Vulnerable Viewsheds in Northwestern BFR Corridor Area
to link further with future street and open space networks. The eastern half of the study area is well suited to provide the open space and recreational needs of its residents for generations to come.

The study area can be divided into three distinct open space zones that will characterize the function and use of park and recreation facilities within them:

- **River Lands**: Nature Preserves, natural heritage sites and historic properties along the Catawba River, including the critical watershed districts to provide limited and controlled uses for recreation and emphasize preservation.

- **Farm Lands**: Farms and rural properties that exist roughly between the preservation lands and BFR to provide private farm uses, farm parks and/or recreational equestrian uses.

- **Hamlet Center and Residential Open Space District**: Community serving open space systems and trails, primarily in the eastern half of the Corridor.

### 6.5.2.2 Active Use Parks

Currently, the only major park in operation with significant active recreational and event facilities is the Latta Nature Preserve. The Richard Barry Memorial Park now under construction is scheduled for completion by early 2008. A future park facility is being planned in the vicinity of the water treatment plant just east of the BFRC SAP study area boundary at Oliver Hager Road. The Capital Improvement Plan of the County has also designated a future district park for the BFR Corridor study area (a district park is a park accommodating playing fields and other active uses, such as Freedom Park in Charlotte). This plan strongly recommends that a designated site for the future district park avoid a location adjacent to Beatties Ford Road. Rather, an available property along the future Vance Road Extension is advisable, since the facility can then be served in the future by a major thoroughfare and keep additional traffic off BFR.

**Farm Park**: Local property owners are in discussions with Charlotte-Mecklenburg Utilities over a strategy to preserve part of the Jim Kidd Farm property (now owned by CMUD) and other adjoining properties for farm uses by creating a working “farm park” on Jim Kidd Road. Such a park will serve as a demonstration and educational center that preserves the property as an active farm for future generations. CMUD is also considering the integration of a water reclamation project on the Jim Kidd property. This plan endorses active cooperation between CMUD, local property owners, the Mecklenburg County Park and Recreation Department, and the Town of Huntersville to pursue the realization of the proposed park in order to: (1) support water quality and reclamation, (2) to create controlled access points to the adjacent nature reserves, and (3) to preserve existing farm uses and open space (including the protection of the upland depression swamp forest Natural Heritage Site that is partly located in the Jim Kidd property).
6.5.3 Non-vehicular Transportation

Creating access to important community destinations, natural areas and historic sites through a diversity of modal choices helps build community ownership, improve public health and support local identity and quality of life. Creating access to natural areas cements public ownership of these lands and is actually significant to the continued maintenance of these areas. A balance must be maintained between the need to create public access to natural lands and the need to protect the natural communities that they preserve; however, through careful and collaborative planning, solutions for achieving both goals can be found.

During the course of public meetings for the BFRCSAP, members of the public expressed their desire for greater access to the open space resources within the study area. While creating access to some natural areas may not be feasible today, a planning framework must have the foresight to anticipate options for public access in the future. This plan proposes and discusses the features and guidelines of several options to link together and create access to the Corridor’s existing nature preserves, parks, and rural conservation areas:

(a) the extension of the recreational/multi-use trail network, especially along the greenways,
(b) the creation of equestrian trails outside of the nature preserves,
(c) the enhancement of recreational use of Mountain Island Lake, and
(d) the planning and use of the bikeway network.

Together with well-linked and pedestrian friendly street networks, any combination of the above travel options can be utilized to create a comprehensive open space system. Planning enhanced networks for non-vehicular access will create an accessible and well-integrated open space network that will serve the communities of the Corridor for generations to come.

