

Northern Corridor Area Plan



Adopted by the Bradley County Regional Planning Commission

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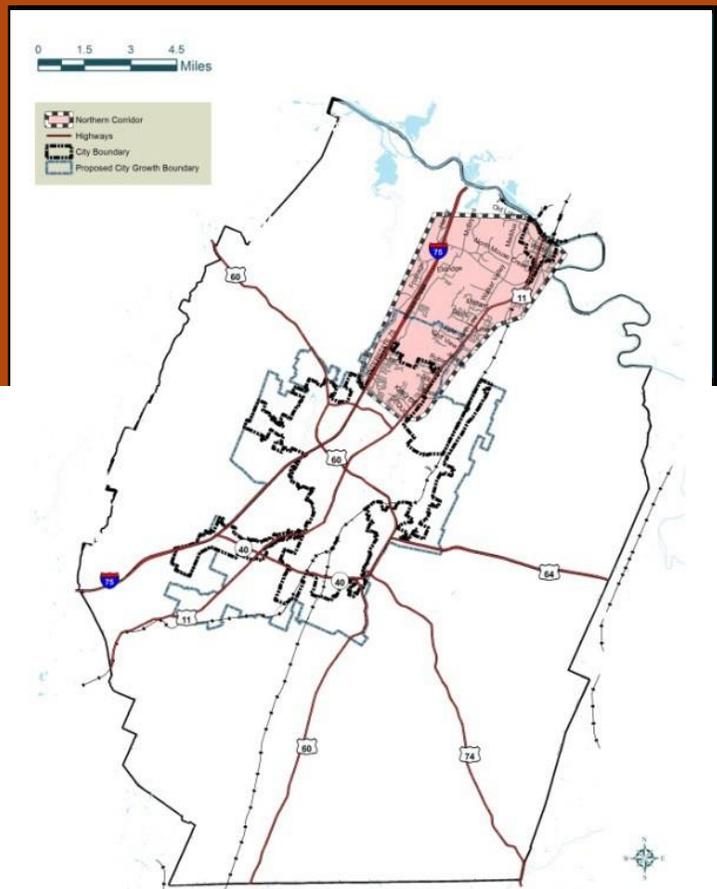
Plan Overview

OVERVIEW

The *2035 BCC Joint Strategic Plan* identified areas within Bradley County requiring targeted planning analysis in order to plan for and accommodate anticipated regional growth. That plan forecasts that Bradley County may receive an influx of 32,000 new residents by 2035, increasing total county populations to 131,212 residents. To accommodate this estimated growth, the plan identified targeted areas for reinvestment, managed growth, and rural preservation. The Northern Corridor Area was identified as a managed growth area and was recommended for a targeted planning study to analyze the impact of growth on the area and to plan for its future. The ***Northern Corridor Area Plan*** is the result of this targeted planning study.

The *2035 BCC Joint Strategic Plan* offers the following guidelines and recommendations when working within a managed growth area:

- Planning efforts to manage growth will be targeted in these areas through area plans and boundary coordination.
- The future character of these areas will include a compatible mix of rural, traditional village, suburban neighborhood, and mixed-use towncenters.
- The specific vision for character and land use will be identified in the comprehensive and area plans.
- Managed growth will be the product of jurisdictional coordination; coordination can be accomplished through a variety of tools such as annexation plans/agreements, Cooperative Economic Development Agreements (CEDA), and Joint Economic Development Agreements (JEDA).
- Planning for these areas will identify efficient land use patterns; public facility and service needs and set asides; transportation networks; and resource protection areas.



Overview

- Economic development opportunities will be balanced with the protection of existing communities and natural and cultural resources, while providing growth and employment to the region.
- Existing communities and neighborhoods will be protected from incompatible development.

COORDINATED PLANS

This area plan was developed for the area, located in northeastern Bradley County between the City of Cleveland and the industrial employment area of the I-75 Exit 33/Lauderdale Highway Area (future site of Wacker Chemie, and the current site of Amazon.com and Olin). The Northern Corridor Area includes the City of Charleston and portions of the City of Cleveland and unincorporated Bradley County within the study area boundaries. The **Northern Corridor Area Plan** was drafted in conjunction with two other plans: the **Central City Area Plan** and the **Southern Corridor Area Plan**; and three comprehensive plans: the **Bradley County Comprehensive Plan**, the **City of Cleveland Comprehensive Plan**, and the **City of Charleston Comprehensive Plan**. Known collectively as the **BCC Comprehensive Plans**, this group of documents plans for anticipated growth in Bradley County and coordinates among various jurisdictions, departments, and agencies to analyze how to best accommodate future growth in the region.

PLAN CONTENTS

This plan is a guide for public decision making and future development within the study area. It will be used by elected and appointed officials to evaluate future proposals or policy changes to ensure consistent decisions are made.

The plan is structured as follows:

- **Vision:** statements expressing the desired future for the study area.
- **Plan Goals:** statements of desired outcomes, or the major aspirations of this plan.

The vision and plan goals, stated in Chapter 3, resonate throughout the plan's four chapters.

- **Chapter 1: Area Profile** introduces the study area, providing current geographic, infrastructure and facility, and development capacity information.
- **Chapter 2: Targeted Planning Challenges** discusses the topics of concern or interest that were introduced to the planning process by the public, the planning team, and the area sub-committee.
- **Chapter 3: Master Plan** addresses those challenges presented in Chapter 2. This chapter includes the plan vision, plan goals, and recommendations for future development within the study area.
- **Chapter 4: Action Strategies** describes the strategies the city may act upon to implement the plan.



Chapter 1: Area Profile

OVERVIEW

It is important to understand a planning area's current conditions before making recommendations for and working towards a vision for future development. This chapter discusses the following existing conditions for the Northern Corridor Area (NCA):

- Geographic Profile & Character
- Infrastructure & Facilities
- Capacity for Growth

GEOGRAPHIC PROFILE & CHARACTER

The NCA contains portions of the City of Cleveland and unincorporated Bradley County, as well as the entire City of Charleston. The NCA has an area of approximately 24 square miles. The boundaries of the area are meant to provide a general frame of reference for development recommendations and are not drawn to follow specific roadways or natural features. The boundaries are depicted on the **Northern Corridor Area Master Plan Maps**.

The NCA includes portions of four parallel valleys separated by their respective ridges: Lower Candies Creek Valley on the western side of I-75, Mouse Creek Valley in the central portion of the area, Walker Valley in the west (along Lee Highway), and northern portions of Dry Valley. Each valley has its own established and emerging character related to how it has been developed and the function of the primary roads which provide access to each. The various roadways, and character of surrounding areas, include:

- **Frontage Road** runs along the eastern side of Candies Creek Ridge on the western side of I-75. It is a two-lane rural road with moderate curves. Residential subdivisions are concentrated toward the southern portion of the road with smaller lots common in this area. There are significant rural residential properties with frontage on Frontage Road. The corridor is minimally developed with subdivisions due to challenging topography. Frontage Road is connected to Mouse Creek Road via Hooper Gap Road which runs east-west under I-75 approximately half-way between exit 27 and exit 33.

- **Mouse Creek Road** runs parallel to I-75 along the eastern side of the interstate. The roadway runs almost seven miles north from Paul Huff Parkway to Lauderdale Highway without a cross street. Few alternate routes are provided to ease congestion along Mouse Creek Road. The topography in this area has allowed for more significant residential subdivision development, and the southern portions of the corridor are relatively built-out with smaller lot subdivisions. Mouse Creek Road is a two-lane rural roadway with limited or no shoulder and areas with extremely curvy alignments. Large lot residential and smaller frontage lots are predominant in the northern three-quarters of the corridor. TDOT's Transportation Planning Report (TPR) found that upgrading Mouse Creek Road to a three-lane facility throughout the NCA would cost \$50 million when all applicable federal and state standards are applied.
- **Route 11/North Lee Highway** from Sequoia Road to Anatole Lane is a five-lane road with wide shoulders. North of Anatole Lane, the road narrows to two lanes with narrow shoulders. The road alignment is relatively straight without dramatic curves for the length of the corridor. Route 11 changes from Lee Highway to Hiwassee Street through the City of Charleston and provides access across the Hiwassee River. The character along Lee Highway is a mix of medium and large lot subdivisions and agricultural/rural landscapes. Route 11 serves as the main street through the City of Charleston.
- The northern portions of **Chatata Valley Road** and **Dry Valley Road** are relatively rural within the corridor.
- **Lauderdale Highway** and **Old Lower River Road** are located in more level terrain that is evolving into the area for larger format industrial complexes. There is substantial agricultural area between Wacker Chemie and the City of Charleston.

