabara Park Boulevard, achieved many of the same results in and around the historic Bethabara Park area.

A comprehensive transportation and land use study was completed for the Town of Bethania - a designated National Historic Landmark. Recommendations for short-range improvements have been implemented while Bethania and the surrounding neighborhoods work toward solving long-range traffic problems. The future implementation of the Northern Beltway (Western Section) will provide the long anticipated bypass that will divert through traffic and protect this historic Moravian community.

MPO staff continues to be active in neighborhood traffic planning and the implementation of traffic calming measures to address a variety of traffic conditions throughout the Urban Area. In several locations (London Lane, Lockland Avenue, Pecan Lane, etc.) the City of Winston-Salem has worked

with neighborhood associations and property owners to develop low cost and effective ways to slow the speed of residential traffic and improve the quality of life in these areas.

On a project by project basis, the Urban Area has supported the provisions of the National Environmental Policy Act of 1969 (NEPA), which require a full environmental review of federally funded transportation projects, particularly streets and highways. NEPA has been successful locally by involving the general public in the planning process to determine the impacts of transportation facilities to the man-made and natural environments. Environmental Impact Statements (EIS), Environmental Assessments (EA) and Categorical Exclusions (CE) are the tools used to evaluate the impacts of these projects and to determine ways to mitigate those impacts.

The Urban Area also has been a leader in North Carolina for its energy conservation and contingency planning. In 1983, the Urban Area hired a consultant to develop an "Energy Conservation /Contingency Plan". The purpose of the plan was to provide a framework for implementing an organized program of strategies to conserve energy and manage the impacts of an energy shortage should one develop. An important consideration in developing the plan was for the overall program to be both politically and economically feasible. The plan focused on two basic functions: identification and analysis of transportation strategies to conserve fuel on a daily basis and provision of step-by-step guidance on actions to be taken in the event of an energy supply shortage. Many of the strategies toward conserving fuel on a daily basis were implemented and are still being used today. For example, park and shuttle lots were built on the northern and western edges of downtown Winston-Salem to encourage transit usage and minimize automobile travel. Working with PART, additional park-and-ride lots have been built in other locations around the Urban Area for the regional transit system.

The Urban Area has also been working with the NCDOT in protecting wetland areas by purchasing tracts of land that have wetland characteristics. This land-banking approach has served well to protect wetlands for future generations. Also, the Urban Area continues to develop the computerized traffic signal system which was installed and became operational in 1998. The current signal system for the City of Winston-Salem controls 372 signals, of which 318 are coordinated across 47 individual zones. To reduce communication failure rates, the central signal system software was updated in 2011. A full Signal System Upgrade project (C-5224), is underway. This project will install a new fiber-optic communications network and upgrade intersection cabinets and equipment. This project is scheduled to be complete in 2016. At the end of the project, the system will include approximately 400 signalized intersections and 150 miles of fiber optic communication cable.

6. THE INTEGRATION AND CONNECTIVITY OF THE TRANSPORTATION SYSTEM, ACROSS AND BETWEEN MODES, FOR PEOPLE AND FREIGHT.

The Winston-Salem Urban Area has developed and supported many programs and projects that enhance the integration and connectivity of the transportation system, across and between modes, for both people and freight. The best example was the completion of the multi-modal transportation center in downtown Winston-Salem in 1997. The facility provides a central transfer point for citizens using WSTA's regular-route buses in Winston-Salem, PART's express buses which provide a regular-route connection to Greensboro, High Point, the Piedmont Triad International Airport (PTIA), and numerous commercial areas and business parks near to NC 68 in Guilford County.

The multi-modal transportation center also links WSTA and PART bus services with citizens using Greyhound/Trailways, taxis and other for-hire vehicles, bicyclists and pedestrians, and those citizens utilizing the PART AMTRAK Connector to High Point's renovated railroad station. In the future, the City has studied and is considering the feasibility of streetcars, trolleys and a possible light-rail line connecting with the multi-modal transportation center will enhance the mobility options for citizens in the Urban Area. The multi-modal transportation center is also home to WSTA's Mobility Manager office. The office uses a variety of computer and satellite technologies to determine the most efficient route for Trans-Aid vehicles and other WSTA buses to use. The Mobility Manager project has greatly enhanced the mobility and accessibility of citizens using the entire transit system and will continue to

improve through the years as the new system is expanded and fully implemented. As mentioned in planning factor 4, the Urban Area has been active in planning and providing for the safe and efficient movement of freight. Improvements to US 52 and Business 40 (US 421), completion of the Northern Beltway (Eastern Section) (Interstate 74), and programmed bridge and railroad crossing replacements will also improve freight movement in the area.