Green Infrastructure Connectivity:
Planning for open spaces must be coordinated with a strategy to create a well-linked open space network throughout the entire study area. Therefore, augmenting the connectivity policy for new development to extend green infrastructure through the use of pedestrian, equestrian, greenway and bikeway connections would facilitate the goals of creating a robust open space network to serve future generations. Even where planned green infrastructure and non-vehicular networks remain undeveloped, a connectivity policy should require the dedication of easements for future public right of ways including those of trails. In particular, any proposed development should not bar public access to the Catawba River/Mountain Island Lake and the Nature Preserves. Any new development either preventing or discouraging such access to the public should be considered inconsistent with the Town's connectivity policy.

6.5.3.1 Recreational and Multi-Use Trail Network:

The extension of the McDowell Creek Greenway from Gilead Road to Beatties Ford Road is the study area’s most extensive green infrastructure component being planned to date. This trail will serve as the study area’s main east to west, non-vehicular spine and will provide a
connection to the greater greenway trail network of northern Mecklenburg County and the surrounding region. It is currently being considered as an important link in the proposed, 15-county-wide Carolina Thread Trail network. Extension of the Greenway across Beatties Ford Road through the Auten Nature Preserve and on to Neck Road near the Rural Hill Nature Preserve would extend this “green” link to the areas in the western part of the study area (and would also help with the Carolina Thread Trail effort). Secondary greenway trails along the McDowell Creek branches extending north and south of the Greenway on both sides of Beatties Ford Road would dramatically reinforce the potential of this Greenway to link the communities of the Corridor. In addition, a (tier two) multi-use trail is being planned along one of the utility rights-of-way in the north, which would connect to the McDowell Creek Greenway in the east to create a comprehensively linked linear park system.

In addition to the greenways, the plans to enhance the thoroughfares and McIlwaine Road for pedestrian and bike use will ensure that the areas east of Beatties Ford Road will be well-linked east to west and north-south for non-vehicular travel.

North to south, this plan proposes three non-vehicular transportation corridors. In the center, the multi-use trail corridor utilizing the 100-foot buffers along both sides of Beatties Ford Road would serve as the primary north-south pedestrian/bikeway conduit linking the residential neighborhoods along the corridor. For the neighborhoods in the eastern part of the study area, a continuous corridor of bikeway and pedestrian amenities is planned along both sides of the future Vance Road Extension.

For the western part of the study area, a Riverland recreational trail corridor creating a comprehensively linked hiking trail system (and linking with the Carolina Thread Trail system) is recommended to be studied as an option in a comprehensive park and recreation master plan for the study area’s nature preserves. Participants in the BFRCSAP workshops noted the general inaccessibility to lands in the western part of the study area. The study area to the west of Beatties Ford Road is segmented north to south between the main rural roads of the area, consisting of seven distinct, unconnected viewshed sub-areas. Unlike the eastern portion of the study area, these sub-areas are not well-suited to accommodate a well-linked open space system. North to south, absence of essential public links (street, road and easement/utility right of way) hinder greater connectivity. East to west, the rural roads lack the right of way width to provide sidewalks and bikeways and other similar amenities needed to extend the pedestrian and trail network from the east. Changing the road sections for non-vehicular travel through easement acquisition may also threaten the rural character of the roads. A recreational corridor linking the string of preservation lands along the river, therefore, would provide a minimally intrusive alternative to connect the western communities of the study area with one another. This recreational trail corridor would tie into the two east-west greenways and (i) East-West Greenways (ii) North-South Multi-Use Corridors (iii) Equestrian Use Corridor
may help realize the creation of such a system.

The siting of equestrian trailheads would be an important determination for evaluating the feasibility of equestrian trails. Trailheads need adequate parking facilities for the temporary storage and easy maneuvering of vehicles with horse trailers. Acquisition of a property for the trailhead either by purchase or by collaborating with a private entity such as South Lake Farm may be an option for consideration in proposing a trail system, especially if such an acquisition or partnership can help preserve endangered viewsheds.