INFRASTRUCTURE & FACILITIES OVERVIEW

The NCA contains some of the major routes connecting county residents to destinations within the county and beyond. Due to the lower-densities and rural character of some areas of the NCA, sewer service is limited. Since portions of the area are currently experiencing an increased development demand, and continued growth is expected, utility services and roadways may be expanded and enhanced in accordance with growth and development.

As Bradley County continues to grow, and as the NCA experiences increased development pressures, demand for quality infrastructure, facilities, and services will rise. Further information and recommendations on accommodating future service demand can be reviewed in the ***BCC Comprehensive Plans***.

TRANSPORTATION

The NCA contains several major thoroughfares. I-75 runs parallel to the western boundary of the study area, providing connections between areas north of Bradley County and the City of Cleveland, as well as to the City of Chattanooga in neighboring Hamilton County. North Lee Highway runs along the eastern boundary of the study area and serves as a critical connection between the City of Charleston and the City of Cleveland. Other critical roadways include Mouse Creek Road, which runs parallel to I-75, and Walker Valley Road NW.

According to the Tennessee Department of Transportation's Rural Functional Classification System for Bradley County, the Northern Corridor Area (NCA) contains an urban/rural

interstate (I-75), an urban principal arterial (southern North Lee Highway), a rural minor arterial (northern North Lee Highway/Hiwassee Street), an urban minor arterial (NW Mouse Creek Road), a rural major collector (Lauderdale Memorial Highway), and various rural minor connectors and local roadways. Due to the low-density nature of development in the NCA, sidewalks and bicycle connections are generally not provided. The City of Charleston has been implementing a greenway trails plan to improve pedestrian connectivity within the city and northeast portion of the NCA.

Many roadways within the NCA are designed for low levels-of-service. Some roadways are constrained by ridgelines and topography, resulting in narrow and winding routes. As development pressures in the NCA build, the capacities of these roadways will need to be analyzed.

UTILITIES

Utilities in the NCA are provided by several utility providers. Cleveland Utilities and the Calhoun-Charleston Utility District provide water service to the NCA. Volunteer Energy Cooperative provides electric service to the majority of the study area, with Cleveland Utilities providing service to some portions of the NCA within the City of Cleveland.

The utility most limited in availability within the NCA is sanitary sewer service. Due to the low-density development pattern and challenging topography, sewer service is not feasible in some areas of the NCA. Cleveland Utilities provides sanitary sewer service to the portions of the study area within the City of Cleveland and provides extended service following NW Mouse Creek Road. Within the NCA, Cleveland Utilities features a sanitary sewer pump station within the City of Charleston and a wastewater treatment plant near I-75 and the Hiwassee River. More information on available utilities, system capacity, service areas, and implications of anticipated growth can be reviewed in **Chapter 4: Master Plan**.

FACILITIES

Public facilities include government buildings, schools, government operation centers, libraries, police and fire stations, parks and open space, and other local government and community buildings and property. Due to the low-density nature of the Northern Corridor Area, few public facilities are located in or near the area, as shown in the following table.

<i>Northern Corridor Area Facilities</i>	
Category	Facility
Education	Walker Valley High School
	Charleston Elementary School
Parks and Recreation	Greater Cleveland Soccer Association complex
	Charleston Park
	Fort Cass Park
	Charleston River Park
Other Facilities	Charleston Greenway Trail System
	Bradley County Fire and Rescue - Station 9
	Cleveland Utilities sewer pump station
	Cleveland Utilities wastewater treatment plant

CAPACITY FOR GROWTH

Current conditions in the NCA may create barriers to development and should be addressed in order to create an environment which balances future growth with existing character. The ridge and valley topography and lack of connecting roads in the area may limit connectivity as the area develops and traffic and congestion levels increase. The current location of sewer service along Mouse Creek Road will promote development near existing infrastructure. However, Mouse Creek Road is already experiencing congestion due to development within the area and the lack of alternate routes. While pressure for growth and use intensification is likely to be concentrated around this infrastructure, traffic and system capacity issues can impact the area as a whole and necessary improvements should be made to reduce conflicts. In addition, residential growth in the NCA may demand future facilities and services as the area grows. The two Future Land Use scenarios presented offer combinations of transportation facility improvements and possible future land use patterns that could be supported by those transportation improvements. The ability to support growth in this area is equally contingent on availability of adequate roadway capacities and either centralized sewer or alternative on-site sanitary sewer treatment options to support higher intensity growth. The targeted planning challenges are discussed in the following chapter.



Chapter 2: Targeted Planning Challenges

OVERVIEW

Throughout the planning process, members of the public were asked to participate in various exercises to identify strengths, weaknesses, opportunities, and threats within the NCA. The suggested items were then reviewed and discussed by the planning team and the area sub-committee, and evolved into the “targeted planning challenges” this plan. The challenges identified for the NCA include:

- Traffic Safety
- Greenway Connections from Cleveland to the Hiwassee River
- Maintaining the Character of the Northern Corridor
- Compatibility of Industrial/Business Growth with Potential Residential Growth
- Charleston Tourism and Economic Development
- Recreational/Economic Use of the Hiwassee
- Services, Amenities, Retail
- Sanitary Sewer and Water Services
- School Capabilities

TRAFFIC SAFETY

Due to limited capacity of roadways, lack of east and west connections, and increased traffic and freight volumes, traffic safety is a major challenge of the NCA. As development demand increases, additional demand will be placed on area roadways in order to accommodate increased vehicular and freight traffic associated with growth. The capacity and condition of roadways, as well as opportunities for future east and west connections, should be analyzed and addressed in preparation for increased demand.

GREENWAY CONNECTIONS FROM CLEVELAND TO THE HIWASSEE RIVER

Safe and accessible pedestrian and bicycle connections are sparse within the NCA. While the Cities of Cleveland and Charleston both have plans designating the future locations of sidewalks, greenways, and trails, full funding for implementation or identification of a preferred route for the connector between Cleveland and Charleston has not been secured. Providing safe routes for pedestrians and bicyclists can reduce conflicts between motorists, pedestrians, and bicyclists while encouraging non-motorized forms of transportation in the NCA. While, participants in this planning process saw value in having a greenway in the NCA the feasibility of securing a right of way and the potential costs have made this a low priority for this plan.

MAINTAINING THE CHARACTER OF THE NORTHERN CORRIDOR

The northern corridor includes portions of four parallel valleys separated by their respective ridges: Lower Candies Creek Valley on the western side of I-75, Mouse Creek Valley in the central portion of the area, Walker Valley in the West (along Lee Highway), and northern portions of Dry Valley. Each valley has its own established and emerging character related to how it has been developed and the function/cross section of the primary road which provides access to each. Development pressures must be effectively managed to maintain unique characters while providing roadway improvements that will allow improved connectivity within the NCA. The higher the development intensity along the corridor the lower the functional capacity of the roads will become without improvements. A balance between allowing for growth and maintaining the desirable character of the Northern Corridor should be pursued.

COMPATIBILITY OF INDUSTRIAL/BUSINESS GROWTH WITH POTENTIAL RESIDENTIAL GROWTH

The attributes of the NCA that were attractive to large format employers such as Wacker Chemie and Amazon.com include the close access to I-75 and the availability of large parcels of undeveloped land with level topography in a location with proximity to services and facilities. Maintaining land suitable for future economic development and job creation will need to be balanced with the demand for residential development in this area. Maintaining adequate buffering and transitions between residential and industrial development will also be essential components to consider in this corridor.

CHARLESTON TOURISM AND ECONOMIC DEVELOPMENT

Charleston, Tennessee is a city with historical significance to the Cherokee Nation, the United States, and Eastern Tennessee. The opportunity to create an educational experience in the city that can tie the significance of the area's history with its natural resources and recreational opportunities has presented itself after considerable effort by the Charleston-Calhoun-Hiwassee Historical Society, the Cleveland/Bradley Convention and Visitors Bureau, and the Southeast Tennessee Development District. The community's efforts to establish preliminary design and ultimately construction of the Charleston Greenway Trail promotes tourism within Charleston and can also serve as a key component for completion of a countywide trail system connecting the existing Cleveland/Bradley County Greenway Trail to the Hiwassee River by establishing a northern destination and river access location.

RECREATIONAL / ECONOMIC USE OF THE HIWASSEE

The Hiwassee River is an important economic and environmental asset to the communities of Bradley County. However, only limited public access to the river is provided. The sole public boat launch along the Hiwassee is located at Charleston River Park. A regional park with public river access is a needed recreational improvement. Expanded economic use of the river should be explored as well.