7. PROMOTE EFFICIENT SYSTEM MANAGEMENT AND OPERATION.

As mentioned above, the Winston-Salem Urban Area strongly supports the efficient management and operation of the overall transportation system, whether it is WSTA's Mobility Manager project or the City of Winston-Salem's computerized traffic signal system. Changeable message signs are used to alert drivers of congestion, accidents, or other traffic problems on the highway system and to direct drivers away from the problem areas.

The City of Winston-Salem and the NCDOT both own and operate traffic surveillance camera systems, share the video information and coordinate the operation of the cameras, changeable message signs, and traffic signals to assure that traffic is managed seamlessly for the traveling public. Given the scarcity of financial resources, it is imperative all modes of the transportation system are operated and maintained in an efficient and effective way.

8. EMPHASIZE THE PRESERVATION OF THE EXISTING TRANSPORTATION SYSTEM.

There is a growing realization that preservation of the existing transportation system in the Winston-Salem Urban Area is extremely important for the safe and efficient movement of people and goods. While new roads, highways, sidewalks, greenways and other transportation facilities are badly needed, proper maintenance of the existing system is just as important, if not more so. To illustrate this point, the Urban Area has had the dubious distinction the last several years of having one of the worst bridges in the state, the Business 40 (US 421) bridge over Liberty Street in downtown Winston-Salem. A plan has been developed to replace this bridge and several others along this corridor in the next few years, but its completion will be difficult and costly.

NCDOT has led the way in trying to address a massive backlog of deficient roads, bridges, and highway facilities in the Urban Area. A significant amount of State and federal funds have been spent in the last 15-20 years to replace deficient bridges and provide better bridge decks on US 52 and Business 40 (US 421), rehabilitate and resurface numerous miles of freeways, expressways and other major roads on the State system, and make other critical improvements at freeway interchanges and major intersections to improve lighting, signage, guardrails, etc. as needed.

Since 2003, NCDOT has undertaken a number of initiatives to boost the financial resources of its agency statewide to address three critical areas – maintenance, modernization and public transportation across North Carolina. NC Moving Ahead, the Mobility Fund, NC Go! and the Governor's recent proposed Transportation Bond have all been short-term, stop gap measures to provide those needed resources to reduce some of the massive backlog of maintenance and modernization projects needed in the state and our Urban Area, but still much more is needed to get caught up.

The State of North Carolina also provides Powell Bill funds to qualified municipalities each year to be expended only for the purposes of maintaining, repairing, constructing, reconstructing or widening local streets that are the responsibilities of the municipalities. Construction and repair of sidewalks are also eligible for use of Powell Bill funds. The Winston-Salem Urban Area MPO will continue to work with NCDOT to provide sufficient funding to maintain and preserve the existing street and highways facilities, and other transportation infrastructure within the Urban Area.

1.4 Transportation Vision and Objectives, Policies, and Action Agenda

Winston-Salem Urban Area Transportation Vision

The Winston-Salem Urban Area Metropolitan Planning Organization shall provide a balanced and sustainable multimodal transportation system that links highways, transit, greenways, bikeways and sidewalks into a seamless network that provides choices for people's travel needs.

Objectives, Policies and Action Agenda

Most of the following objectives, policies and action agenda items were developed in as part of the *2030 Legacy Update*, the comprehensive plan adopted by Forsyth County and all municipalities in Forsyth County in 2012 and 2013. Objectives and recommendations related to regional transportation and regional logistics listed below are from the Piedmont Together regional vision endorsed by the Transportation Advisory Committee of the Winston-Salem MPO in March 2015.

The following objectives and recommendations guide the implementation of this 2040 Metropolitan Transportation Plan.

Land-Use and Transportation Coordination

Objective: Promote integrated development patterns and transportation networks that work together to support mixed-use, pedestrian-friendly communities and active modes of transportation. Land use and transportation decisions should be consistent and mutually reinforce each other.