This plan, however, will not make a specific recommendation for proposed alignments of an equestrian trail system, but it does recommend its further consideration by the Town of Huntersville, the Mecklenburg County Park and Recreation Department, local landowners, stakeholders and the public in order to enhance public enjoyment of the Beatties Ford Road Corridor, promoting equestrian related recreational use and tourism. If feasible, such a unique amenity would truly solidify the image of this area as a signature rural and historic area of Mecklenburg County and help galvanize further support for its continued preservation as such.

Latta Equestrian Center: Consideration should be given to augmenting the facilities and resources available to the Latta Equestrian Center on the Latta Plantation Nature Preserve. The existing Latta Equestrian Center contains parking

create local access to public lands and the river. Public access points to the trail corridor should be provided at all local roads that currently dead-end. This plan recommends that a comprehensive master plan be undertaken by the County to determine the nature of public uses in the nature preserves and to evaluate the feasibility for creating an unbroken north-south trail corridor.

6.5.3.2 Equestrian Use Corridor

In order to encourage equestrian-related uses and to highlight the special character the Corridor, an equestrian use corridor is recommended to extend north to south along the Beatties Ford Road Corridor, in the farm lands between the western nature preserves and Beatties Ford Road, extending where possible into the westernmost areas of the study area and including the Latta Equestrian Center on the Latta Plantation Nature Preserve. Horse trails on public lands and rights-of-way are encouraged to be considered in the equestrian use zone, but any proposed trail system must be located to avoid natural heritage sites and the sensitive areas of nature preserves (as determined by the Mecklenburg County Park and Recreation Department), since horses facilitate the spread of invasive species detrimental to the natural communities found in these areas. Given this reality, the ability to accommodate an equestrian trail system in the western part of the study area using public lands is greatly hindered. Nevertheless, collaboration with both public and private landowners of property outside the nature preserves
Open Space Network - Option A
Showing the Proposed Recreational Trail Corridor in the West
Open Space Network - Option B
Emphasis on Creating Blueway Access; No Recreational Trail Corridor
The primary consideration in trail design is the safety of the horse and its rider. The special needs of horses, both physical and psychological, must always be kept in mind. Consideration to riders with special needs must also be considered; therefore, trails should be designed to remove any obstruction and hazards that would require a rider to dismount to avoid an obstruction or to lead the horse around it. Safety considerations include:

- A 12-foot minimum vertical clearance.
- An 8-foot minimum cleared trail width.
- A 4-foot minimum tread width (8 to 10 feet recommended by Latta Plantation personnel).
- A continuous trail surface composed of soil or un-compacted material such as pit gravel (crushed stone).
- Removal of brush and stumps in the cleared trail zone, along with periodic removal of items such as fallen branches, large rocks, litter/shiny objects and other such low-lying objects that may disturb or injure a horse.
- Provision of adequate drainage to prevent the accumulation of standing water on the tread surface.
- Adequate road warning signage at intersections and along roadways to inform vehicular traffic of horse traffic and approaching trail crossings.
- Directional signage for riders and the provision of trail maps at trailheads.
- Slopes may present challenges to horses due to bearing loads. A maximum grade of 10 percent for slopes greater than 100 feet and a maximum grade of 20 percent for slopes less than 100 feet is recommended. The creation of switchbacks along sloping terrain may be necessary.
- At intersections and crossings over paved or hard surfaces, care must be made to make sure the pavement surface is not slippery to horses. Painted surfaces can pose a special hazard to horses in this regard.
- Insulation from any noises or visual objects that may agitate horses is recommended. Signage, warning strips and other such objects to avoid disturbance to the Hopewell Presbyterian Church walls creating a safer exit and entryway for vehicles and horse trailers, (2) to expand the grounds available for use of the Latta Equestrian Center, (3) to retain at least part of the acquired right of way for grazing horses, and (4) to create a visible presence of the Latta Equestrian Center on Beatties Ford Road.