SERVICES, AMENITIES, RETAIL

The support services in the NCA are relatively limited. Because of the low-density rural development levels in most of the area, there has not been a high enough demand to support significant retail and service uses. Gas stations located off I-75 Exit 33, the grocery store in Charleston, and a few restaurants along Route 11 and in Calhoun account for the services currently available in this corridor. As residential populations and daytime employment populations grow in this area, demand for these types of services will increase. Consideration of the location and design of these uses will be important particularly as they relate to serving the Charleston area and the functionality of Exit 33 and Lauderdale Highway.

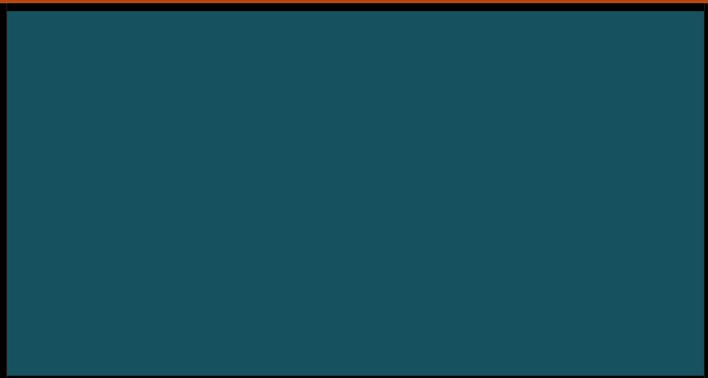
SANITARY SEWER AND WATER SERVICES

While the Cleveland Utilities Treatment Plant sits just to the north of the study area along I-75 and the Hiwassee River, there is limited capacity within the sanitary sewer system to accommodate future growth. The main sanitary sewer line runs through the study area and topography is favorable for expansion of a gravity feed system in the area, particularly in the Mouse Creek Valley. Expansion and new lines would be needed in the unincorporated areas to provide sanitary sewer services. Potable water lines would have to be extended to the study area.

SCHOOL CAPABILITIES

Four Bradley County Schools are located within the NCA: Walker Valley High School, Charleston Elementary School, North Lee Elementary School, and Tennessee Christian Preparatory School. Several county elementary schools and a city elementary are located just south of the corridor study area and serve the existing population in the corridor. In 2010 when an assessment of system wide school capacities was conducted there was very little capacity for new students within the existing city or county systems. Residential growth in this corridor will generate additional students for both the city and county school systems. Consideration about bussing and accessibility to schools in relationship to that development could help influence the location of future facilities.

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Chapter 3: Master Plan

OVERVIEW

The **Northern Corridor Area Master Plan Maps** strive to capture the vision and goals of this plan and serve as the culminating piece of this planning process, depicting the planned location and character of growth and development within the NCA. The future land use categories shown on the map represent the envisioned development for various areas within the study area. Although these designations are meant to be general and are not intended to be parcel-specific in nature, they present the characteristics of envisioned development for the NCA.

Many recommendations, planned roadway connections, and future land use areas strongly correlate to and reflect the recommendations within the ***BCC Comprehensive Plans***. This area plan should be used in concert with the comprehensive plans to ensure cohesive development within the county and to work towards achieving the vision and goals of these plans.

This section includes the following components:

- Plan Vision
- Plan Goals
- The Northern Corridor Area Master Plan Maps
- Future Land Use Recommendations
- Future Utility Service Areas

PLAN VISION

The Northern Corridor Area will experience managed growth in the future, exemplifying balance among service demand, service provision, roadway capacity, and maintained community character. Roadways will adequately accommodate traffic demand safely and efficiently, connecting residents and visitors to high-quality commercial development, local eco-tourist and tourist attractions, and to other destinations both within and outside of the corridor. The transportation infrastructure will accommodate all users, as greenway trail and pedestrian connection expansions will allow pedestrians and bicyclists to travel through the area safely.

PLAN GOALS

Goals are broad statements of desired outcomes. In the context of a planning process, goals reflect the community's vision for the future and serve as targets to direct policy decisions, development, and general progress towards the area's vision. These goals have been established to realize the vision and should be viewed as priorities for community leaders when making future decisions affecting the NCA.

TRAFFIC SAFETY

The roadways, intersections, and interchanges in the Northern Corridor Area will provide safe and adequate access and traffic flow for local and interstate travelers.

GREENWAY CONNECTIONS FROM CLEVELAND TO THE HIWASSEE RIVER

Provide safe and accessible pedestrian and bike connections between the Cleveland Greenway Trail and the Charleston Greenway Trail with opportunities to connect to the soccer complex and Walker Valley High School.

THE CHARACTER OF THE NORTHERN CORRIDOR

The development intensity and character of land uses in the Northern Corridor Area will be directly linked to the capacity of facilities such as schools, roads, and utilities to provide adequate levels -of-service to new development without reducing services to existing residents.

COMPATIBILITY OF INDUSTRIAL/ BUSINESS GROWTH WITH POTENTIAL RESIDENTIAL GROWTH

The corridor will have a land use pattern that supports appropriate locations for industrial, commercial, and residential development that is compatible with existing and planned infrastructure improvements and reduces conflicts between uses.

CHARLESTON TOURISM AND ECONOMIC DEVELOPMENT

Increase tourism and economic development in Charleston.

RECREATIONAL / ECONOMIC USE OF THE HIWASSEE RIVER

Recreational and economic use of the Hiwassee River will be an important component of economic development in the Northern Corridor Area.

SERVICE, AMENITIES, RETAIL

Provide support retail services and amenities for daytime populations and residents in the northern part of the county.

SANITARY SEWER AND WATER SERVICES

Development in the corridor will have sewer and water services consistent with the intensity and character of development.

SCHOOL CAPACITIES

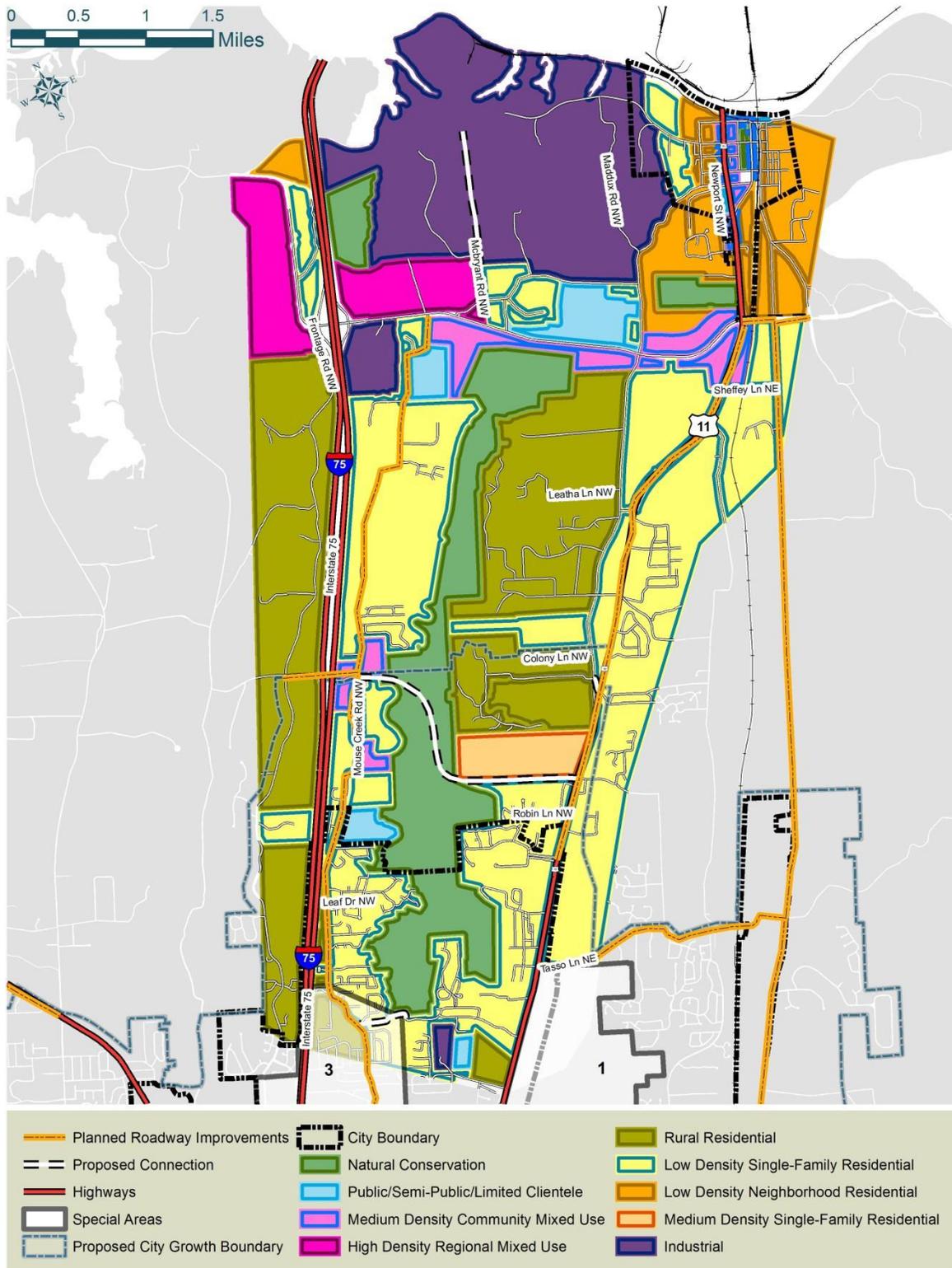
Reserve accessible and adequate school sites within the Northern Corridor Area for future facilities to accommodate anticipated growth in student populations.