Policies

- Encourage local jurisdictions to adopt plans and approve developments that make efficient use of our transportation resources and make transit, walking, and biking viable transportation options.
- Encourage transportation planners and providers to utilize the *Legacy 2030 Update* and the adopted plans of other MPO jurisdictions when updating transportation plans and implementing projects and services.
- Invest in transportation projects that further the land use goals of *Legacy* and other adopted land use plans.
- Assure that WSDOT and NCDOT staff participate in long range planning efforts, zoning ordinance revisions and the development review process to better enable coordination between land use and transportation planning.
- Encourage local jurisdictions and NCDOT to adopt and apply comprehensive access management policies/programs to minimize the number of driveways along thoroughfares and arterials to reduce vehicular conflicts, increase pedestrian safety, and maintain/improve roadway capacity.
- Encourage local jurisdictions to review Traffic Impact Study (TIS) standards and to consider whether to expand when a TIS is required for public and private projects and to require analysis of multimodal transportation impacts.

Action Agenda

- Continue to have transportation plans reviewed by the City-County Planning Board to ensure that these plans support land use objectives and maximize the potential for transit and other active modes of transportation.
- Review CTP road classifications to assure consistency between transportation function and land use goals.

Integrated Multimodal Transportation Network

Objective: Develop a high-quality, fully-integrated, multimodal transportation network that provides transportation options that meet the short and long term transportation needs of the residents and businesses in the Winston-Salem Urban Area.

Policies

- Complete key elements of the road network that will enhance manufacturing and logistics strengths, contribute to further development of our economic base, and lessen congestion on existing streets and highways.

- Promote and develop an integrated, multimodal transportation network that offers safe and attractive choices among modes including sidewalks, bikeways, greenways, public transportation, roadways, railways and aviation.
- Assure that new public and private developments include a multimodal transportation network that provides connections to adjacent land uses and transportation facilities.
- Plan and develop the transportation network and individual transportation facilities in a manner consistent with adopted land use plans and sensitive to the human and natural environmental context.
- Consider the impact on both vehicular and pedestrian access and connectivity when evaluating the closure of a street, bridge or other public right-of-way.

Action Agenda

- Work to fund and implement road projects of regional and area-wide significance.
- Develop and adopt corridor maps for new roads proposed in the CTP.
- Identify and eliminate gaps in the roadway system to increase connectivity, reduce travel distances, improve access, and to provide mobility options for vehicles, transit, bicycles and pedestrians.

Street and Highway Network

Objective: Design streets and highways that are safe and efficient for motor vehicle drivers while accommodating transit users, pedestrians and bicyclists and limiting negative environmental impacts.

Policies

- Ensure that new roadway projects and major reconstruction projects provide safe, convenient and attractive accommodations for all users including pedestrians, bicyclists, transit riders and motorists.
- Create livable, people-oriented streets by integrating appropriate traffic management principles into new and existing streets.
- Slow motor vehicle speeds throughout the city through traffic calming and proper roadway design.
- Encourage sustainable roadway design and construction best practices to reduce stormwater runoff, maintain and enhance vegetation and minimize environmental impacts.
- Design roadways and bridges to be community assets, serving to connect communities and to enhance the visual appearance of the built environment.
- Use context-sensitive approaches to locate and design transportation facilities to be consistent with adjacent land uses, preserve natural features, protect historic and cultural resources and enhance community appearance.
- Limit the use of undivided multilane streets and utilize raised or landscaped medians to improve safety and capacity while providing opportunities for pedestrian refuge and landscaping.
- Prioritize the safety and needs of pedestrians, bicyclists and transit users over the convenience of motorists.

Action Agenda

- Adopt a Complete Streets policy and develop Complete Streets guidelines.
- Work with municipalities and stakeholders to review and revise street standards to make streets more multi-modal, livable and sustainable.
- Consider the safety of all users when evaluating road and intersection improvement projects.
- Prepare corridor studies with design guidelines that focus on coordination with land use, access management, transit and bicycle accommodation, pedestrian safety features such as sidewalks with planting strips wide enough to allow for landscaping and stormwater recharge, and safe crossings at intersections, highway ramps and over bridges.
- Consider road diets on streets with excessive road width, lanes, and travel speeds using available right-of-way for landscaping, bicycle, transit and pedestrian facilities.
- Continue and enhance traffic management programs that increase safety and livability especially in sensitive areas around schools, parks and institutions.