6.5.3.3 Catawba Blueway

Currently, a number of boating and canoe access points are located along the Catawba River / Mountain Island Lake, which comprises the western boundary of the study area. Two canoe/kayak access points are provided on Latta Plantation and a public boat access area is located just south of the Auten Nature Preserve. Other canoe/kayak access points have been silted over or fallen to neglect. As part of the Duke Energy Catawba/Wateree Comprehensive Relicensing Agreement facilities, lighted arenas, stalls, show grounds and a tack shop. The Duke utility right of way inside the preserve is being utilized for equestrian trails and grazing land. Currently, the Latta Equestrian Center cannot meet the current (and increasing) demand for pastureland, stalls, parking and show ground facilities. If the Center were to realize its goal of constructing a covered arena, it would have to roughly double the size of its current land area and facilities in order to meet the demand it would attract from the region. Currently the nearest show ground facilities with covered arenas are in the Raleigh and Atlanta regions. As such, the Center could anticipate being booked year-round for shows if it contained a covered arena.

To meet this demand, consideration should be given to the purchase of property under the Duke Energy utility right of way by the County to meet four goals: (1) to enable a realignment of Sample Road...
in the horse’s sightline should not be overly bright, reflective or shiny as these can spook horses or cause them to become agitated, especially near vehicular traffic.

• The provision of bollards to prevent vehicles from accessing the trail as well as the prohibition of off-road vehicles on horse trails. Signage stating the prohibition of off-road vehicles – and if pertinent, communicating associated fines for infractions – should be posted at all major trail access points. Bollards are recommended to be 3 feet in height and spaced a minimum of 5 feet away from an adjacent bollard or vertical surface. A bollard must be designed to be weather-resistant, to have a round cross-section and a top with smoothed edges, and to be composed of durable, homogenous, non-splintering material that does not contain any edges, attached components and small projections that may catch on or scrape a horse or rider. Lighted bollards and bollards with reflective strips or bright colors are not recommended.

• Horses like clear sightlines to be maintained between themselves and other moving bodies, such as vehicles and other horses. Care must be made to make sure that sightlines to approaching traffic are maintained around curves and corners and at the approach to roadways, roadway crossings and trail branches. If providing parallel trail branches with jumps, a wide berth between the main trail and the jump trail is recommended, but with care that unobstructed sightlines are maintained between parallel trails.

• Fencing, buffers, and/or berms are recommended between the trail and an adjacent roadway (especially in areas where vehicular traffic typically exceeds 35 miles per hour) so long as clear sightlines to approaching traffic are not obstructed.

• For long trail runs, consider the placement of mileposts and first-aid stations and/or call-boxes.

• Avoid the placement of trail crossings on the curves of roads.
Currently, the primary challenges facing cyclists are the high volumes and speeds of traffic on the roads. The discontinuity of bike lanes on Beatties Ford Road and the provision of a lane on only one side of the road were also deficits repeatedly noted by users and Corridor residents present at the BFRCSAP workshops. However, cyclists do not necessarily need designated or striped bike lanes so much as wide enough road widths to accommodate them alongside vehicles. Many experienced road cyclists, in fact, favor wide lane widths over bike lanes, as marked bike lanes discourage vehicular traffic from giving better consideration to cyclists — especially where cyclists like to travel in groups. These cyclists are typically happier with long sight distances, warning and “share the road” signage, and/or enforcement of speed limits.

The Mecklenburg County Park and Recreation Department should consider enhancing bikeway access to the parks and nature preserves in the area as well providing multi-use trails inside the preserves to allow the public to better enjoy the unique environments of the area. The Auten Nature Preserve, which has been recently expanded along McDowell Creek to Beatties Ford Road, is ideally situated to allow cyclists to access the preserve via Beatties Ford Road and the multi-use trail of the McDowell Creek Greenway now under construction.