THE NORTHERN CORRIDOR AREA MASTER PLAN MAPS

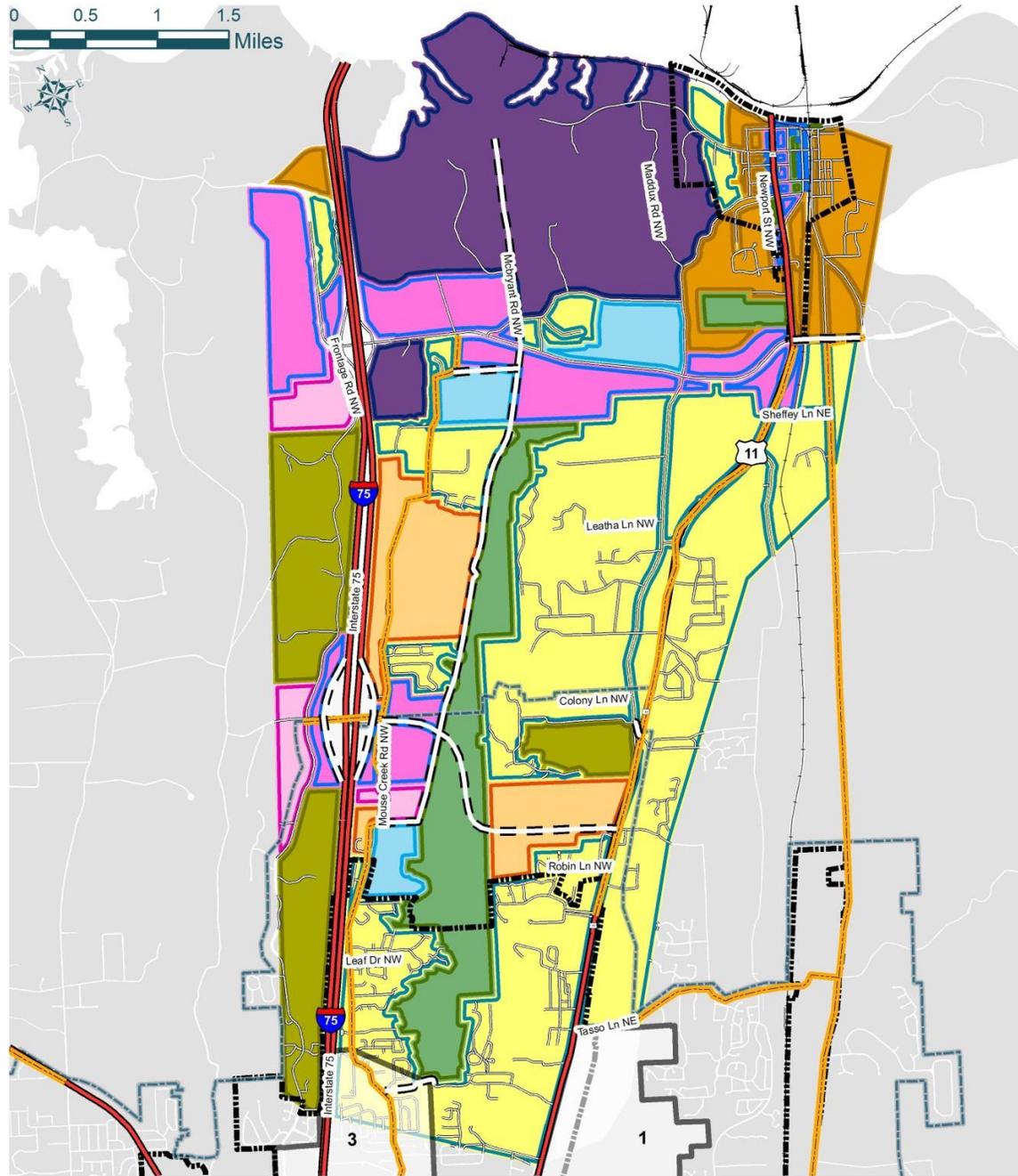
Two master plan scenarios were developed for the NCA. Scenario 1 features existing infrastructure and areas suitable for various future land use categories along with a proposed connecting route from Mouse Creek Road to North Lee Highway. Scenario 2 features a new interchange off of I-75, located between Exit 33 and Exit 27, as well as possible new roads parallel to Mouse Creek Road and additional connections of Lauderdale Highway and North Mouse Creek Road, and adjusts future land use recommendations to reflect these infrastructure improvements.

The goals and master plan scenarios for the NCA were created to identify possible future development patterns and establish the interconnected relationship between land use development patterns and the availability of infrastructure, particularly roads and sanitary sewer treatment options.

NORTHERN CORRIDOR AREA MASTER PLAN MAP: SCENARIO 1



NORTHERN CORRIDOR AREA MASTER PLAN MAP: SCENARIO 2



Proposed Connection	Natural Conservation	Medium Density Single-Family Residential
Planned Roadway Improvements	Public/Semi-Public/Limited Clientele	Low Density Neighborhood Mixed Use
Highways	Rural Residential	Medium Density Community Mixed Use
Special Areas	Low Density Single-Family Residential	High Density Regional Mixed Use
Proposed City Growth Boundary	Low Density Neighborhood Residential	Industrial

FUTURE LAND USE RECOMMENDATIONS

The **Northern Corridor Area Master Plan Maps** and future land use category descriptions are intended to be used together to provide general direction in the quality, intensity, and locations of various land uses appropriate in various areas of the NCA. Descriptions include a narrative description of character, some images of example uses, and supporting recommendations. Some areas were identified for additional or more specific recommendations are discussed in the following section on Future Land Use Special Areas.

The future land use categories applied in the CCA include:

- Natural Conservation
- Public/Semi-Public/Limited Clientele
- Rural Residential
- Low-Density Single-Family Residential
- Medium-Density Single-Family Residential
- Low-Density Neighborhood Residential
- Low-Density Neighborhood Mixed-Use
- Medium-Density Community Mixed-Use
- High-Density Regional Mixed-Use
- Industrial

Natural Conservation

The natural conservation category represents areas where new development should be reviewed for impact on natural resources. Within the NCA, the natural conservation designation is applied to two types of land: land that is unsuitable for development due to severe environmental constraints such as ridge lines, valleys, and potential flooding; and land that exhibits natural or agricultural features that should be preserved. Due to their limited geography most of these areas would likely be most suitable for lower density residential development, or continued natural or passive uses. Developers would be well suited to consider location of floodplains, steep slope or poor draining soil in the selection or designation of building sites.



Development Recommendation

- In considering potential development in natural conservation areas, special consideration should be given to the location of floodplains, steep slopes, or poor draining soil on building sites.

Example Uses

- Woodlands, forest
- Wetlands and waterways
- Nature trails
- Wildlife management areas
- Single-family homes
- Agriculture

Public / Semi-Public/Limited Clientele

The public/semi-public/limited clientele category includes publicly owned or operated facilities and institutional non-governmental uses. Public/semi-public areas include uses relating to community services, such as government buildings, community centers, and educational facilities. Limited clientele facilities are recreational and institutional uses with limited access, such as a private golf course, supper club, hunting lodge, etc. The scale of the clientele facilities should be determined based on the populations and projected populations served. The areas designated on the **Northern Corridor Area Master Plan Maps** represent existing or planned locations for public/semi-public/limited clientele uses. Additional, unidentified locations for the uses may be located in other areas.



Development Recommendation

- The location of future facilities should be coordinated with other agencies and departments to identify opportunities for co-location of related facilities and to ensure cooperation and compatibility of future facilities.

Example Uses

- Government offices
- Public utilities and facilities
- Public parks and open space

Rural Residential

The rural residential land use category indicates areas with existing large lot residential use patterns. This category intends to provide a transition from denser areas closer to development to predominantly agricultural areas, and to preserve the rural character in existing neighborhoods throughout the county. The average lot size for rural residential areas is five or more acres.



