Albemarle County

Northern Development Areas

Master Plan

ASSETS, NEEDS, AND OPPORTUNITIES REPORT

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1. **Executive Summary**

*This section will provide a by-chapter summary of findings and a summary discussion of the Existing Framework for the Places29 area.*

**A. Assets, Needs, and Opportunities Assessment**

**B. Existing Framework**

[**SUMMARY WILL BE WRITTEN AFTER CHARRETTE #2 WHEN ALL SECTIONS HAVE BEEN FINALIZED**]

2. **Introduction**

The Assets, Needs, and Opportunities Assessment provides an understanding of current conditions in the Northern Development Areas at a level of detail and at a scale that is relevant for formulating the framework-level Master Plan for the project area.

The Assessment focuses on conditions that particularly frame future development in the project area, including

1. The distribution of existing land uses;

2. The built patterns and community character created by existing and recently approved or considered development;

3. The definition of (Neighborhood Model) place types that form the existing context into which future land uses and development will be integrated. In this context, the definition of some place types in addition to those that have already been defined by the County in other plans is necessary as the project area is very different from Crozet, the only other area for which a Master Plan – at a more detailed level than this Framework Plan – has been established;

4. The location of existing and already planned components of the open space network in and around the Northern Development Areas (including public and semi-private open space, Greenways and trails, rivers and creeks, Conservation Easements, Ag and Forest Preservation Areas, as well as areas of significance for biodiversity in the County);

5. The location of areas that may not be considered for future urban development, such as areas with critical slopes (over 25%), as well as critical water resources like rivers and creeks, and their floodplains;

6. The location of existing historic resources that should be taken into consideration as growth and development takes place in the Development Areas. This includes sites or districts of architectural or archaeological importance;
7. The key travel characteristics and urban design character of the transportation network in the project area, including all modes of transportation focusing on US 29 and the Entrance Corridor roads within the planning area, and Proffit Road;

8. The traffic patterns in the project area and travel behavior that generates these patterns;

9. The economic framework in which future development will take place (this includes a look at pertinent regional socio-economic trends, as well as development trends);

10. A market assessment of various segments of the real estate market considered most relevant to the type of development that is likely to occur in the future for the Northern Development Areas.

**Assets** are the resources found in the planning area. Including, but not limited to, open spaces of varying characteristics, natural features such as rivers, creeks, areas rich in biodiversity, historic resources, and areas with valued community character, as well as community facilities such as libraries, schools, fire response services, police services.

**Needs** for the area range from desired uses or community character that may be missing or need enhancement to improved mobility or accessibility in the transportation system to other aspects of quality of life which are missing or need improvement. Needs are being defined by community input into the Framework Plan process as well as through goals, objectives, and strategies contained in the County’s Comprehensive Plan and associated elements. Examples for Needs include the need for public open space, transportation-related concerns, lack of desired housing choices, and poor pedestrian environments in many parts of the planning area.

**Opportunities** may be inherent in already present conditions and assets, which can be taken advantage of through the Framework Plan and the definition of new policies, standards, and implementation measures, guided by the goals for the Development Areas identified in the County’s Comprehensive Plan and in the community’s vision and guiding principles (see Section 3.). These also include: the identification of opportunities for infrastructure improvements and improvements to existing development that will make existing areas more compatible with the goals of the Neighborhood Model and this plan; the identification of sites that may be appropriate for new infill development; and identification of areas for development and for preservation that are currently undeveloped or in agricultural use.
3. Community Vision and Goals

A. Overview of Public Participation Process

The ongoing, comprehensive public participation process for the Places29 project, which includes the Northern Development Areas Master Plan, consists of a series of public meetings, individual and group meetings with stakeholders, and public hearings, as well as opportunities for the public to review and comment on draft documents posted on the County’s website.

The following list summarizes milestone events in the public participation process:

- Charrette #1: Public Workshop – Project Initiation and Community Visioning
- Charrette #2:
  1. Open House – Review of Assets, Needs, and Opportunities
- Open House: Stakeholder Input on Refined Initial Framework Concepts
- Charrette #3: Public Workshop – Review of Initial Preferred Master Plan
- Working Session #1: Review of Initial Draft
- Working Session #2; Public Comment Meetings
- Public Comment Period for Draft Master Plan

Note: The appendix of the Final Master Plan will include a more comprehensive summary of the input received during the public meetings and through the County’s website or individual communications.

B. Draft Vision Statement

This section will state the DRAFT vision statement and how it was derived from the input received during Charrette #1.

[SECTION WILL BE ADDED AFTER FINAL EDITING BY COUNTY STAFF]

C. Draft Guiding Principles

This section will describes the DRAFT guiding principles and how they were derived from input received during Charrette #1.

[SECTION WILL BE ADDED AFTER FINAL EDITING BY COUNTY STAFF]
3. Physical Pattern Assessment

A. Settlement Patterns

A.1 Context Map

The Northern Development Areas of Albemarle County include Neighborhood 1, Neighborhood 2, Hollymead, and Piney Mountain. They are located to the north of the City of Charlottesville (see Figure 1 on the next page) on either side of US 29.

Insert Figure 1: The Northern Development Areas in the Context of Albemarle County

A.2 Place Types

[In the final version of the Assets, Needs, and Opportunities Report, this section will define the Place Types that make up most of the Northern Development Areas. At this time, a spreadsheet format has been selected for discussion purposes between Consultant Team and the County's Internal Stakeholders. Once agreement has been established about the range of place types appropriate for the Northern Development Areas, a description of each place type in paragraph format will be added to precede the spreadsheets.]

The following three tables provide an overview of the range of Place Types suggested for use in the Existing and Potential Future Framework Plans for the northern Development Areas.

Table 1: Provides an overview of different Neighborhood place types. Neighborhood place types include development that is organized around a Center.

Table 2: Provides an overview of the different types of Centers that may be found in a Neighborhood place type.

Table 3: Provides an overview of different District place types. Districts are defined as single use areas that do not provide connections to a neighborhood.
<table>
<thead>
<tr>
<th>Place Type:</th>
<th>Neighborhoods <em>(development organized around a center)</em></th>
</tr>
</thead>
<tbody>
<tr>
<td>Land Use Characteristic</td>
<td>Residential [predominant Neighborhood Type]</td>
</tr>
<tr>
<td>Summary Description</td>
<td>Existing or future residential area organized around a center.</td>
</tr>
<tr>
<td>Examples from Places29 Planning Area</td>
<td>New growth residential area surrounding a center, such as area the around Hollymead Towncenter Target retail area. Existing Forest Lakes area within 1/2 mile (or 1/4 mile?) of Hollymead Elementary and Sutherland Middle School</td>
</tr>
</tbody>
</table>

Table 1: Neighborhood Place Types
### Types of Neighborhood Centers:

<table>
<thead>
<tr>
<th>Types</th>
<th>Civic Green Center</th>
<th>Convenience Center</th>
<th>Community Center</th>
<th>Destination Center</th>
<th>&quot;Downtown&quot; Center</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Summary Description</strong></td>
<td>Neighborhood Green with civic use within or adjacent (e.g.; community center, daycare, religious facility, etc.) could also include small convenience retail/service use(s), live/work, or small office complex.</td>
<td>Plaza or Green with convenience retail/service anchor should also include uses included in a Civic Green Center.</td>
<td>Anchored by commercial center, including a grocery store, other retail and service commercial uses; should also include office uses and uses included in a Convenience Center.</td>
<td>Anchored by commercial center, including a range of retail, service and employment uses that draw from the larger region (e.g.; major retailers, movie theaters, restaurants, office complexes, medical services, etc.) should also include sub-regional and local serving retail and service uses, such as a grocery store; should also include uses included in a Sub-Regional Center.</td>
<td>Anchored by restaurant and entertainment uses in a mixed-use environment with employment and residential uses; some convenience retail with few &quot;shoppers goods stores&quot; (e.g.; clothing and household goods, etc.)</td>
</tr>
<tr>
<td><strong>Examples from Places29 Planning Area</strong></td>
<td>Woodbrook Elementary and adjacent park [is it a park or school grounds?)]</td>
<td>The office, church, and retail area at Hollymead Drive and US 29 is this type of center [does it include retail?]</td>
<td>Shoppers World has potential to be this type of center (access from surrounding residential could be much improved as could walkability within the center)</td>
<td>This center type does not exist today, but there is potential for the proposed Albermarle Place and a modified Fashion Square Mall to evolve into such.</td>
<td>This center type does not exist today, but there is potential for an area around the intersection of Rio Road and US 29 to evolve into one. Also, an area between Hollymead Towncenter and North Fork Research park could become this type of center.</td>
</tr>
</tbody>
</table>

**Notes:**

1. all Neighborhood Centers should include a mix of housing in addition to retail, service, office, and civic uses, preferably in a vertical mixed use configuration.
2. Densities and intensities of uses in the neighborhood and within the center should generally range from higher levels at the core of the center to lower densities at the fringe.