Bicycle & Pedestrian Transportation

Objective: Create a safe and effective bikeway/sidewalk/greenway network that is integral to the transportation system, links together resources and destinations, provides an alternative to automobile travel, increases recreational opportunities, and advances healthy lifestyles and quality of life.

Policies

- Consider bicycle and pedestrian transportation at every level of community planning, including development review, community development, recreation, school siting, and transit.
- Enhance pedestrian and bicycle circulation throughout the community by constructing innovative facilities that comply with current design standards.
- Ensure adequate funding for construction and maintenance of bicycle and pedestrian facilities.
- Accommodate pedestrians and cyclists in all road, bridge, and intersection improvement construction projects, as well as resurfacing projects.
- Add bike lanes to roadways by restriping underused right-of-way or center turns lanes and, where feasible, convert unused or abandoned railroad corridors for bicycle, pedestrian and multiuse paths.
- Support programs to educate residents about their transportation choices and to educate them about how to use those options safely.
- Encourage provision of bicycle support facilities, such as bicycle parking and personal showers and lockers for new and existing office developments and employment centers to encourage bicycling as transportation.
- Provide sidewalks that are safe and appealing to pedestrians of all ages and abilities by including features, such as tree canopies, sidewalk terraces, pedestrian signals, crosswalks, and refuge islands.

Action Agenda

- Implement a complete streets policy at the MPO level to ensure that all users are considered in all roadway projects.
- Update and implement the existing bicycle and pedestrian plans and fund projects based on a priority ranking system.
- Amend the UDO to help create walkable and bikeable mixed-use neighborhoods that offer a full complement of bicycle and pedestrian accommodations.
- Develop a comprehensive active transportation plan that integrates bicycle, pedestrian, and greenway components.
- Provide or require the construction of sidewalks, bicycle facilities, multi-use paths, and greenways consistent with the cross-sections established in the CTP.
- Prioritize candidate sidewalks projects based on the benefit they provide to the community in terms of pedestrian transportation.
- Reserve, obtain, or acquire right-of-way or easements for proposed bikeways, sidewalks, multiuse paths, and greenways if facilities are not required to be constructed as part of the development approval process.
- Undertake walkability and bikeability audits to identify deficiencies and target areas for improvements.
- Work with major employers and institutions to develop plans to improve facilities and increase active transportation.

Public Transportation

Objective: Enhance and expand public transportation into a system of buses, vanpools, car pools and special population transit services that is efficient, convenient, safe and cost-effective. Increase transit use through service enhancement, improved pedestrian and bicycle linkages, and transit supportive development patterns.

Policies

- Promote and support quality transit and paratransit services to enhance mobility options for all residents and visitors especially those with special needs including senior citizens, the disabled, and transit-dependent persons.
- Encourage expansion of existing transit to provide service on Sundays and to high-growth areas that are not currently serviced by transit.

- Locate governmental services and health facilities where they can be served by public transportation.
- Encourage transit system routes and land use development patterns that support transit use and help to make transit convenient and cost effective.
- Connect people and transit by prioritizing sidewalk and bicycle infrastructure investments adjacent to transit routes.
- Encourage increased public transit ridership by offering Internet access and other conveniences and amenities.
- Investigate alternative public transportation opportunities such as the urban circulator for the downtown to promote housing and employment investments while increasing urban vitality.

Action Agenda

- Review and coordinate the existing public transportation service in relation to land use goals and expand the system to connect the transit hubs with activity centers, town centers, major employers and venues along identified Growth Corridors.
- Equip WSTA buses and major transit stops with Internet service, charging stations and other safety and comfort amenities.
- Implement the recommendations of the Regional Transit Development Plan including PART Express Corridors, Transit Emphasis Corridors, local route extensions, and the urban circulator.
- Consider reconfiguring bus transit service to maximize interconnectivity to these new services and expand into underserved areas.
- Update and implement the Human Services Transportation Coordination Plan to improve transportation services for persons with disabilities, older adults and lower income persons.
- Study the feasibility and effectiveness of establishing satellite transit hubs at key locations.
- Establish park and ride lots at key locations along Growth Corridors, Activity Centers and outlying municipalities.
- Continue to require transit stops and shelters, as appropriate, through the site plan review process.
- Explore the proper spacing of transit stops and improve bus stop and shelter amenities.
- Work with the communities and institutions to substitute event shuttle services where feasible to allow for reduced parking requirements.