Development Recommendations

- Rural residential areas are typically not provided with urban levels-of-service. Depending on location in relation to urban service boundaries, rural levels-of-service generally will not include sanitary sewer and stormwater drainage facilities. Rural residential is generally not recommended in areas where urban services are or will be available.
- The capacity and condition of rural roadways should be analyzed prior to approval of new development to ensure adequate capacity exists for increased vehicular traffic. Several winding and rural roadways exist throughout the county and could create congestion and safety issues if actual use begins to surpass road capacity.

Example Uses

- Single-family uses
- Institutional uses, such as schools, churches, and public facilities
- Parks and recreation uses

Low-Density Single-Family Residential

The low-density single-family residential category is the basic residential classification for single-family detached homes located on medium to large lots and is applied primarily to the transitional areas between the cities of Cleveland and Charleston where recent growth trends have created neighborhoods with medium to large lots. Within the NCA, this designation applies to many existing neighborhoods, as it is possible to achieve this residential density in the forest agricultural residential zoning district. Future development in these areas will likely be at densities lower than other residential areas, but may be denser than rural residential areas without potable water. Low-density single-family residential areas along Mouse Creek Road may have sewer service provided by or access to sewer service through Cleveland Utilities, however areas near Charleston and portions of North Lee Highway may be un-served. Lots in low-density single-family residential areas are commonly between two and five acres (a density of 0.2-0.5 units per acre).



Development Recommendations

- Residential development in low-density single-family residential areas is limited to single-family homes and accessory structures. Accessory dwelling units may be appropriate in some areas as determined by the county.
- Residential developments in low-density single-family areas should be designed with current and future transportation needs in mind. If new roads are required, new roads should connect one existing public roadway to another to improve access and mobility throughout the county.

Example Uses

- Single-family uses and accessory structures
- Institutional uses, such as schools, churches, and public facilities
- Parks, open space, and recreational facilities

Medium-Density Single-Family Residential

The medium-density single-family residential category supports slightly denser single-family residential development. Lots in medium-density single-family residential areas range from 0.16 to two acres (a density of 0.5 to six units per acre). This use is recommended as the primary designation for most of the City of Cleveland’s urban growth boundary. Within the NCA, these areas have the potential to develop near I-75, especially if an additional exit ramp is constructed, and in a portion of the city’s growth boundary along North Lee Highway. These areas can accommodate higher development densities based on the potential availability of centralized utilities. These are the areas with a suburban character.



Development Recommendation

- Residential development in medium-density single-family residential areas is limited to single-family homes and accessory structures. Accessory dwelling units may be appropriate in some areas.

Example Uses

- Single-family uses and accessory structures
- Institutional uses, such as schools, churches, and public facilities
- Parks, open space, and recreation facilities

Low-Density Neighborhood Residential

The low-density neighborhood residential category allows for single-family dwellings, but also provides the opportunity for attached units and small-scale multi-family buildings as the area transitions to higher density residential uses, commercial centers, or mixed-use centers. This category primarily applies to areas adjacent to the City of Charleston. Densities in low-density neighborhood residential areas range from two to eight units per acre, with sensitivity to the existing neighborhood context.



Development Recommendations

- New residential development should be sensitive to existing character, in terms of density and dwelling type. In cases where there is not an existing development pattern, a development could include a range of lot sizes.

Example Uses

- Single-family residential uses (both attached and detached) and accessory structures
- Small-scale multi-family residential structures
- Institutional uses, such as schools, churches, and public facilities
- Parks, open space, and recreation facilities

Low-Density Neighborhood Mixed Use

The low-density neighborhood mixed-use category recognizes lower density developed areas which support a combination of residential, retail, service, and institutional uses at an appropriate scale to serve a neighborhood. This category applies to business developments along major thoroughfares at the fringe of urban areas and along Lauderdale Highway within areas with or proposed for neighborhood residential development. The uses in these areas

should be focused on serving local populations and be developed with sensitivity to context. Priority should be placed on commercial, office, and semi-public uses in these areas however, residential development at densities up to four units per acre is suitable. Non-residential floor areas typically range between 10,000 and 20,000 square feet with a service radius of about two miles.



Example Uses

- Retail and services
- Offices
- Single- and multi-family residential
- Institutional uses, such as schools, libraries, churches, and public facilities

Medium-Density Community Mixed Use

The medium-density community mixed-use category supports a mix of land uses of appropriate scale to serve the surrounding community. In the NCA, this use category applies to areas surrounding current and potential I-75 exits and along Lauderdale Highway, as well as in areas adjacent to high-density mixed-use. These areas should feature retail, service, office, and institutional uses in both horizontal and vertical mixed-use settings, while accommodating residential uses. Non-residential uses in medium-density community mixed-use areas feature a scale between 20,000 and 100,000 total square feet of floor area and a service radius of approximately five miles. Single-family detached residential units in medium-density community mixed-use areas feature average lot sizes between 0.16 and 0.5 acres. Residential densities up to 12 units per acre are appropriate in this category. These developments, somewhat like traditional downtowns, are automobile oriented and must include adequate parking for residential and business uses; however, a park-once experience supported by a pedestrian friendly environment is encouraged.



Development Recommendation:

- These developments, somewhat like traditional downtowns, are automobile oriented and must include adequate parking for residential and business uses; however, a park- once experience supported by a pedestrian friendly environment is encouraged.

Example Uses

- Commercial, retail, office, and service uses with a five mile service radii
- Personal and professional services
- Offices
- Mixed density residential
- Institutional uses, such as schools, libraries, churches, and public facilities
- Parks, plazas, and open space

High-Density Regional Mixed Use

The high-density regional mixed-use category allows for higher-density mixed-use developments appropriate for retail, service, office, entertainment, and residential uses to serve the region. This category is applied to areas near I-75 Exit 33 on the **Northern Corridor Area Master Plan Map: Scenario 1**, as the current spacing of the exit ramps along I-75 may concentrate development demand near the current ramp. These areas feature non-residential concentrations of 100,000 square feet of floor area or more and service areas of more than five miles. Densities ranging from two to 12 units per acre, with higher density development being appropriate in some areas, are appropriate in these areas. These developments are automobile oriented and should include adequate parking to accommodate residential and business uses; however a park-once experience supported by a pedestrian friendly environment is encouraged.



Example Uses

- Regional scale retail and services
- Offices
- Multi-family residential
- Parks, plazas, and open space

Industrial

The industrial category allows for industrial and warehouse uses of medium to high intensity. Industrial uses may include research facilities, assembly plants, warehouses, distribution centers, and manufacturing plants. Support office and retail would be included in this category. Within the NCA, industrial areas are generally concentrated in the northern portions of the corridor. Development in these areas should occur in a manner sensitive to the surrounding community in order to reduce impact on nearby properties, uses, and natural resources. The scale of industrial areas is typically larger than 30 acres. Floor area ratios for industrial developments typically range from 0.15 to 0.25.



Development Recommendations

- Development in industrial areas should occur in a manner sensitive to the surrounding community in order to reduce impact on nearby properties, uses, and natural resources.
- Depending on location in relation to sewer service boundaries, urban services may not be available in some industrial areas. Sites in industrial areas not serviced by public sewer and water should be large enough to accommodate appropriate facilities on site.
- The capacity and condition of rural roadways should be analyzed prior to new development to ensure adequate capacity exists for increased vehicular traffic. Roadways may need to be improved or densities limited in these areas to prevent congestion and safety concerns.
- New infrastructure particularly roads should be designed to safely accommodate heavy freight traffic. Freight traffic and roadway access should be managed to reduce the impact on existing roadways and surrounding communities. When possible, freight traffic should be limited or prohibited on roadways which are inadequate to handle the increased use due to environmental constraints and roadways primarily serving residential communities.

Example Uses

- Manufacturing, warehousing, and distribution
- Research and technology centers
- Support retail and service uses

FUTURE LAND USE FOCUS AREAS

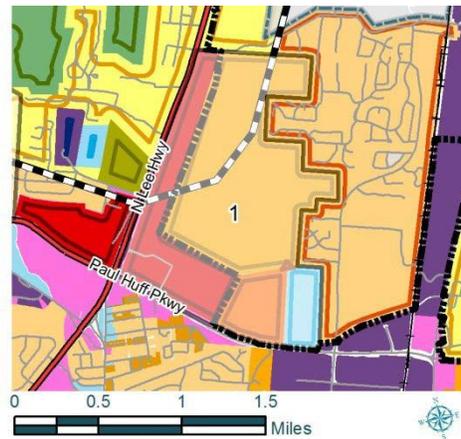
The *City of Cleveland Comprehensive Plan* identifies various future land use focus areas to recognize unique situations in terms of potential future uses. These areas may have been selected due to anticipated demand, future transportation improvements, or the presence of relevant and current plans. Two areas identified as future land use focus area overlap boundaries with the Northern Corridor Area: Area 1: Hardwick Farms Master Plan Development Area and Area 3: Exit 27 Development and Traffic Impact Area. Development in these areas should consider the respective development policies within *City of Cleveland Comprehensive Plan*.