Table 2: Overview of Types of Neighborhood Centers
### Place Type: **Districts (single use areas without connections to a neighborhood)**

<table>
<thead>
<tr>
<th>Land Use Characteristic</th>
<th>Existing Residential</th>
<th>Existing Retail/Service Node</th>
<th>Retail/Service Corridor</th>
<th>Employment</th>
<th>Airport</th>
<th>Civic</th>
<th>Open Space</th>
</tr>
</thead>
<tbody>
<tr>
<td>Summary Description</td>
<td>Existing residential area without a center which may or may not have the potential to become a neighborhood with a center</td>
<td>Existing retail or service commercial area which does not have convenient connections to surrounding residential or employment areas.</td>
<td>Existing or future retail or service commercial area with no residential development and oriented towards access from a major roadway.</td>
<td>Existing or future employment area without a center and no residential development</td>
<td>Special district for Charlottesville Airport</td>
<td>Special district for civic uses (including existing schools) that do not function as centers</td>
<td>Undeveloped places in the Development Areas that are preserved as open space</td>
</tr>
</tbody>
</table>

**Nodes and Corridors** may or may not have the potential to become a center for a neighborhood. Can include a range of retail/service uses from convenience to regional-serving.

**Examples from Places29 Planning Area**

- Portions of Carrsbrook area that are not within walking distance of Woodbrook Elementary or a shared park or civic facility.
  - Portions of Forest Lakes that area not within walking distance of a park or civic facility.
  - Portions of the future development in Belvedere has the potential to become a residential district.
- Shoppers World, and the range of other retail and service "centers" along US 29, Rio Road, and Worth Xing; some of which have the potential to become Centers for surrounding neighborhoods if future development and transportation improvements allow
- Many of the more narrow retail areas along US 29 or Rio Road, such as the retail area on the east side of US 29 just to the south of the South Fork of the Rivanna River.
- North Fork Research Park
- Charlottesville Airport
- Baker Butler Elementary School, because it is only accessible from a major road - Proffit Rd.
- Open space preserved around Charlottesville Airport

**Notes:** [1] Districts may include an insignificant amount of other uses and generally are not focused on a center.
A.3 Existing Framework

Using the defined development place type categories, this section describes in text and accompanying maps the Existing Framework and how it was derived. The existing framework is a composite map that combines patterns of existing development types in the Northern Development Areas with critical elements of the existing transportation and open space networks. This map and information is critical for developing alternatives for potential future framework plans (which will be presented to the public at Workshop #3) as analysis of the existing framework can begin to illustrate shortcomings relative to the vision and guiding principles (i.e., gaps in network of greenways, gaps in network of multi-modal transportation network, minimal extent of mixed-use center and large extent of retail strips and nodes).

1. Existing Built Environment

1.1 Place Type Patterns and Land Use

[The following discussion will be updated and expanded after agreement has been established about the array of place types appropriate for the Northern Development Areas.]

The following section provides an initial description of the existing place type patterns and land uses in the Northern Development Areas, using the terminology outlined in the previous chapter.

Development Area - Neighborhood 1

A review of Framework Map South shows that once the currently proposed development for Albemarle Place and the townhouses at Woodburn Road are implemented the southern portion of this Development Area will be largely built out. Additional new development here would likely occur in the form of infill or through revitalization efforts. The largest remaining vacant area in Neighborhood 1 is located west of Berkmar Drive and north of the Woodbrook Crossings Condos.

Almost all areas within this Development Area have been categorized as Districts. This was largely based on the poor interconnectivity of the underlying transportation network, which limits the movements of pedestrians to within close proximity of their residences, and on the lack of Centers that would provide a focal point for surrounding residential areas, as described in the place types matrix above.

The majority of Districts include higher-density residential building types, which could provide the critical mass for supporting a limited level of neighborhood-oriented or convenience retail away from the US 29 Corridor. However, today only one location with such retail exists on Hydraulic Road across from Albemarle High School. Because the adjacent residential area to the north has access to this retail within one quarter of a mile, this area is categorized as Residential Neighborhood.

Retail along the US 29 Corridor has been categorized as either Retail/Service District or Retail/Service Node.
The categorization of Humphris Park as an Open Space District rather than a Civic Green Center is based on the lack of amenities in this park. The park clearly has the potential to become a Civic Green Center in the future, with a much stronger presence and importance for adjacent residential development.

With exception of the future development at Albemarle Place, which has the potential to include a future Destination Center, Mixed-Use Neighborhood, and Community Center, no other Neighborhood place types are found in this Development Area.

**Development Area – Neighborhood 2**

The US 29 Corridor in this Development Area includes Retail Nodes, which are mainly clustered around the intersection of US 29 and Rio Road, and Retail Districts, which are located where the topography limits the accessibility of retail sites from otherwise nearby residential neighborhoods. East of the retail along US 29, the southern portion of the Development Area includes Residential Districts that consist of high-density residential development (Branchland Professional Center Condos, Branchlands Retirement Village, Glenwood Station, etc.). Low-density residential areas are located farther north (Belvedere, Raintree, Westmoreland) and east of the railroad line, off of Rio Road (Dunlora). Rio Road west of the rail line is the location of one of the few Retail Districts away from the US 29 Corridor.

As in Development Area – Neighborhood 1, most built environments in this Area are categorized as Districts because of the current lack of a Center within walking distance.

Woodbrook Elementary School provides a Civic Green Center for the adjacent residential area within a one quarter mile walking distance. This makes portions of Woodbrook one of the few existing Neighborhoods as per the definition of place types provided above.

**Development Area – Hollymead**

The area east of US 29 predominantly consists of Residential Districts made up of low density residential uses that currently lack a Center. This could potentially be provided by if the cluster of Hollymead Elementary School and Sutherland Middle School (total student population 1,161) could be turned into a Civic Green Center. This would allow for larger portions of the southern Forest Lakes Residential District to become a Residential Neighborhood within walking distance of the Civic Green Center.

The *Framework Map North w/ Proposed Development* illustrates that the proposed new development at the Hollymead Towncenter, in the North Pointe area, and in the North Fork Research Park, as well as the presence of still vacant developable land provides the opportunity to significantly shape the future distribution of Center Types which subsequently determine place types to the west of US 29 and the northeastern portion of this Development Area.

**Development Area – Piney Mountain**

The *Framework Map North* illustrates that the area west of US 29 in this Development Area is largely built out with Residential and Employment Districts that are unlikely to become a Neighborhood place type because of the lack of potential Center. The southern
portion of Piney Mountain also includes Employment Districts while the northernmost portion consists of vacant land that is still undeveloped.

1.2 Entrance Corridors

Urban structure describes the quality of the trip and relates to the landscape and streetscape character along the traveled route as well as the location and character of buildings, the visibility and scale of development, and whether the found characteristics support pedestrian activity or create a solely auto-oriented environment. Beyond the more technical transportation performance measures, these characteristics will help to determine the quality of trips within the Corridor and also aid the community in understanding whether the existing environment meets their goals and expectations with respect to community character and quality of life.