Regional Coordination and Cooperation

Objective: Create a strong multi-modal regional transportation system that provides regional mobility, encourages economic development, promotes sustainable growth patterns and preserves the natural and built environments of the region.

Policies

- Continue to work with regional planning partners and transportation agencies to coordinate transportation planning, operations, and funding priorities for roads, transit, commuter rail, and other transportation modes.
- Support the Piedmont Authority for Regional Transportation (PART) in providing transit service and demand management programs in the Triad region.
- Work with regional organizations and other jurisdictions on collaborative land use and transportation planning efforts.
- Establish a structure to locally fund and promote the development of a regional transportation network.
- Support regional planning and sustainability efforts, such as Piedmont Together, the Piedmont Triad's Sustainable Communities Planning Project.
- Coordinate roadway improvement projects to support regional transit service.
- Work with regional partners to develop multi-jurisdictional greenways and bikeways and

Action Agenda

- Evaluate the roles and responsibilities of existing transportation organizations and agencies in order to be competitive for federal and state funding, reduce redundancies in planning and operations, and be better stewards of transportation resources.

- Implement PART's Regional Transit Development Plan, including the Bus Rapid Transit (BRT) Gold Routes which is to serve as commuter rail precursor.
- Implement PART's Piedmont Triad Regional Seamless Mobility Study to consolidate, coordinate and improve communication among the transit systems in the Triad.

Commuter Rail Transportation

Objective: Support policies and development patterns to make establishment of a regional commuter rail system feasible in the future.

Policies

- Encourage land use development patterns compatible with a regional rail system including mixed use, higher density and transit/pedestrian oriented design.
- Ensure that land use policies support increased density along potential commuter rail corridors and around potential rail stations.
- Preserve existing rail lines and rights-of-ways for future regional and local rail service or for interim or permanent pedestrian and bicycle use.

Action Agenda

- Implement growth management plans to create the type and density of development needed to support commuter rail.
- Implement PART's Regional Transit Development Plan including the Bus Rapid Transit Gold Route to serve as a commuter rail precursor.
- Update the commuter rail study and consider a wide range of potential corridors including existing rail lines and major road rights-of-way.

Freight Transportation

Objectives: Provide a safe and efficient freight transportation system that improves existing levels of freight access and mobility, supports the region's economic wellbeing and minimizes negative impacts on sensitive land uses and the environment.

Work with other Triad jurisdictions to maintain and enhance the region's competitive edge as a transportation and logistics hub along the Eastern Seaboard by focusing on facilities and infrastructure planning, improving coordination and cooperation among stakeholders.

Policies

- Consider freight movement as a priority in roadway planning, infrastructure investment and land use decision making. Seek to maintain a low level of traffic congestion in the region along Unlimited Truck Routes.
- Consider access to freight terminals, warehouses and other industrial uses in land use decision making. Direct transportation investment to improve access to existing such facilities.
- Support efforts to improve freight movement to and around Smith Reynolds Airport and the Piedmont Triad International Airport.

Action Agenda

- Identify the transportation link between freight and economic development opportunities.
- Engage the freight community in the planning process, particularly in the development of the transportation plan and TIP.
- Define the term "freight corridor" for transportation planning purposes.
- Identify short- and long-term freight-related needs or projects pertaining to major freight corridor studies.
- Develop a process to effectively evaluate, monitor, and implement freight-related strategies and specific improvements to sustain or enhance system performance within freight corridors.
- Develop a process to collect traffic data and monitor the system performance and reliability of the regional transportation system with regard to major freight movements (e.g., travel time, speed, delay time, etc.).
- Develop freight planning performance measures in order to document, monitor, and evaluate freight-related system-level reliability goals or other established performance level goals.
- Continued investments within the vicinity of PTIA as outlined in the Airport Area Plan, CTP and Collector Street Plan.

- Coordinate needed improvements to meet the advancements of the PTIA logistical hub, and proposed PTI Air Logistics Hub and Piedmont Triad Aerotropolis.
- Implementation of an Intermodal Management System.
- Coordinate with NCDOT on the development of future rail improvements.
- Closely coordinate area roadway planning with freight objectives, including access and mobility in the context of other community planning objectives.
- Develop a comprehensive vision for freight infrastructure in the region.
- Develop a multimodal freight network strategy in the region designed to create, protect and maintain transport links, connecting intermodal facilities and appropriate modes, both public and private.
- Expand logistics educational and career opportunities for the Piedmont Triad workforce.