AREA 1: HARDWICK FARMS MASTER PLAN DEVELOPMENT AREA

The Hardwick Farms Master Plan Development Area shows opportunity for a master planned mixed-use development. Future land uses within this area may include commercial, high-density neighborhood residential, low-density neighborhood residential, and institutional.

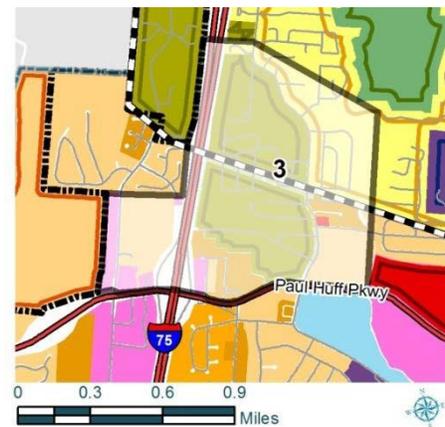
Development Recommendations:

- A concept master plan should be submitted to the city by the developer/land owners prior to development.
- The concept master plan should be accompanied by a traffic impact analysis, an access management study, and a utility demand study.
- The master plan should incorporate the following design elements:
 - A site plan which considers the location of steep topography, streams, and flood zones in the subdivision and location of building sites and internal roads.
 - Protection and preservation of features associated with the heritage of the land and surrounding area as designated by the property owners.
 - An internal transportation network including roads, trails, or sidewalks that connects in multiple locations to external networks.



AREA 3: EXIT 27 DEVELOPMENT AND TRAFFIC IMPACT AREA

The area surrounding Exit 27 off of I-75 is experiencing development pressure which will likely worsen road congestion and connectivity issues if left unaddressed. An integrated strategy of land use and transportation improvements is needed.



Development Recommendations:

- Prepare an access management plan for the area between I-75 Exit 27 and North Lee Highway along Paul Huff Parkway.
- Identify safety improvements to North Mouse Creek Road and implement improvements.
- Examine potential reconfiguration of local roads and commercial development as market driven redevelopment takes place.

FUTURE TRANSPORTATION ROUTES

A number of planned transportation improvements have been identified for the Northern Corridor Area. The following figure lists those projects that are currently under construction and/or identified in the MPO’s Regional Transportation Plan.

<i>Planned Transportation Projects</i>							
2035 Plan ID	Roadway	From	To	Project Type			Project Details
				Intersection	Upgrade	Widen	
Projects Underway							
E+C	Mouse Creek Road	East Circle	Logan Road		X		Realignment/Safety
Horizon Years 2010 - 2025							
17	Mouse Creek Road	Cleveland City Limits	Hooper Gap		X	X	Upgrade from two lane with shoulders to three lane 12-foot rural section with 5-foot shoulders and ditches; turn lanes at Hooper Gap; alignment improvements
19	Tasso Lane	Lee Highway	Michigan Avenue/Dry Valley		X	X	Widen to 3 lane rural section with 6-foot shoulder and ditches
57	Mouse Creek Road	Paul Huff Parkway	Cleveland City Limits		X	X	Widen to 3 12-foot lanes with curb, gutter, and sidewalk
Horizon Years 2026 - 2035							
23	Hooper Gap	Frontage Road	Mouse Creek Road	X	X		Upgrade to 12-foot rural section with 6-foot shoulders and ditches, add turn lanes at Mouse Creek Road
31	Mouse Creek Road	Hooper Gap	SR 308		X		Reconstruct to two lane 12-foot rural section with 6-foot shoulder and ditches
Notes:							
E+C – Funding is available and the project is moving toward implementation.							

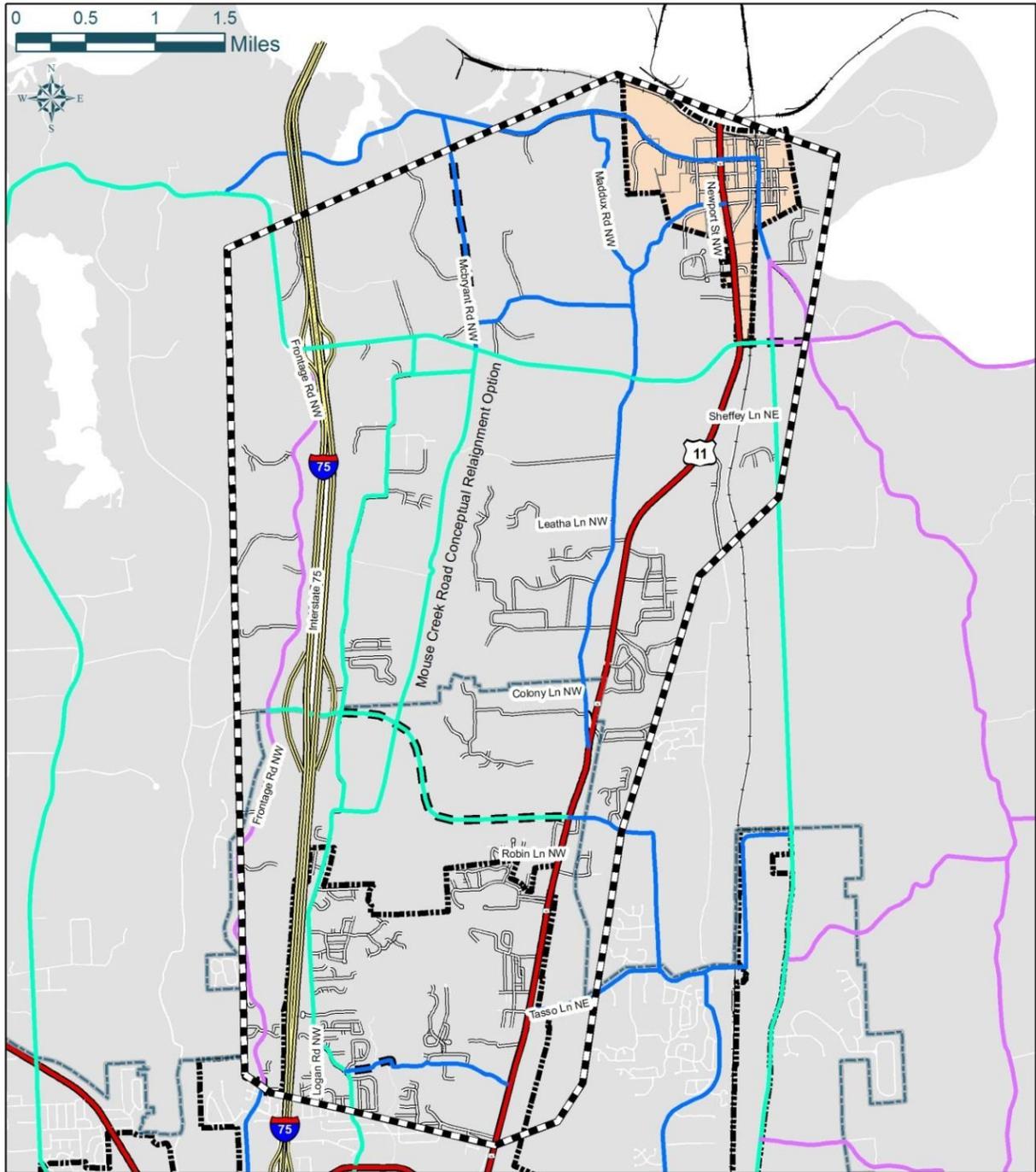
Improvements to Mouse Creek Road continue to be an important transportation need given existing and future development growth activity in this area of Cleveland and Bradley County. The comprehensive planning process resulted in the identification of a number of additional roadway connections to improve access in the area beyond improvements to Mouse Creek Road.

These roadway concepts include:

- A new interchange at I-75 and Hooper Gap Road and the extension of Hooper Gap Road from its current terminus at Mouse Creek Road to North Lee Highway (US 11);
- Consideration of a new alignment for North Mouse Creek Road;
- Extension of McBryant Road from Lauderdale Memorial Hwy (SR 308) to Old Lower River Road;
- The realignment of Walker Valley Road at North Lee Highway (US 11); and
- The connection of Lauderdale Memorial Hwy (SR 308) to Dry Valley Road (and Upper River Road).
- Since TDOT's Transportation Planning Report (TPR) estimated costs for a full-scale improvement to a three lane facility meeting all applicable federal and state standards as being about \$50 million, the Cleveland MPO and the City of Cleveland have adopted an approach of pursuing incremental improvements, especially where safety can be improved.