**US 29 Entrance Corridor**

The existing urban structure of the US 29 Corridor can be understood as a series of sections within the two major planning areas (the Southern Area south of the South Fork of the Rivanna River and the Northern Area north of the river, which includes the Hollymead and Piney Mountain development areas). The sections are based on an understanding of the land use and roadway network patterns, the pattern of currently proposed development, and the urban design and landscape character of the lands that US 29 passes through. The Corridor can be broken down into five major sections, two of which are divided into two “sub-sections” or segments, (see table below and the *Generalized Land Use: Southern Area and Generalized Land Use: Northern Area* maps that are included in the Appendix of Illustrations).
### Table 4: Sections and Segments of US 29 Corridor

Following are brief descriptions of the urban structure patterns along US 29 organized according to the characteristic sections and segments:

1. **South Rivanna Section – between Barracks Road and the South Fork of the Rivanna River**

This section of the US 29 Corridor is characterized by a nearly continuous frontage of commercial (mostly retail) uses. The scale of these uses varies widely and ranges between individual small-scale businesses on small lots to large-scale, multi-tenant malls, such as Seminole Square, Fashion Square Mall, Albemarle Square, and Rio Hill Shopping Center. Land uses beyond the lining commercial properties are dominated by residential neighborhoods, consisting of single-family, condos, townhouses, and multi-family.
Segment 1-A: Barracks Road to Woodbrook Drive

Land Use Pattern

With the exception of two larger sites with light industrial uses (Comdial and Sperry) and the approved Albemarle Place development (which has the potential to have buildings of significant urban scale and mix), this corridor segment displays the typical land use pattern along US 29 in proximity to the City of Charlottesville. Here, commercial uses, mostly retail, line US 29 on either side. Residential neighborhoods of varying building types and densities are located behind these commercial properties. Residential neighborhoods just east and west of these commercial uses consist of detached single-family homes (along Commonwealth Drive) and duplexes, townhouses, and apartments along Hillsdale Drive.

Frontage and Building Scale

The quality and character of the frontage onto US 29 is variable within this segment; the majority of development has minimal landscaping and fronts US 29 with surface parking lots with single-story commercial buildings beyond. Some of these developments are either well above or below the grade of US 29, depending upon topography. There are limited areas where more effort has been put into developing a landscaped character adjacent to US 29 – in front of Sperry and the Fashion Square Mall. In the future, the retention ponds of Albemarle Place may be developed with a higher-quality landscaped character.

Buildings are typically set back from the edge of US 29. The depth of this setback is largely determined by three variables: 1) site topography and the resulting need for longer or shorter driveways to parking areas, 2) the accommodation of off-street parking between buildings and the street edge of US 29, and 3) past County setback regulations. Setbacks vary between approximately 50 feet, found mostly along small-scale uses, and up to 300 feet (along Fashion Square Mall). The scale of buildings in this corridor segment ranges from small restaurants and car repair businesses to large-scale malls, such as Fashion Square Mall, while building heights are typically one to two stories. This will likely change at Albemarle Place as it develops. It should be noted that the topography adjacent to US 29 does create a sense of enclosure and definition to the highway in several locations, yet this also creates challenges for some businesses in terms of visibility and access from US 29. Some developments solve this problem by providing distinctive landscaping and signage along US 29 to bring people into their property, and then provide a design that orients people to the specific stores within the property. Fashion Square Mall does this today, and Albemarle Place will do this in the future using a more urban approach in terms of street network and building orientation within the site.

Segment 1-B: Woodbrook Drive to the South Fork of the Rivanna River

Land Use Pattern

The critical difference between the land use pattern and urban structure along this segment and the previous segment is the increasing impact of topographic conditions in this area. The slopes on the western side of the Corridor rise to 40-plus feet. In most locations the change in grade is relatively gradual or occurs behind structures so it is not that visible from US 29, the most notable exception being the retained and landscaped slopes on
the east and north sides of the Lowe’s. These slopes have been leveled out at their tops to create building pads for medium to large individual retail stores, including Lowe’s, Sam’s, Wal-Mart, and others. In comparison to the opposite side of the Corridor and to Segment 1-A, this side of Segment 1-B lacks residential development beyond the 800-foot to 1200-foot deep commercial properties that line US 29.

The eastern side of the street is characterized by steep slopes whose toes are located close to US 29, allowing only relatively shallow buildable areas with limited usability for commercial development, unlike most other areas in the Corridor. Due to the shallow depth of the (currently mostly undeveloped) commercial properties, the residential single-family development east of these properties comes close to the US 29 Corridor, but is separated from it by steep, vegetated slopes. At the northern end of the segment, close to the Rivanna River, moderately-scaled retail buildings take advantage of the buildable land that is created where the toe of the slope moves away from US 29.

Frontage and Building Scale

With few exceptions, buildings on the west side of US 29 have deep setbacks relative to the edge of US 29 and are located on leveled building pads 40-plus feet above the street. As explained above, this is related to the proximity of slopes to the right-of-way. Buildings in this segment are of medium to large scale and separated by setbacks not only from US 29 but also from one another. The most visually prominent developments in this segment are on the western side and include the car dealership with a structured parking garage that is currently under construction, and the 7-story Doubletree Hotel behind and “up slope” from the dealership. On the eastern side, proximity of vegetated slopes, vacant lots, and the smaller scale of existing development combine to significantly offset the visual appearance of this segment from others in the Corridor. The proposed North Town Center would fill in the southern third of the undeveloped frontage on the east side of US 29 in this area.

2. South Hollymead Section – between the South Fork of the Rivanna River and the Southern Edge of Hollymead Towncenter

This primarily undeveloped section of US 29 is of critical significance to the perception of the overall urban structure of the Corridor. It creates a strong physical and visual separation between the northern and southern planning areas in the Corridor. Aside from the river’s floodplain, the area includes forest on the east side and grass covered knolls and slopes on the west side of US 29.

Land Use Pattern

The western side of this corridor segment is void of development and, at present, characterized by fields and forests, which extend west to rural residential development along Earlysville Road.

The southern portion of the eastern side of US 29 is similarly undeveloped. But moving north, there is substantial residential development in Forest Lakes, to the east. Forest Lakes is located behind clusters of non-residential use and undeveloped landscaped buffers. Forest Lakes is accessed from US 29 via Ashwood Boulevard, Hollymead Drive,
Timberwood Boulevard, and Proffit Road. Forest Lakes primarily consists of clusters of detached single-family homes on moderately-sized lots surrounded by open space and lakes. Multi-family developments are clustered in two locations on the east side of US 29. A mobile home park is located just off of US 29 on Bridgewood Drive.

**Frontage and Building Scale**

Nearly the entire frontage along US 29 is void of development that is visible from US 29, with the exception of the Rivanna Grill restaurant near Ashwood Boulevard and the commercial development between North and South Hollymead Drive.

3. **Central Hollymead Section – between Southern Edge of Hollymead Towncenter and northern intersection of Airport Acres Road**

The land use pattern, visual appearance, and urban structure of this section is becoming more like those of the South Rivanna Section as the existing commercial area from Worth Xing north past Airport Road expands to the south with the development of Hollymead Towncenter. The widening of US 29 in the area also contributes to this change in character. Again, similar to the South Rivanna Section, the topography of the areas on either side of US 29 affects the character. But larger open spaces and landscaped buffers are more prevalent in this section, particularly with the cemetery on the eastern side of US 29. Where the northern neighborhoods of Forest Lakes are located beyond the developed or “green” frontages, they are largely hidden from view and accessed from roads that connect to US 29, but only in a few cases to one another.

**Land Use Pattern**

The land use pattern on the west side of US 29 is currently undergoing a significant transformation, related to the completion of the first phase of the Hollymead Towncenter Project. This phase of the project consists of larger retail buildings (Target/Harris Teeter anchors) only, while the other phases of the project will include mixed use residential/office and stand-alone residential components. All implemented and planned areas of the Town Center development are accessed from Airport Road rather than US 29.

Substantial residential developments are located, and more will be in the future given existing plans, beyond these clusters of nonresidential uses as well as buffers of landscaped open space in the eastern parts of the Hollymead Development Area. These northern neighborhoods within Forest Lakes are accessed from US 29 via Timberwood Boulevard and Proffit Road. The neighborhoods consist primarily of detached single-family homes on moderately-sized lots. Multi-family developments are clustered in two locations in the area.

**Frontage and Building Scale**

With the exception of the open space at the southeast end of this segment, the frontage on US 29 is typically surface parking with minimal landscape buffering. The buildings that are visible from US 29 are all one-story commercial buildings. This creates an environment that is very similar to the character of the Corridor’s southern planning area.
4. North Hollymead Section – between the Southern Intersection with Airport Acres Road and the North Fork of the Rivanna River

The North Hollymead Section of US 29 is characterized by large stretches of undeveloped land or developed land with significant landscaped buffers that has the visual appearance of a natural forested landscape. The character of this corridor section is likely to experience dramatic change where the major development of North Pointe is under review.