**Bikeway Loop:** Residents of the southern district of the study area proposed and enthusiastically endorsed the idea of creating a “bikeway loop” to accommodate local cyclists. Such a loop would travel clockwise using the triangle formed by the intersections of Beatties Ford, Hambright, and McCoy Roads. The scenic qualities of these roads, gentle slopes, low
density of surrounding development, and the relatively few intersections and driveways accessing the roads comprising the loop (especially to the inside curb), make the bikeway loop a reasonable and promising proposal.

The proposed bike loop may pose a few challenges to designers, however, necessitating the consideration of parking facilities for cyclists, the adding of paved width to the road section, and provisions to make sure that sight distances are adequate on the bends of Beatties Ford (between the Brasilia Park subdivision and the Hopewell Church), on Hambright Road (just east of the Norman Park subdivision), and on McCoy Road (just south of the McCoy Slave Cemetery). Groups of cyclists are more likely to utilize roads with generous widths and/or roads with infrequent traffic where sight distances allow vehicles to easily share the road with cyclists. Bike lanes and traffic calming measures such as a stamped section of pavement would need to be added to the section of road traveling adjacent to the walls of the Hopewell Church Cemetery on Beatties Ford Road, as was recommended by the Beatties Ford Road Protection / Enhancement Strategy Plan. Because of the constrained width of the road section between the rock walls, bike lanes are recommended in the Hopewell Church area. Bike lanes are also necessary for curves with limited sight distances, but are not necessary for the remainder of the loop for the reasons mentioned above. Along with adequate warning signage around the loop and on the roads approaching the loop, it is recommended that advertising/branding of the loop be pursued. The provision of bike parking in the Latta Village shopping center should also be encouraged.

On McCoy Road, this plan recommends that pavement not be added to the outside (eastern) lane of the road to accommodate bicyclists, as this would be detrimental to the natural buffer protecting the habitat of the federally listed Schweinitz’s Sunflower, which is found underneath the power-line running parallel to McCoy Road on this side. This will not adversely affect the bikeway loop, since the loop will travel clockwise on the opposite side of the road. Adding a bikeway pavement width to the inside (western) lane of McCoy Road is recommended, however.
Successful implementation of the Beatties Ford Road Corridor Small Area Plan will require the commitment and managed efforts of Town leaders, stakeholders, landowners, residents, County and State government officials and affiliated agencies. The following implementation initiatives and strategies are recommended.

7.1 Transportation

The following action items are recommended to ensure a uniform implementation of the plan:

- Adopt the Beatties Ford Road Small Area Plan
- Coordinate with NCDOT on an agreed upon vision for Beatties Ford Road to ensure continuity of street sections as continued development occurs
- Conduct all necessary feasibility studies and request corresponding amendments (if deemed appropriate) to the MUMPO Thoroughfare Plan for the Vance Road Extension and Hugh Torance Parkways
- Refine and adopt the connectivity plan depicted in the collector street element of the small area plan so that street connections can be incrementally implemented as development occurs.
- Evaluate current connectivity policies and amend if necessary to ensure the implementation of a comprehensive
interconnected collector street network.
• Continue coordination with Town officials, NCDOT, and MUMPO in an effort to expedite the construction of the Vance Road Extension.

7.1.1 Required Further Studies

The following represents additional studies necessary to implement the recommendations of the Plan:

Conduct a Small Area Plan Traffic Study: This study should include travel demand forecasting, regional modeling, and traffic analysis at critical intersections in an effort to more accurately predict the capacity needs of area roadways and to test the configuration of roadway alignments and intersection treatments.

Vance Road Extension Modification and Hugh Torance Parkway Feasibility Study: The purpose of this study will be to evaluate the proposed alignments identified during the charrette. The feasibility study should include sufficient detail to confirm a preferred alignment that can be presented to MUMPO for consideration. As a part of this task, the Town should collaborate with NCDOT and MUMPO on the development of functional designs for critical intersections (most notably the Highway 73/Vance Road Extension intersection) and confirm a preferred intersection design configuration so that adequate ROW can be preserved incrementally as development occurs. This task should involve travel demand forecasting, traffic modeling and simulation and functional design.