Air Transportation

Objective: Support efforts to improve air service, promote economic development and provide transportation access to Smith Reynolds Airport and the Piedmont Triad International Airport (PTIA).

Policies

- Consider passenger and freight access to Smith Reynolds and PTIA as part of the transportation planning process and transportation investment decisions.
- Support Smith Reynolds Airport in its efforts to adopt and implement an updated master plan.

Regional Travel Demand Model

Objective: Develop and use a regional travel demand model that not only serves to meet State/federal requirements, but also provides useful information for land use and transportation planning in the urban area.

Action Agenda

- Continue to work cooperative with PART and other Triad MPOs on the Triad Regional Demand Model and the Air Quality Conformity Determination.
- Revise the Triad Regional Travel Demand Model to be more useful and responsive for testing land use and transportation alternatives (a.k.a. scenario planning) and for small area studies.
- Comprehensively update socio-economic data to be used in the Triad Regional Demand Model using update-to-date socio-economic data and the growth and development recommendations of adopted land use plans of area jurisdictions.

Congestion Management, Safety and Travel Demand Reduction

Objective: Establish policies and programs to improve the efficiency of the roadway network, reduce congestion and pollutant emissions, increase safety, and reduce vehicle miles traveled (VMT) and single-occupancy vehicle use.

Policies

- Institute new technologies and management strategies to move vehicular traffic more effectively and efficiently.
- Monitor system safety and analyze crash data for both spot improvements and future needs.
- Support PART in providing demand management programs, including transit, ridesharing, vanpooling, and awareness programs such as Triad Commute Challenge.
- Encourage employers to reduce travel demand by providing transit subsidies, bicycle facilities, alternative work schedules, ridesharing, telecommuting and work-at-home programs, and preferential parking for carpools and vanpools.
- Promote telecommuting and assure that land use regulations do not inhibit it.

Action Agenda

- By 2017, fully upgrade the City of Winston-Salem signal system.
- By 2017, implement a system to collect volume and turning movement count data and retime coordinated signal systems and corridors on a biennial basis.
- In the process of collecting crash data and summaries, coordinate the identification of deficient locations and the determination of potential strategies and improvements with NCDOT on an annual basis. Review locations with high vehicular crashes involving pedestrians and bicyclists to identify needed improvements.

- Encourage businesses to work with PART and WSTA on transit incentives and develop strategies to encourage active transportation modes.
- In the short term, expand PART service to neighboring counties and WSTA service to northwestern Winston-Salem and add additional circulation bus service.
- In the next two to ten years, implement the recommendations of the Piedmont Triad Seamless Mobility Study to enhance connectivity among transit services.
- Increase service levels throughout the region with a dedicated source of federal funds for public transportation, implementation of weekend service, and increased participation and involvement on the PART and WSTA boards and committees.
- Develop the Triad Intermodal Transportation Center complex.
- By 2020, install approximately 30 miles of bicycle lanes and on-road bicycle facilities to increase transportation mode options.

Transportation Funding

Objective: Ensure adequate long-term funding for maintenance and construction of all modes of transportation facilities.

Policies

- Ensure adequate funding for construction and maintenance of all modes of transportation.
- Aggressively seek State and federal funds for local transportation projects. Leverage State and federal grant funds to supplement local resources whenever possible.
- Consider a wide range of standard and innovative funding sources for transportation funding, including bond issues, assessments and fees-in-lieu, taxes, toll roads, and public/private partnerships.
- Ensure that transportation infrastructure investments are equitably distributed throughout the MPO.

Action Agenda

- Develop funding strategies for maintenance of existing and construction of new transportation facilities.
- Seek State enabling legislation, as necessary, to expand transportation funding sources.
- Require developers to provide right-of-way, make improvements, construct facilities, or provide fees-in-lieu to help alleviate the traffic impacts of their projects.
- Make greater use of the mass transit tax portion of the property tax to pay for increased transit service.
- Consider seeking voter approval of a ½ cent sales tax to fund regional transit service expansion as allowed by the NC General Assembly.
- Pursue State and federal sources and innovative financing options to assist in funding transit infrastructure investments.