_land use pattern_

The land use pattern of this corridor section contains long stretches of undeveloped, currently forested land on the east side of the Corridor. The east side of this Section is the location of the proposed North Pointe development (also see Proposed Development Section below). An area of large-lot residential development is on the west side of the Corridor. The majority of these lots are accessed off Airport Acres Road with a few having access directly from US 29. Additional residential development on this side of US 29 includes a mobile home park, which is accessed by Cypress Drive.

The largest existing land use component in this section is the North Fork Research Park located on the west side. The research park is accessed via Lewis and Clark Drive, a four-lane road. At present, only a fraction of the approved land uses has been built (also see Proposed Development Section below). The buildings that have been constructed to date are located along the western end of Lewis and Clark Drive, away from the US 29.

At build-out, the combined proposed development in the North Pointe area and the North Fork Research Park will dominate the land use characteristics of this corridor section and will have a profound impact on the transportation network.

_frontage and building scale_

With exception of a few residential and individual, small-scale commercial and light industrial uses that are visible directly from US 29, the frontage along the Corridor is currently characterized by landscape buffers and forested areas.

The scale and floor plates of buildings in the research park are distinctly different from the majority of other development in the area and deviate particularly from the large-lot residential buildings just outside of the Development Area boundary, on the east side of Dickerson Road. The frontage along this corridor section is characterized by stretches of undeveloped land, open space, forested edges, and landscaped buffers. But this will likely change, depending upon the form and design of the North Pointe development. It is unclear, at this point, how the North Pointe development will front onto US 29 and how visible the development will be from vehicles traveling on the highway. The landscaped frontage of the research park is a design approach that allows for relatively dense development to occur adjacent to US 29 without creating an urban character directly along the highway. Given the likely retail commercial components being considered in North Pointe, there will be a desire to make this area more visible from US 29. What will be determined through the Places29 project is the character and orientation of this relationship following the goals and objectives of the Neighborhood Model.
5. Piney Mountain Section – between the North Fork of the Rivanna River and the Greene County Line

The character of this section of the US 29 Corridor is different from all other sections discussed above. Here, US 29 is bordered primarily by rural land uses such as fields and forests on either side of the street. One segment of the section is located within the Piney Mountain Development Area and will likely see additional more urban development in the future. While the second segment is located outside of Albemarle County’s Development Areas, what little development would occur in this segment would be rural in character and intensity.

Segment 5-A: The Piney Mountain Development Area

This segment is within a County development area and will likely experience urban development in the future. Today there are pockets of residential and employment uses, but they are generally heavily buffered from US 29 creating a more rural character for the segment.

Land Use Pattern

Forested areas or buffers line the majority of both sides of this segment. Two residential developments of single-family homes (Briarwood and Camelot) on the west side of the Corridor are located deep in the forested area and accessed via Camelot and Austin Drives. US 29 constitutes the only road connection between these two developments. Two employment uses, the GE research facility and the National Ground Intelligence Center (NGIC) facility are located on the east side of US 29, behind deep, forested buffers. The only uses with direct driveway access from US 29 are the few light industrial uses located at the southern and northern ends of this segment.

Overall, the prevalence of forested areas and the deep setbacks between US 29 and most uses along the highway gives this segment of the Corridor a rural character fairly similar to Segment 5-B to the north.

Frontage and Building Scale

The frontage along this Corridor segment solely consists of undeveloped land, open space, forested edges, and landscaped buffers. The scale of buildings located on the light industrial properties and on the sites of the GE research facility and the NGIC facility are consistent with these types of land use and do not create a visual discontinuity as they are well buffered from view and from adjacent residential buildings or undeveloped land.

Segment 5-B: From the northern boundary of Piney Mountain to the Greene County Line

This segment is part of Albemarle County’s Rural Areas, which defines the area to maintain its existing rural character. Little future development is likely to occur within close proximity of US 29, and the land uses would be low intensity. The overall character of this segment is rural or forested.

Hydraulic Road (West) / Rio Road (West) Entrance Corridor

The alignment of the Hydraulic Road (West)/Rio Road (West) Corridor is, for the most part, identical to the boundary of Development Area - Neighborhood 1. The Corridor...
originates at the intersection of Hydraulic road and US 29 and arches around the Development Area - Neighborhood 1 to reconnect to US 29 at the intersection of US 29 and Rio Road. The name change from Hydraulic Road (West) to Rio Road (West) occurs at the Woodburn Road intersection.

The Corridor can be divided into the following three sections:

<table>
<thead>
<tr>
<th>Corridor Section</th>
</tr>
</thead>
<tbody>
<tr>
<td>Section 1 Hydraulic Road (West): US 29 to western edge of Solomon Court Condos</td>
</tr>
<tr>
<td>Section 2 Hydraulic Road (West): Solomon Court Condos to Woodburn Road</td>
</tr>
<tr>
<td>Section 3 Rio Road (West): Woodburn Road to US 29</td>
</tr>
</tbody>
</table>

1. Hydraulic Road (West) – US 29 to Western Edge of Solomon Court Condos

Land Use Pattern

This section of the Corridor will experience major changes along its northern edge beginning at the intersection with US 29. The future implementation of the proposed Albemarle Place mixed-use development will transform the northern edge of the street to include retail, office, and residential uses. West of Commonwealth drive, uses on both sides of Hydraulic Road are dominated by medium-density housing (Solomon Court Condos, Turtle Creek Condos) and a few single-family residential. The uses located along the southern edge of the street (within the City of Charlottesville) consist of residential development oriented toward streets perpendicular to Hydraulic Road, access to the Holiday Inn (located on Emmet Street/US29), and a single commercial building that is located between the two residential streets on this side of the Corridor.

Frontage and Building Scale

With exception of portions of the proposed Albemarle Place development, the remaining building frontage along both sides of Hydraulic Road is discontinuous, and most buildings side, rather than front onto the street. Semi-private open spaces located between condo buildings and single-family homes (the latter are strung out along the northern side of the street west of the Turtle Creek Condos) dominate the spatial appearance and character of the street in this area.

The proposed buildings within Albemarle Place are bound to create a more coherent and somewhat continuous frontage to this portion of this section of the Corridor. However, at this point it is not certain to what degree the new uses in Albemarle Place will address the street, that is whether entry doors will be oriented toward Hydraulic Road. The site plan available for review also showed some surface parking lots fronting onto the street.

The scale of the proposed buildings is diverse and based on the variety of proposed uses. The immediate street frontage on Hydraulic Road would consist of moderately sized retail and office buildings as well as attached townhouses. Similar to the building frontage
within the County, the frontage of uses located along the southern edge of the street (within the City of Charlottesville) is largely discontinuous and consists of residential development oriented toward streets perpendicular to Hydraulic Road.

2. Hydraulic Road (West) – Solomon Court Condos to Woodburn Road

Land Use Pattern

The land use pattern along this section of the Corridor is shaped by the fact that the western side of the street is lined by properties and land located outside of the Development Area – Neighborhood 1. However, some development and public uses are located in the adjacent Rural Area. The Georgetown Green is a development of townhouses located west of the Solomon Court Condos and constitutes the only residential use along this side of the street that is of a higher density than the typical rural development. The most significant use located on this side of Hydraulic Road, is a cluster of schools consisting of Greer Elementary School, Jouett Middle School, and Albemarle High School. With a combined student population of 2,616, this cluster of schools constitutes a major destination for many residents of the development areas and beyond. The remaining land uses on the west side of Hydraulic Road largely consist of rural type development.

Land uses along the east side of Hydraulic Road Across in this section include a series of individual medium- to high-density residential developments and a small cluster of one-story convenience retail located across from the Albemarle High School. A mobile home park is located north of Townwood Drive. The County has recently received a development proposal for the single remaining vacant parcel on this side of the street, located across from the Woodburn Road intersection. This proposal is for a townhouse development of 50-60 units.

Frontage and Building Scale

The building frontage along the western edge of Hydraulic Road is largely “green” in character as development here is either separated from the street by deep landscaped setbacks or dispersed and interceded by large segments of rural-type open space. The only exception is a small residential development north of Woodlands Road, which is located close to the street.