Additional transportation recommendations include updating the county's and municipalities' major thoroughfare plans to account for these roadway concepts and other roadway functional classification changes, as depicted on the **Proposed Functionally Classified Roads Map**.

PROPOSED FUNCTIONALLY CLASSIFIED ROADS MAP



Functional Classification		Proposed City Growth Boundary	Area Streets
	Interstate		City Boundary
	Freeway/Expressway		Highways
	Principal Arterial		Railroads
	Minor Arterial		Proposed Connection
	Urban & Major Collector		
	Minor Collector		

FUTURE UTILITY SERVICE AREAS

Since the utility facilities and infrastructure to support telecommunications, electrical power and natural gas service are provided on an on-demand basis, they will not be addressed in detail in this section, except to say that a robust offering of such services and the infrastructure and facilities to support them will be essential to addressing areas in which a high level of growth and increased development densities are anticipated.

The South Mouse Creek Valley (where local transportation facilities are limited but sanitary sewer service is already in place) and the Little South Mouse Creek Valley (along North Lee Highway [US 11], where a primary transportation route exists but there is no plan for provision of sanitary sewers) have dominated discussion of future development within the NCA. These areas reflect the disconnect between currently available services, facilities and infrastructure and underscore a need for any future transportation, land use and utility infrastructure planning to be undertaken in concert with one another and in more of a comprehensive manner.

As can be seen in the **County-Wide Sewer Service Availability Map**, the presence of the existing South Mouse Creek Interceptor gravity sanitary sewer system as well as abundant potable water system facilities make lower South Mouse Creek Valley from Mouse Creek Ridge west to Candies Creek Ridge an attractive area for more intensive levels of development and potential future service by Cleveland Utilities. Cleveland Utilities sewer connection is not allowed apart from annexation or agreement to be annexed by Cleveland. Currently most of this area is outside of the city's growth boundaries. Without significant improvements to Mouse Creek Road, the corridor would be unable to support significant development. In recent years, development in the vicinity of I-75 TN Exit 33 by such entities as GE, Amazon and Wacker Chemie has demonstrated the potential held by this area.

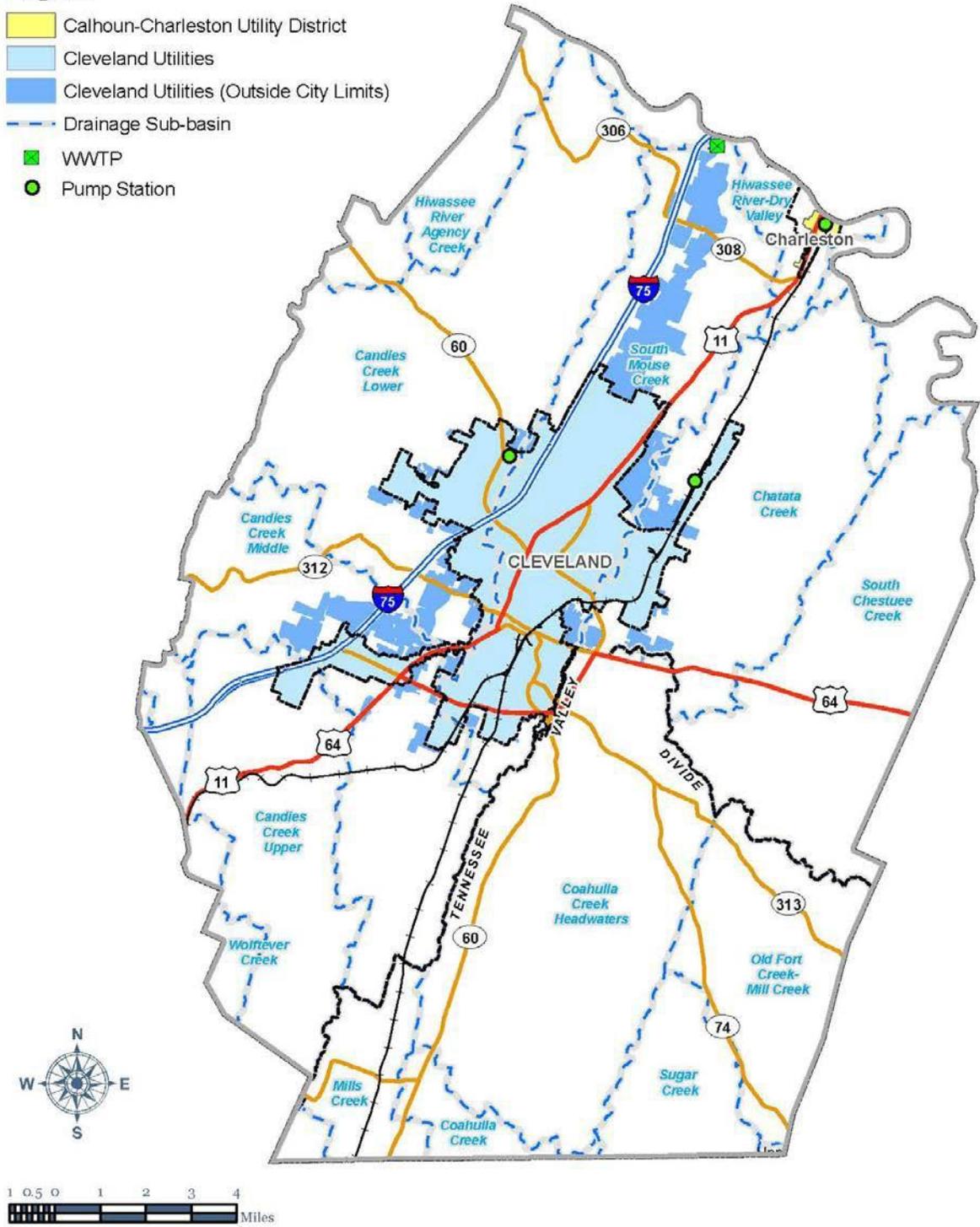
The City of Cleveland, Cleveland Utilities, Bradley County, Charleston-Calhoun Utility District and possibly Ocoee Utility district should evaluate the overall costs associated with increasing development capacity in the Mouse Creek Road Corridor and develop and coordinated strategy for provision of sanitary sewer treatment facilities in the NCA

Given the existing development pattern and limited road way capacities in Little South Mouse Creek Valley (includes Walker Valley and Route 11) this area is an unlikely location for significant growth. Lauderdale Highway however, holds potential for significant economic development and mixed use growth which will likely demand utility services.

COUNTY-WIDE SEWER SERVICE AVAILABILITY MAP

Legend

- Calhoun-Charleston Utility District
- Cleveland Utilities
- Cleveland Utilities (Outside City Limits)
- Drainage Sub-basin
- WWTP
- Pump Station



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Chapter 4: Action Strategies

OVERVIEW

This chapter recommends strategies to guide the successful implementation of this area plan. Many of the plan's strategies will require joint efforts between the county and municipalities. When considering implementation of these strategies, the jurisdictions should fully consider the fiscal implications of these decisions and weigh them against the possible fiscal and public good which will result from their completion. When possible, available funding sources have been identified.

Strategies are discussed for each targeted planning challenge and plan goal. Plan goals are restated before recommended strategies are discussed.

STRATEGIES

TRAFFIC SAFETY

The roadways, intersections, and interchanges in the Northern Corridor Area will provide safe and adequate access and traffic flow for local and interstate travelers.

Strategies:

- Establish an alternative route for Mouse Creek Road traffic south of existing city limits (e.g. an east-west connection between Mouse Creek Road and Frontage Road south of Hooper Gap Road).
- Reconfigure the McBryant/Mouse Creek/Lauderdale Highway intersection to improve geometry and reduce conflict points. The reconfiguration will also improve site distance and reduce incidents in this area.
- Beginning west of Walker Valley High School maintain the 2-lane rural highway character of Lauderdale Highway. The road should continue to provide primary access to Charleston from the interstate. Access management techniques should be employed to maintain levels-of-service along the highway.
- Make improvements at Walker Valley High School to reduce conflicts between student traffic and truck traffic. Turn lane and signals may be an option.