Transportation Planning Process

Objective: Support an open, inclusive and participatory transportation planning process.

Policies

- Ensure that transportation planning and decision-making is an open, collaborative process that includes citizens and local, State, and federal governments.

Action Agenda

- Follow the Public Participation Policy adopted by the MPO to bring a broad cross-section of the public into transportation policy, planning and investment decision-making processes.

Human and Natural Environment and Transportation

Objective: Develop a transportation system that respects and enhances the human and natural environment.

Policies

- Identify and address the needs of minority and low-income populations in making transportation decisions.
- Develop land use and transportation plans and projects that improve air quality.

- Design transportation facilities to be consistent with adjacent land uses, preserve natural features, protect historic and cultural resources, and enhance community appearance.

Action Agenda

- Implement the recommendations of the Environmental Justice (EJ) Plan.
- Follow the consultation procedures and the mitigation strategies established in the Consultation and Environmental Analysis and Mitigation Plan.
- Use Context Sensitive approaches for all transportation projects to involve stakeholders, minimize impacts to neighborhoods, historic resources, and sensitive natural areas, conserve energy resources, reduce greenhouse gas emissions and limit air pollution.

Healthy, Active Transportation

Objective: Support development patterns and transportation networks that promote healthy lifestyles and increase active transportation options.

Policies

- Consider the potential positive and negative impacts of new transportation projects on health and equity prior to approval.
- Ensure that affordable transportation services are available to and from health and other community facilities, especially for the elderly, special needs, minority and low-income groups.
- Promote land use patterns and street connectivity that allow children to be more self-sufficient.
- Collaborate with community organizations to help remove barriers to mobility and access to public and private facilities and services.

Action Agenda

- Identify neighborhoods/areas with active living (walking, biking and transit) deficiencies and prioritize improvements for these areas.
- Collaborate with transit service providers to serve people who are transit-dependent by improving connections to job opportunities, health facilities, healthy food outlets and recreation facilities

Environmental Justice

Objective: Identify and address the needs of minority and low-income (MLI) populations in making transportation decisions.

Policies

- Enhance the MPO's analytical capabilities to ensure that the long-range transportation plan and the Transportation Improvement Program (TIP) comply with Title VI.
- Identify residential, employment, and transportation patterns of MLI populations so that their needs can be identified and addressed, and the benefits and burdens of transportation investments can be fairly distributed.
- Evaluate and improve, where necessary, public involvement processes to eliminate participation barriers and engage MLI populations in transportation decision making.

Action Agenda

- Implement the recommendations of the Environmental Justice (EJ) Plan of the 2040 Metropolitan Transportation Plan.

1.5 Metropolitan Transportation Plan Public Involvement Process

The Winston-Salem Urban Area Metropolitan Planning Organization (MPO) began public review of the 2040 Metropolitan Transportation Plan (MTP) Street and Highway Project List by Horizon Years in conjunction with the draft 2016-2025 State Transportation Improvement Program (STIP) for the MPO in February 2015. A public drop in meeting and public hearing were held on February 19, 2015. The Draft 2040 MTP mapping and contact list were sent to all State and Federal environmental agencies for preliminary regional review. A full discussion of the environmental consultation is in the Environmental section of the document and Appendix. The Winston-Salem DOT and City/County Planning Board staff reviewed each section of the existing long range plan and all information including each transportation mode was updated to reflect the changes that have occurred since the 2035 LRTP Update was adopted in January 2013.



Transportation planners for the Winston-Salem Urban Area Transportation Advisory Committee, the Piedmont Authority for Regional Transportation and the Winston-Salem Transit Authority need your input on a long range plan for improving our transportation system through 2040, called the Draft 2040 Metropolitan Transportation Plan (MTP). The plan covers all facets of transportation, including highways and streets, mass transit, bike lanes, greenways, commercial transport, rail and air.

They are also seeking input on two related documents: the Draft Air Quality Conformity Determination Report, and the Draft Fiscal Years 2016-2025 Metropolitan Transportation Improvement Program (MTIP).