The building frontage along the western edge of Hydraulic Road in this section is formed by a range of residential buildings of varying types, configuration, and scale (townhouses, condos, apartments). Buildings typically do not front onto Hydraulic road but rather onto access streets perpendicular to Hydraulic road. The majority of these access and internal circulation streets are not connected to one another, which emphasizes the individual character and separate nature of development on this side of the Corridor.

3. Rio Road (West) – Woodburn Road to US 29

Land Use Pattern

Low-density residential uses line the northern edge of Rio Road (West) in the western portion of this corridor section, while a cluster of employments uses is located on the other side of the street west of Berkmar Drive.
Retail is the predominant land use along both sides of Rio Road between Berkmar Drive and US 29. This retail is part of the large agglomeration of a broad range of retail uses of different types and scale that includes areas on both sides of US 29 and both sides of Rio Road (West and East).

**Frontage and Building Scale**

The low-density residential development along the northwestern edge of the street take access directly from Rio Road. They are separated from the street by residential front yards. The cluster of employment uses is mostly oriented toward Berkmar Drive and its Rio Road frontage consists mostly of surface parking associated with the building located closest to this street.

The retail frontage on both sides of the street includes buildings of a variety of scales and floorplate sizes, but no “big box” development. The retail buildings are typically set back from Rio Road (West) to accommodate surface parking and delivery functions. The visual impact of the large amount of paved surfaces and larger-size, utilitarian buildings combine to create strong contrast to the “softer” appearance of the Hydraulic Road sections of this Corridor.

**Rio Road (East) Entrance Corridor**

Rio Road (East) is a key Entrance Corridor as it establishes an important connection between northern sections of the City of Charlottesville, the US 29 Corridor, and the Northern Development Areas, and therefore functions as an entrance for both the City and the County. The road is well-known to City and County residents for the frequent backups.

The Corridor can be divided into the following four sections:

<table>
<thead>
<tr>
<th>Corridor Section</th>
</tr>
</thead>
<tbody>
<tr>
<td>Section 1: US 29 to Putt Putt Place</td>
</tr>
<tr>
<td>Section 2: Putt Putt Place to Wakefield Road</td>
</tr>
<tr>
<td>Section 3: Wakefield Road to Railroad Crossing</td>
</tr>
<tr>
<td>Section 4: Railroad Crossing to Melbourne Road</td>
</tr>
</tbody>
</table>

1. US 29 to Putt Putt Place

**Land Use Pattern**

The two dominant land uses in this section of the Rio Road (East) Corridor are the Fashion Square Mall (indoor mall) and Albemarle Square Shopping Center (with in-line stores and additional businesses accommodated in separate buildings on the property. In addition to these two large-scale uses, several small-scale businesses are dispersed along the street out to the eastern end of this section at Putt Putt Place. A sizable vacant lot fronts onto the street just east of Albemarle Square. The Rio East Professional Park Condos are
located east of the vacant lot and behind some of the small businesses that front onto Rio Road. The condos are accessed from the Corridor via Putt Putt Place and Rio Hill Drive. Albemarle Place is the home of the Northern Library, the only County-library location in the Northern Development Areas.

Frontage and Building Scale

Due to the character of the general topography and manmade grade changes around the intersection of Rio Road and US 29, Fashion Square Mall and Albemarle Square both do not front onto Rio Road with buildings directly accessible from the sidewalk. The Mall is located on a plateau 10 to 15 feet above Rio Road and separated from it by landscaped slopes, whereas the Albemarle Square property is located about 10 feet down from the northern edge of Rio Road at the corner of US 29. The primary access to Albemarle Square from Rio Road is therefore located 800 feet back from the intersection with US 29, where grade differences between the property and Rio Road begin to even out. Building and floorplate of Fashion Square Mall are the largest of any development in the Northern Development Areas.

2. Putt Putt Place to Wakefield Road

Land Use Pattern

The predominant land use in this section of the Corridor is residential, which consists of higher density apartment buildings, such as in Glenwood Station on the south side of the street and low-density residential, like the Raintree district on the northern side. The eastern portion of this section traverses an area with residential development at rural density levels.

Frontage and Building Scale

The residential and far and between non-residential uses (minor employment and semi public) along this section of the Corridor are set back from the street and do not provide the street with a coherent front of buildings. Residential buildings side onto the street and are separated from it by landscape buffers, which creates an almost rural character throughout portions of the section with adjacent low-density residential development.

3. Wakefield Road to Railroad Crossing

This section of Rio Road is of great interest to the master planning effort as it provides an example for a Retail/Services and Civic District away from the US 29 Corridor, that if accessibility were improved could become a Center for surrounding residential areas.

Land Use Pattern

The western portion of this section includes a semi-public uses (churches?) on the north side of the street and a mix of townhouses (Rio Square) and single-family detached residential (Wakefield) uses. In the eastern half of the section the pattern of single-family residential development continues on the southern side of the street (in the City of Charlottesville) while land uses on the northern side of the street consist of a variety of convenience retail establishments and gas stations.
Frontage and Building Scale
The spatial relationship between buildings and streetscape in this section of the Corridor is largely defined by the strong sense of enclosure created by the rising terrain on either side of the street. Portions of the residential uses on the south side of the street are located close to the street edge (Rio Square), which adds to the sense of enclosure and narrowness of the Corridor in this location. The retail and semi-public buildings on the north side of the street front onto Rio Road and address the street with entrances. While the semi-public buildings “read” as solitaires, the retail buildings form somewhat of a short retail strip. All buildings in the area are of small scale.

4. Railroad Crossing to Melbourne Road

Land Use Pattern
This section of the Corridor passes a variety of fairly recent single-family residential developments and older residential development areas at rural densities. Two residential districts consisting of condominiums (Stonehenge and River Run Condos) are located not directly on Rio Road, but are accessed from it, on the Charlottesville (western) side of the street and along currently undeveloped land in the Development Area Neighborhood 2 (eastern side). The vocational school, CATEC, is located at the northernmost end of the section and represents the only present use that is accessed from this section of Rio Road. A portion of Pen Park (mostly located in the City of Charlottesville) is located inside of the Development Area and fronts onto Rio Road.

Frontage and Building Scale
The frontage along the street is predominantly characterized by front yards of rural development and vacant rural lands on both sides of the street. Only a few buildings south of Pen Park Lane do front directly onto the street.

Airport Road Entrance Corridor
The Airport Road Corridor is likely to experience the greatest level of future change of all Entrance Corridors as new development is already taking place very near it (Hollymead Towncenter) or is proposed to take place in the future, such as the extension of the North Fork Research Park to the north of the street. In addition, the location of the Charlottesville Albemarle Airport at the Corridor’s western end and the possible growth of daily flights and uses around the airport constitute a major agent for potential change of conditions that may impact the character of the Airport Road.

Land Use Pattern
Aside from the Corridor’s most prominent use, the airport, only few parcels have been fully developed and, at present, the majority of parcels are either vacant or carry development at rural intensity levels. The Deerwood development of single-family detached homes is located at the southwestern portion of the Corridor. It is accessed from Airport Road, but its buildings do not front onto the street, but rather are separated from it by a landscape buffer. Uses east of Deerwood include rural-scale residential development and a few dispersed employment uses. Clusters of older, small-scale retail buildings are located near the intersection of Airport Road and US 29 on both sides of the street.
**Frontage and Building Scale**

In its present state the street is still largely lined by vacant or rural land that has the appearance of open space. The Deerwood neighborhood and rural-intensity residential development on either side of the street do not directly front onto the street, but are separated from it by landscaped buffers, forested areas, or pastures. The retail uses near US 29 are also set back from the street to accommodate surface parking and do not create a coherent frontage. All retail buildings are small in scale, which is consistent with the traditional development pattern in this area, which continues on the opposite side of US 29 and along Proffit Road. The development of the Hollymead Towncenter may in the near future have a major impact on the long-term viability of these remaining older, small-scale businesses and therefore the future appearance of this section of the Corridor.

**Proffit Road Corridor**

The Proffit Road Corridor is not subject to the Entrance Corridor Overlay District, but included here because of its important access function to the Hollymead area (and ongoing Towncenter development) for the Rural Areas to the east, and because of the interest expressed by members of the Architectural Review Board to address the streetscape and urban design along this Corridor.