- Reroute the Charleston area truck traffic along TN 163 (in McMinn Co.) instead of along Lauderdale Highway. This should be helpful particularly for trucks with a destination to Bowater and other locations in McMinn County, north of the Hiwassee River. Rerouting trucks to TN 163 would improve safety on the streets of Charleston.
- Manage roadways and roadway capacity in order to promote an efficient, safe, and secure transportation network. The capacity of roadways is influenced by a number of design factors including but not limited to roadway width, the number of lanes, types of traffic (passenger or freight), alignment of roadway, number of access points, and location and number of intersections. Through management practices and standards for roadway design and access management, the various jurisdictions can manage the capacities of existing and future roadways.
- Promote access management and roadway design which accommodates all users. The roadways in the study area must serve several purposes including the movement of goods and people and access to properties for residential and business uses. For roadways to function as major thoroughfares they need to have limited interruptions in traffic flow, roads serving major employment centers require the capacity for heavy freight traffic, and roads primarily providing access to homes should discourage high speeds and non-residential traffic to promote safety and accessibility to individual properties.
- Manage the mix and impacts of freight traffic on the surrounding areas while promoting efficient business connections throughout the region. Freight and passenger vehicles must share the roadways in Bradley County. The county could explore cost effective options like signage, and traffic patrol, to limit heavy truck traffic to designated roadways. Signalization, intersection design, and exploration of alternative routes for freight traffic can also be explored.
- Integrate school site planning and transportation planning to ensure compatibility. There are some existing conflicts with the transportation system in the county because of the location of schools and the geometry of existing roadways; freight traffic and school traffic conflicts are also a concern particularly in the Walker Valley area. Schools are often magnets for growth and look for sites with good access to the geography they will serve. As the schools need new locations, the capacity of the roadways, and possible signalization and capacity improvements should be taken into consideration before sites are selected or accepted. Conversely, when the thoroughfare plan is updated an estimation of the approximate location of future school sites should be taken into consideration.

GREENWAY CONNECTIONS FROM CLEVELAND TO THE HIWASSEE RIVER

Provide safe and accessible pedestrian and bike connections between the Cleveland Greenway Trail and the Charleston Greenway Trail with opportunities to connect to the soccer complex and Walker Valley High School.

Strategies:

While a greenway trail connection would enhance the area, a likely alignment is unclear, and acquisition and construction would be a longer-range priority for the community. This topic is of lower priority in this area. To continue moving forward on this initiative, the following strategies are recommended:

- Identify preferred or feasible route along Mouse Creek Ridge or within shared right-of-way along North Lee Highway (US 11).
- Consider these alignments in land use and development recommendations for the NCA. Look for opportunities to time land procurement or dedication and trail development with development of the area.

THE CHARACTER OF THE NORTHERN CORRIDOR

The development intensity and character of land uses in the Northern Corridor Area will be directly linked to the capacity of facilities such as schools, roads, and utilities to provide adequate levels -of-service to new development without reducing services to existing residents.

Strategies:

- **Frontage Road:** The land uses in this area should remain relatively rural residential in nature, with large lot subdivisions and frontage residential lots being preferred. However, access management techniques should be used to maintain Frontage Road as a primary north-south transportation route to alleviate some of the travel demand from Mouse Creek Road.
- **Mouse Creek Road:** The central portions of this valley should be maintained in rural and agricultural uses. However, if residential development is proposed the allowable density/intensity of development should be stipulated by the roadway capacity.
- **Route 11/North Lee Highway:** Route 11 will need to continue to function as a major transportation corridor between Charleston and Cleveland. Land uses and developments should be situated to allow for future widening of Route 11 north of Anotole Lane. Limited access points along the corridor should be managed by TDOT and local access management standards to ensure the roadway continues to function as a major arterial.
- **Northern portions of Chatata Valley Road and Dry Valley Road:** These areas should be maintained with agricultural and rural character.
- **Lauderdale and Old Lower River Road:** Within the corridor these areas are the locations most appropriate for future industrial development. However, the growth in this area should be balanced with the impacts on the existing Walker Valley school site and the residents of Charleston and the surrounding area.

COMPATIBILITY OF INDUSTRIAL/BUSINESS GROWTH WITH POTENTIAL RESIDENTIAL GROWTH

The corridor will have a land use pattern that supports appropriate locations for industrial, commercial, and residential development that is compatible with existing and planned infrastructure improvements and reduces conflicts between uses.

Strategies:

- Encourage the industrial and business development within the Northern Corridor Area. The recent industrial growth has placed significant pressure on infrastructure and services in the NCA; it is also rapidly contributing to a change of character. Efforts to

moderately increase industrial and business development in these areas and to slow down or phase in new high intensity development should be considered.

- Promote higher intensity development near I-75 Exit 33. High intensity commercial, service, and auto oriented uses should be accommodated as close as possible to I-75 Exit 33 to reduce traffic loads on local roads.
- Develop a system to evaluate impacts of new development on roads and other infrastructure to pass costs of improvements required onto the developer or new uses. Policies which require new development to pay for itself allow current levels-of-service to be maintained in the face of growth without additional cost for system expansion.

CHARLESTON TOURISM AND ECONOMIC DEVELOPMENT

Increase tourism and economic development in Charleston .

Strategies:

- Pursue destination signage along I-75 directing tourists to Exit 33 and 38 for historic sites. Alerting travelers of local destinations will increase traffic to historic and cultural sites, while improved wayfinding may improve general traffic patterns along I-75 and other roadways.
- Reduce truck traffic through the center of Charleston to improve vehicular and pedestrian safety. Restrictive signage, weight limits, access time restrictions, and alternate routes around the city will reduce truck traffic within the city limits.
- Promote recreation and educational opportunities in Charleston. Continue the implementation and design of the greenway trails system.
- Preserve important historic and natural features to be enjoyed and draw people to the community, thereby increasing demand for retail, restaurants, and commercial services.

RECREATIONAL / ECONOMIC USE OF THE HIWASSEE RIVER

Recreational and economic use of the Hiwassee River will be an important component of economic development in the Northern Corridor Area.

Strategies:

- Maintain barge traffic on the Hiwassee River to the west of Charleston, contingent on maintenance or improvements of the Chickamauga Dam locks.
- Maintain recreational access to the Hiwassee River. The public boat launch at Hiwassee River Park in Charleston is the only public access to the Hiwassee. Preserving this recreational asset will enhance the area.
- Acquire a public site for a regional park with access to the Hiwassee River.

SERVICE, AMENITIES, RETAIL

Provide support retail services, and amenities for daytime populations and residents in the northern part of the county.

Strategies:

- Concentrate automobile-oriented and high traffic service uses near existing infrastructure. Automobile-oriented services such as hotels, fast food restaurants, and gas stations should be located as close as possible to the highway.
- Improve connectivity and overall function of the road network by planning and implementing interchange and intersection improvements. Consider design standards for improvements to existing interchanges and for interchange development to ensure access is managed and the development around the interchange projects a positive image.
- Streamline development regulations to promote economic development. Removing barriers to development from current development regulations will act as a catalyst for economic development in these areas.
- Promote the location of local serving commercial establishments in existing and future neighborhoods. Local serving retail and service establishments are encouraged to locate in or near Charleston.

SANITARY SEWER AND WATER SERVICES

Development in the corridor will have sewer and water services consistent with the intensity and character of development.

Strategies:

- Identify targeted levels-of-service for each publicly provided facility and service. The common way to measure the adequacy of utilities and public services is to establish a targeted and operational level-of-service. Levels-of-service differ for each type of facility or utility but ultimately they relate to the capacity of the facility to service a targeted population. For sewer and water it may be treatment capacity, daily demands from households and businesses. The level-of-service (LOS) allows facility managers and planners to identify need or demand for new facilities.
- Coordinate the development of new infrastructure with plans for future growth. It will be necessary for the various jurisdictions to monitor growth on a regular basis and update both short and long range plans to provide new infrastructure as growth requires additional facilities.
- Manage stormwater runoff and minimize the impacts of development on watersheds, natural assets, and surrounding areas. The various jurisdictions may consider creating alternative development standards that would incentivize the protection of these areas during development activities.
- Develop mechanisms and tools to balance the demand for new facilities with the costs of providing them in order that new growth pays for its fair share of the cost of utilities and public facilities. The communities will need to assess if the necessary improvements can be covered under existing tax and fee structures. If the improvements exceed the

resources, but levels-of-service would fall below acceptable levels without improvements, the county and city will need to explore alternative funding options.

SCHOOL CAPACITIES

Reserve accessible and adequate school sites within the Northern Corridor Area to accommodate anticipated growth in student populations.

Strategies:

- Select future school sites in advance of increased development pressures. Often times, sites ideal to accommodate educational facilities are within or near areas of heightened development pressure. This causes the prices of land to increase. Securing sites in advance of development pressure will allow facilities to be strategically located and will save costs. Identify a suitable site for a new middle school facility in the Lauderdale Highway corridor.
- Select sites in conjunction with anticipated roadway improvements. Select sites that have adequate roadway access to prevent extensive congestion and conflict with truck or business traffic.
- Select sites which will be centrally located within the district they serve. Locating facilities within areas served can reduce the impact of the school site on existing infrastructure.