You can review the documents and meet with staff at these locations:

- Jul 18, 10 am to 12 pm, Shallowford Square, 6550 Shallowford Rd, Lewisville, NC
- Jul 23, 5 pm to 7 pm, The Booe House, 5135 Sullivantown Rd, Walkertown, NC
- Jul 23, 4 pm to 7 pm, Village of Clemmons Town Hall, 3715 Clemmons Rd, Clemmons, NC
- Jul 28, 11 am to 2 pm, Clark Campbell Transportation Center, 100 W. Fifth Street, Winston-Salem, NC *
- Jul 30, 4 pm to 6 pm, Tanglewood Farmers Market, 4061 Clemmons Road, Clemmons, NC
- Aug 8, 10 am to 12 pm, Dixie Classic Farmers Market, 421 W. 27th St, Winston-Salem, NC
- Aug 15, 10 am to 3 pm, Honeybee Festival, 702 W Mountain St, Kernersville, NC
- Aug 18, 10 am to 3 pm, Forsyth County Health Department, 201 N Chestnut St, Winston-Salem, NC*

*Spanish language translation available at these meetings

Drafts are available online at www.dot.cityofws.org, and copies will be placed July 16 through August 20 at all town halls and public libraries in the urban area, at NC Dept. of Transportation Offices, 375 Silas Creek Pkwy, and at Suite 307 in the Stuart Municipal Building.

Come out and give your thoughts directly to DOT staff or send your thoughts via mail, fax or e-mail by August 20 to: Fredrick Haith, Winston-Salem Dept. of Transportation, P.O. Box 2511, Winston-Salem, NC 27102, 336-748-3370 (fax), fredrickh@cityofws.org

The Winston-Salem Urban Area Metropolitan Planning Organization (MPO) does not exclude participation or discriminate in any program or activity receiving Federal assistance on the grounds of race, color, national origin, sex, age, or disability. Any person who believes they have been aggrieved by an unlawful discriminatory practice regarding the **Winston-Salem Urban Area MPO** programs has a right to file a formal complaint with Angela Carmon, City Attorney, City of Winston-Salem, P.O. Box 2511, 27102, within one hundred and eighty (180) days following the date of the alleged discrimination occurrence.

The Interagency Consultation Partners for Air Quality Conformity worked through the winter and spring to meet conformity for the region with the 2040 MTPs. The FY 2016-2025 Metropolitan Transportation Improvement Programs (MTIP) were evaluated with the draft 2040 MTP project lists and the MPO addressed all comments from the Interagency partners. The NCDOT conducted an air quality conformity analysis and determination in June 2015.

On July 16, 2015, this draft 2040 MTP document, draft 2016–2025 MTIP and the draft Air Quality Conformity Determination Report was distributed to each library and Town Hall in the MPO, NCDOT Division 9 offices, and members of the TCC and TAC for public review. In addition, the document was available on the City of Winston-Salem website: dot.cityofws.org.

The adjacent announcement was placed in the local newspapers for the Winston-Salem Urban Area. The 2040 MTP and three transportation issues are the focus of Winston-Salem TV13 spots being broadcast throughout the months of July and August. Also, a new outreach with targeted social media advertisements linked to a 30 second video spot advertising the 2040 MTP will be implemented. The draft documents will be out for a public comment review period from July 16th through August 20th, 2015, with eight public involvement meetings being held throughout the MPO during the months of July and August.

An MPO Newsletter, at the end of this chapter, was mailed and e-mailed to announce the availability of the draft 2040 Metropolitan Transportation Plan, draft 2016-2025 Metropolitan Transportation Improvement Program (MTIP) and draft Air Quality Conformity Determination Report for public review and to notify the public of meeting dates, times and locations. The e-mail went to neighborhood associations, churches, various minority and civic groups or organizations.

During the public review period, meetings will held throughout the MPO with Spanish language translation available at two meeting sites, the Transportation Center and the Public Health Department. A Spanish language hotline notice has been published on the cover of the document and is available throughout the public review period.

Appendix References

NCDOT From Policy to Projects – 2040 Plan – August 2012

NCDOT From Policy to Projects – 2040 Plan Appendices – August 2012

Winston-Salem Urban Area MPO Comprehensive Transportation Plan adopted May 17, 2012

Public Participation Policy adopted March 20, 2014

Draft Air Quality Conformity Appendices

Environmental Consultation with Resource Agencies and Agency Contact List

Public Comments from the 2040 Metropolitan Transportation Plan

Draft Street and Highway Project List Public Meeting and Hearing on February 19, 2015