**Land Use Pattern**

The land use pattern near the intersection of Proffit Road and US 29 resembles the pattern of similar uses on the opposite side of US 29 along Airport Road. Similar to the potential impact of the Hollymead Towncenter and North Fork Research Park development on the future character of Airport Road, the potential development in the North Pointe Area may have significant impact on the character of Proffit Road. Such development would likely be accessed in part through an extension of Worth Xing into the area north of Proffit Road.

East of the retail area, land uses along Proffit Road are solely low-density and rural-density residential, with the exception of the Broadus Elementary School, which is located just south of the Chesterfield residential development (total student population 326).

**Frontage and Building Scale**

Similar to the retail building on the west side of US 29, those around the intersection of US 29 and Proffit Road form a loose cluster of structures without a coherent appearance of frontage onto the street. The residential development between the retail uses and the intersection of Pritchett Lane is either separated from Proffit Road by deep landscaped setbacks or landscape buffers. Single-family detached residential buildings do front directly onto Proffit Road between Pritchett Lane and the edge of the Development Area. The landscaped spaces between individual buildings are larger on the Rural Areas (north) side of the street. Homes on this side of the Corridor also have deeper front yards than those located within the Development Area. The building of Broadus Elementary is far back from the street and located down-slope from it.
2. Currently Planned Development

The following is a summary of development projects that have either been already approved by the County, are currently under review or have otherwise been presented to the County. The projects are generally mentioned and integrated in the discussion of the Existing Framework above.

2.1 Approved Projects

Belvedere
The Belvedere residential development is located between the Norfolk Southern rail line alignment to the west and the Dunlora Subdivision to the east. This locates the project within the general alignment of the Northern Free State Road connector (formerly called the Meadowcreek Parkway, Phase II project). Some sites with surveyed historic resources are located on the property (see Historic Resources Map in the Appendix of Illustrations).

The development is approved for 650 – 800 residential units, and will consist of single-family detached and attached types as well as townhomes and apartment units; including “carriage” units. In addition, the project includes some small-scale support commercial/office of a total of 68,000 sq.ft. (retail/office/institutional).

Dunlora Subdivision
The Dunlora Subdivision has mostly been built-out by now. A few additional, smaller phases are expected to be submitted in the future.

Hollymead Towncenter
This project involves a total of four developers and four areas to be rezoned. With exception of Area A, the rezoning for the three remaining areas has been approved. The Hollymead Towncenter will be a mixed-use development at its center, with retail located along but not accessible from US 29.

<table>
<thead>
<tr>
<th>Area</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Area B</td>
<td>Approximately 500,000 sq.ft. of retail (Target/Harris Teeter anchors). No mixed-use. Now under construction.</td>
</tr>
<tr>
<td>Area C</td>
<td>Approved for up to 200,000 sq.ft. of retail/office, combined 275,000 sq.ft. and 120 residential units</td>
</tr>
<tr>
<td>Area D</td>
<td>Approved 50,000 sq.ft. of office and residential. Subdivision plat submitted for 149 townhouses.</td>
</tr>
</tbody>
</table>

North Fork Research Park
This on-going development is approved for up to 3.0 million square feet of office/research/industrial uses and up to 300,000 square feet of supporting commercial. Currently 30 acres off Airport Road are under review for inclusion into the research park. In addition, the owners (UVA Real Estate Foundation) have discussed submitting a proposal to construct residential units (apartments/townhouses) in the park, which would require a rezoning.

Briarwood and Camelot Subdivisions
The Briarwood and Camelot subdivisions were approved for a total of 661 units. Of those, 329 have been built to date and are shown on the base maps used for the Master Plan. The remaining 332 will be constructed in several phases throughout the area around the current Briarwood and Camelot developments.

### 2.2 Proposed and “In Process” Projects

**Albemarle Place**

With exception of the Sperry site, the mostly vacant area west of US 29, north of Hydraulic Road, and south of the Comdial property will accommodate the approved mixed-use (up to five-story) and one-story retail development of Albemarle Place. This will include components of ground-floor retail, office, and a significant residential component. Below is a summary of the most recent proposed use program:

Approximately 1.875 million square feet of mixed-use and one-story retail development. It is anticipated that the site plan will be submitted this summer (2005) and mostly be a single-phase project. Some of the residential development may be phased.

<table>
<thead>
<tr>
<th>Component</th>
<th>Square Feet</th>
</tr>
</thead>
<tbody>
<tr>
<td>Retail</td>
<td>616,000 sq.ft.</td>
</tr>
<tr>
<td>Cinema</td>
<td>65,000 sq.ft.</td>
</tr>
<tr>
<td>Restaurants</td>
<td>44,000 sq.ft.</td>
</tr>
<tr>
<td>Office</td>
<td>267,000 sq.ft.</td>
</tr>
<tr>
<td>Residential</td>
<td>600-700 units</td>
</tr>
<tr>
<td>Lodging</td>
<td>80,000 sq.ft.</td>
</tr>
</tbody>
</table>

**North Town Center**

The North Town Center is currently under review. This retail development would be located just north of Woodbrook Drive (across from Lowe’s/Schewel’s/Better Living Furniture), on the eastern side of US 29.

The proposal is for 151,000 square feet of retail development, consisting of:

<table>
<thead>
<tr>
<th>Component</th>
<th>Square Feet</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grocery</td>
<td>53,000 sq.ft.</td>
</tr>
<tr>
<td>3-story Office/Retail building</td>
<td>23,000 sq.ft.</td>
</tr>
<tr>
<td>Leasable Commercial</td>
<td>43,000 sq.ft.</td>
</tr>
<tr>
<td>Drug Store</td>
<td>15,000 sq.ft.</td>
</tr>
</tbody>
</table>

**North Pointe**

A major development is currently under review for the North Pointe area north of Flat Branch and east of US 29. The southernmost portion of this development is likely to contain a sizable retail component. If approved as submitted, the development program would include the following components:

<table>
<thead>
<tr>
<th>Component</th>
<th>Square Feet</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residential (Single-family detached/Single-family</td>
<td>800 to 890 total (max.)</td>
</tr>
<tr>
<td>Retail</td>
<td>600,000 sq.ft.</td>
</tr>
</tbody>
</table>
Treesdale
The proposed Treesdale development is an affordable housing and senior housing project located on Rio Road East, across from Charlottesville Catholic School. It consists of 20-30 affordable townhouses and 70-90 senior housing units, with the senior units not necessarily being affordable. As access would occur via Rio Road East, road capacity issues will need to be addressed. The development of the westernmost units may also be dependent on the final alignment and timing of plans for the Northern Free State Road connector.

Rio Road West
A townhouse development of 50-60 units is proposed on Rio Road West south of the Woodburn Road intersection. County staff has described this development as a typical example of “by-right”-type development of which the County has gotten many over the years in this area.

Old City Sewage Plant Subdivision
This proposed project is located within the City of Charlottesville, but the 100-250 units in City would access Rio Road. This project has similar issues to Treesdale.

3. Urban Edge Conditions
Using the Existing Framework Map, this section will describe in text and an accompanying map different types of existing edges between urban/rural or urban/natural environments (i.e., single family housing/forest or single family housing/fields, etc.).

[Some additional fieldwork is required during Charrette #2 to complete this section for the FINAL Report.]

A.4 Historic and Archaeological Resources
The Albemarle County Comprehensive Plan contains the following goal and objective (among others) with respect to historic and archaeological resources:

GOAL: Protect the County’s historic and cultural resources.

OBJECTIVE: Continue to identify and recognize the value of buildings, structures, landscapes, sites and districts which have historical, architectural or cultural significance.

The Historic Preservation Plan (a component of the County’s Comprehensive Plan), defines specific implementation strategies with respect to the above goal and objective. It also states that while much of the preservation effort in Albemarle County is and will be focused on historic buildings, structures, and landscapes located in the agrarian context of the Rural Areas, many historic resources are located in the Development Areas. “Within
these areas, choices about growth and change should include the preservation of historic buildings and structures. Adaptive use may be a practical approach to preserving these important historic resources.” (County of Albemarle Historic Preservation Plan, p. 1, September 6, 2000)

The *Historic and Archaeological Resources Map* (see Appendix of Illustrations) illustrates that several sites and areas that have previously been surveyed by the Department of Historic Resources in Richmond (DHR) are located within or adjacent to the Northern Development Areas. None of the sites or districts in the Development Areas are currently listed on any National or State register for historic places.