Roundabout Functional Design and Analysis: The potential for roundabouts at various locations within the study area has been suggested through previous planning studies as well during the BFR Corridor Small Area planning process. This plan recommends the placement of a roundabout at BFR and McCoy Road. The Town should collaborate with NCDOT on the development of a functional design for this roundabout and confirm the ability of this intersection treatment to adequately handle projected traffic volumes. This task should involve travel demand forecasting, traffic modeling, simulation and functional design.

Greenway Master Planning/ Feasibility Study: The greenway recommendations contained in this plan should be reviewed by the Town’s Greenway, Trails and Bikeway Commission and be incorporated in the Town’s “Greenway, Trails and Bikeways Master Plan”, if deemed appropriate.

7.2 Land Use and Zoning

The following items are recommended to ensure a uniform implementation of the land use element of the plan:

• Implement and adopt land use, transportation and zoning recommendations as identified in the Beatties Ford Road Corridor Small Area Plan (refer to plan on overleaf).
• Codify 100' buffer on both side of Beatties Ford Road.
• Support rezoning of property, located in the west quadrant of Beatties Ford Road and NC 73, from Residential to Conditional Highway Commercial.
• Prescribe a base of core community retail within Neighborhood Center District zoning designation.
• Continue the low density residential development pattern within the study area.
• Focus commercial development at (NC-73 and Mt. Holly Huntersville Road) with a commercial center in the northeastern quadrant of Beatties Ford Road and Hambright Road.
• Modify existing regulations as needed for consistency with the Beatties Ford Road Corridor Small Area Plan
7.3 Open Space Preservation

Where farm/grazing use is threatened, strategies for preserving these special properties requires special consideration. The most important consideration would be to encourage continued cooperation with private land conservation groups, such as the Catawba Lands Conservancy (CLC) to acquire and manage conservation easements and land in the Rural (R) district lands of the Corridor. The following strategies are examples of the tools that can also be used to secure conservation easement and open space and are recommended for further study:

- Define and implement strategies for the green infrastructure as identified in the plan
- Gaining viewshed protection and/or continued farm use during the land development agreement process
- Outright property acquisitions – if necessary, through public-private partnerships and partnerships with land conservancy agencies
- Use bonus and incentive zoning to exceed open space requirements or convey conservation easement to the Town.
- Applying for grant funding: possible sources can include the Transportation Equity Act for the 21st Century (TEA-21), the North American Wetlands Conservation Act (NAWCA), the Wetlands Reserve Program, the Interagency Committee for Outdoor Recreation (IAC), and other such federal and state programs
- Acquisition of properties by the Charlotte Mecklenburg Utilities Department (CMUD)
- Leveraging and facilitating acquisitions by the County for public parks, greenways and nature preserves
- Creating donorship programs and/or leveraging acquisitions
- Supporting the Carolina Thread Trail initiative and other similar programs
- Seeking corporate donations and/or sponsorships to secure revenues available for acquisitions
- Apply real estate excise taxes (REET) for acquisition/maintenance of conservation areas.
- Bond referendum or property tax levy to fund a Rural, Historic and Critical Preservation Program (funding land acquisition and historic heritage/ecological preservation) for the Town of Huntersville
- Finding a preservation use location for a non-profit, or putting together a coalition of investors/organizations/foundations committed to a preservation use of property; one possibility to consider is an equine rescue center for abused and neglected horses, which is lacking in the area (the nearest is in China Grove, N.C.)
- Finding other regulatory measures, such as defining viewshed standards in Rural zoned areas for conservation subdivisions or creating a Scenic Roadway Overlay Zoning District for the threatened areas
- Working closely with the Mecklenburg County Park and Recreation Department, the Mecklenburg County School Board and other agencies to expand recreational lands and services; joint use of facilities shall be used as a major strategy for efficient use of public funds and to provide additional opportunities to reduce traffic