It is the County’s intention to use portions of a recent grant to enter into a cost-sharing agreement with DHR to conduct updates of surveys conducted many years ago to gain a better understanding of the nature and current condition of some of the previously identified resources in the northern Development Areas.

While the size and mostly far-and-between nature of the distribution of areas with historic or archaeological resources may not significantly affect the development of the future framework for the Northern Development Areas, it is important to document the general location of these areas as they may need to be taken into consideration by future more detailed master planning and development efforts.

### A.5 Schools and Community Facilities

[For the FINAL Assets Need and Opportunities Report the following section might be integrated into the discussion of the existing framework – distinguishing which of these are integrated into Civic Green Centers and which are Civic Districts.]

1. **Schools**

Section will describe in text and an accompanying map location and other key characteristics of Schools, Libraries, Community Centers, Fire Stations, and Police Sub-stations. This information will later be used to inform the potential need for additional facilities under potential future development scenarios for the Northern Development Areas.

The following schools are located in the Northern Development Areas, with exception of Agnor-Hurt, Jouett, and ??? schools which are technically located in Rural Area 1, but serve school districts that reach into the Development Areas (also see *Schools and School Districts Map* in the Appendix of Illustrations). The total student population is for the year 2003-04 is listed in brackets.

**Elementary Schools:**

- Agnor-Hurt Elementary School (440)
- Baker-Butler Elementary School (506)
- Broadus Wood Elementary School (326)
Greer Elementary School (420)

Hollymead Elementary School (494)

Woodbrook Elementary School (319)

**Middle Schools**

- Burley Middle School (400)
- Jouett Middle School (585)
- Sutherland Middle School (667)

**High Schools**

- Albemarle High School (1,611)

The *Schools and School Districts Map* also illustrates an approximate walking distance of 5 to 10 minutes (indicated by 1/4 and 1/2-mile circles). This was done to demonstrate the approximate area from which walking to school could be considered as a possible mode of transportation for daily trips to school. The map shows that particularly Baker-Butler Elementary School is located in a location too remote and with only few residences within reasonable walking distance.

It should be noted that several of the schools are arranged in clusters, combining different levels of education. Following is a list of such clusters and their total student population.

1. Greer Elementary School, Jouett Middle School, and Albemarle High School (2,616)

2. Hollymead Elementary School and Sutherland Middle School (1,161)

The sites of clustered school facilities are of significance to the Master Plan from a transportation perspective, as the clustering of schools and resulting AM vehicular trips may adversely affect pedestrians and bicycle travel on school access routes and in adjacent residential areas.

**2. Community Facilities**

Please also refer to the *Community Facilities Map* (in the Appendix of Illustrations), which shows the location of all community facilities discussed below.

**2.1 Libraries**

The only library in the Northern Development areas is the Northside Library, located at 1671 Seminole Trail in Albemarle Square. It should be noted that Albemarle County also provides bookmobile services to the Rural Areas, retirement centers, and institutions.
During the first public meeting, many of the workshop participants emphasized that the Northside Library is very much thought of as a critical asset for residents of the Northern Development Areas.

2.2 Fire Stations

Fire response service in the Northern Development Areas is provided by the following two Fire Stations:

1. Seminole Station (includes Neighborhood 1 and 2, as well as the southern portion of Hollymead), and
2. Earlysville Station (including central and northern Hollymead and Piney Mountain).

Both fire stations also cover large sections of (mostly) Rural Area 1. During the assessment phase of the different framework plan alternatives, it should be determined whether the two fire stations have the capacity to provide services to the potential additional development proposed under the alternatives.

2.3 Police Stations

Policing service in the Northern Development Areas is provided by one police station located in Neighborhood 1. The Northern Development Areas are broken down into the following police beats:

1. Neighborhood 1 – Beats 6 and 7
2. Neighborhood 2 – Beat 1
3. Hollymead (south) – Beat 8
4. Hollymead (central and north), Piney Mountain – Beat 9

As with fire response services, it should be determined during the assessment phase of the Master Plan planning process whether a single police station and its officers and other personnel assigned to the five beats have the capacity to provide service to the potential additional development proposed under the framework plan alternatives.

A.6 Open Space and Other Natural Resources

1. Open Space and Greenways

1.1 Open Space

The Urban Open Spaces chapter of the Albemarle County Comprehensive Plan’s Natural Resources and Cultural Assets section addresses the critical distinction between the County’s goals for open space in the Development Areas and open space in the Rural
Areas. This distinction sets the tone for the approach to the open space component of the Master Plan.

“There is a fundamental difference in the value and character of open space in urban and rural situations. In the Rural Area, the County is often seeking to conserve large systems of land of particular value (such as agricultural and forestry lands) or to preserve areas of significant resources (mountain ridges, stream valleys, wildlife habitat.) Whereas, in urban areas some preservation of natural areas (such as stream valleys) occurs, but more often, open spaces are designed and created....Urban open spaces will become more important as the County’s Development Areas become denser and as additional urban areas are developed. ... In addition, specifically designed open spaces should be incorporated as amenities into urban developments to offset the higher densities. In evaluating higher density proposals, the County will consider how they relate to existing open space systems, and how they create new open spaces.” (Natural Resources and Cultural Assets Section, p. 181/182)

This section of the Comprehensive Plan furthermore contains two strategies that are critical for the Northern Development Areas Master Plan;

1. Evaluate all Development Area proposals for their contribution to the urban open space network; and,

2. Seize opportunities for urban parks.

Based on the above, it is important for this Assessment to identify those natural areas within the Northern Development Areas that are of importance as natural habitat and may require consideration for preservation. The main focus of open space planning in the Development Areas will be the assessment of opportunities for the establishing a network of urban open spaces and to identify opportunities for urban parks.

A review of the Open Space & Greenway System, Planned Land Use, and Existing Framework Maps (see the Appendix of Illustrations) shows that current conditions are generally consistent with the above outlined approach of the Comprehensive Plan.

The Open Space & Greenway System Map shows a number of Agricultural/Forest Conservation and Conservation Easement areas in the Rural Areas, while only one small Conservation Easement exists within the Development Areas (north of Marlboro Court in the Carrsbrook residential district). Within the Development Areas, open space largely occurs as private or semi-private open space associated with residential development, such as Forest Lakes, Carrsbrook, Woodbrook, and other residential districts.

The only existing park in the Development Areas is Humphris Park, located east of Hydraulic Road in Neighborhood 1. This park largely consists of a wooded area and does not provide any programmed recreational activities, such as ball fields, playgrounds, etc. In its present condition, the park appears to be somewhat poorly integrated into the surrounding residential areas and underutilized as an urban open space as envisioned by the Comprehensive Plan. The relative higher residential density in the vicinity of the park (as
compared to other residential districts in the Development Areas), makes Humphris Park a distinct opportunity site for maximizing the benefits of having a park amenity for the nearby residents by creating a “specifically designed” urban park and by improving the spatial relationship of the park to the surrounding residential development.

It should be noted that, while not directly located in the Northern Development areas, Darden Towe Park, located in Neighborhood 3, Pen Park in Charlottesville, and Ivy Creek Natural Area and Chris Greene Lake Park located in the County’s Rural Areas, nonetheless represent open space resources with significant recreational facilities and importance to the population in nearby residential districts located in the County. Particularly the Chris Greene Lake area, located west of northern Hollymead and Piney Mountain, was frequently mentioned by many participants of the first public workshop as a critical resource and destination for those who live in the Northern Development Areas. This lends emphasis to the need for implementation of the planned Greenway that would connect the Hollymead and Piney Mountain areas to Chris Greene Lake Park (Greenways are discussed in greater detail below).

School sites are included in the Open Space & Greenways Map because their recreational facilities represent another important open space resource for the Development Areas and in some cases were considered as Centers in the Existing Framework Map.

The discussion of the Conservation Easement Program and Public Lands chapter of the Natural Resources and Cultural Assets section includes a strategy that suggests the further study of the open space/recreational potential of a potential park site northeast of the intersection of Routes 29 and 643 (Rio Mills Road). This should be taken into further consideration during the next phases of the Places29 project.

1.2 Greenways
As discussed above, the County Comprehensive Plan recognizes the importance of public urban open spaces for the Development Areas and the need for establishing a network of such spaces. This is further underlined by the detailed discussion of Greenways in the Natural Resources and Cultural Assets section of the Plan, which states the following objective:

*Establish a Countywide network of greenway trails for conservation, recreation, transportation, and education throughout Albemarle County, and linked to trails in the City of Charlottesville.*

The Open Space & Greenway System Map illustrates the existing and planned beginnings of this envisioned network of Greenways within the Development Areas and adjacent Rural Areas. At present, the extent of this network and the number of designated access points are somewhat limited and many of the proposed Greenways have yet to be implemented. In order for the network of trails to become more attractive to bicyclists and pedestrians as a means of access to natural areas and other types of open space within and outside of the Development Areas, ways should be explored in which access to the trails from residential districts can be improved. Equally important would be efforts to increase the network density of Greenways and trails in order to connect a greater number of key
destinations within and outside of the Development Areas, such as schools, potential new public open spaces, and preserved forest and agricultural lands.

2. Water Resources

The Natural Resources and Cultural Assets section of the Comprehensive Plan addresses a broad range of aspects around the protection, conservation, and management of a variety of water resources in the County, including both surface water and groundwater resources. The Plan also emphasizes the “functional interrelationship of stormwater hydrology, stream buffers, flood plains, wetlands, and human management practices.”

Of importance for establishing a Framework Plan for the Northern Development Areas is an understanding of the location of the most prominent surface water resources in the area and the recognition of the relationship between new development and surface and underground water resources. This interrelationship can then be addressed by the Master Plan’s implementation steps for future development and by including buffer zones for development along critical water resources.

As part of its ongoing efforts to appropriately address goals and objectives of the Comprehensive Plan, the County of Albemarle adopted a Stormwater Master Plan in early 2005, to become a part of the Natural Resources and Cultural Assets section. The Stormwater Master Plan specifically assesses and provides guidance for water resources located in the County’s Development Areas. The objectives of the master plan are to:

“1. provide guidance for land use planning and neighborhood master planning that is based on the assessment and prioritization of water resources, and

2. promote public and private stormwater solutions that are based on needs and opportunities at the watershed scale rather than relying solely on a site-by-site approach.”

(Natural Resources and Cultural Assets, p. )

The master plan includes the following elements (the following is text taken from the Albemarle County website):

- an assessment of 100 miles of stream corridors within the Development Areas, including such observations as habitat conditions and problems areas (i.e., bank erosion)
- the identification of high-value stream corridors -- or those that should be afforded greater protection from impacts
- a list of stream corridor restoration projects, prioritized by the public benefit of restoration versus the cost
- a list of recommended regional stormwater facilities.
The *Stormwater Master Plan* also addresses the need for trade-offs involved in the management of water resources in the Development Areas:

> "By its nature, water resources management within the Development Areas requires trade-offs: protecting some high-value stream corridors while acknowledging that others may be impacted by development, allowing the development designated in the Land Use Plan while protecting downstream property and natural resources, and seeking design solutions through the Neighborhood Model that turn water resources into neighborhood and environmental assets rather than liabilities. These trade-offs are made with the understanding that higher-density development is being concentrated within the 35 square miles of the Development Areas in order to afford a much higher level of protection for streams within the remaining 692 square miles of the County’s rural areas. " (Stormwater Action List Summary Report for the Stormwater Master Plan, p.1, 2003)

Figure 2: Provides an overview of Designated Use Categories for Assessed Stream Reaches in the Development Areas. Pocket Natural Areas and Community and Private Use/Trails are considered “high value” with regard to planning deliberations and, ultimately, protection under the WPO (this will require ordinance amendments).\(^1\)

The Stormwater Master Plan also identified six locations for regional stormwater control facilities in the Northern Development Areas (shown in Figure 3). More detailed information is contained in the master plan, which points out that “within the Development Areas, appropriately designed and placed regional facilities can enhance stormwater treatment and serve as amenities for neighborhood centers and other development projects. Regional facilities are not a panacea and should only be used where they can capture and treat a large impervious area and fit into development patterns functionally and

\(^1\) Explanation of mapped categories from: Stormwater Action List Summary Report for the Stormwater Master Plan, Figure ES-2, 2003):

**Pocket natural area**—These areas have high habitat and natural aesthetic values. Stream corridors should be protected to preserve these values, as well as water quality and living resources.

**Community and private use/trails**—The primary objective of these stream corridors is to provide for access to natural refuge and trails in proximity to developed areas, especially residential areas.

**Designed urban water feature**—These stream corridors are located in areas designated for high-density residential/commercial/mixed use. As an alternative to complete piping, these corridors can be managed to provide open space, pocket parks, and water features. It is assumed that these channels will require engineering intervention of one type or another (limited piping, channel engineering, ponding).

**Urban/engineered**—These streams are first and second order streams in areas designated for high-density residential/commercial/mixed use. In most cases, existing conditions are degraded for habitat or natural aesthetic. Some amount of piping, filling, or channelization is expected.

The *Water Resources and Critical Slopes Map* (see Appendix of Illustrations) illustrates the location of water bodies in the Development Areas and adjacent Rural Areas, including rivers, creeks, and lakes. The North and South Forks of the Rivanna River represent the most prominent surface water resources in the project area. In addition, a number of creeks and lakes add further diversity to the hydraulic, habitat, scenic, and recreational assets provided by these water bodies. The *Water Resources and Critical Slopes Map* also provides information about the extent of the 100-year flood plain associated with the water resources. This is of importance as the County adheres to zoning regulations governing floodplain usage in order to remain under coverage of the National Flood Insurance Program of the Federal Emergency Management Agency. The County’s Comprehensive Plan recognizes the importance of protecting floodplains through the following Objective:

*Protect floodplains from inappropriate uses and recognize their value for stormwater management and ecological functions.*

This objective is implemented through the County Zoning Ordinance (Section 30.3 Flood Hazard Overlay District – FH), which regulates structural uses, wells, septic systems, storage facilities, water and sewer facilities, and renovation/restoration of structures/facilities in the floodplain. It should be noted that multi-use paths and Greenways are a by-right permitted use in the Floodway Fringe.

There was no information about the potential presence of wetlands within the Northern Development Areas.

### 3. Important Biodiversity Sites

As pointed out earlier, the Albemarle County Comprehensive Plan in its Natural Resources and Cultural Assets section acknowledges the importance of preservation of natural resources within and outside of the Development Areas and includes the following goal:

*Recognize the importance of protecting biological diversity in both the Rural Areas and the Development Areas for the ecological, aesthetic, and economic benefit to the community.*

This goal is accompanied by the objective to “develop a systematic knowledge of the types and distribution of biological resources in Albemarle County.”

As a first step in addressing the above goal and objective (which is one of several), the County established a temporary Biodiversity Working Group (BWG). As per direction of the Comprehensive Plan, the BWG was to address a number of tasks related to biodiversity resources in the County. A preliminary outcome of the group’s work has been an ini-
tial list of Important Biodiversity Sites. The *Albemarle County Biodiversity – A Report on History, Current Conditions, and Threats, with Strategies for Future Protection* (prepared by the Albemarle County Biodiversity Group, October 2004) states that this list “is meant to serve as an outline, a ‘starting point’ to which data can be added or amended. Once this database is created, these sites can be identified in the Comprehensive Plan as important sites to be considered in policy development, land-use planning, and application reviews.”

In the absence of such a final and adopted database, the Assets, Needs, and Opportunities Report will use the sites listed on the BWG’s initial list of important sites as an approximation of sites that may be sensitive to future development and warrant further investigation prior to any development activities (see *Open Space & Greenway System Map* in the Appendix of Illustrations). It should be pointed out that the list (and the resulting designations on the *Open Space & Greenway System Map*) are “the result of two meetings in February and March of 2002… No specific standards for inclusion of any of the sites are implied or to be assumed; they are simply those places agreed to by the group as being foremost in their uniqueness, based on their expertise and years of field experience.” (Albemarle County Biodiversity – A Report on History, Current Conditions, and Threats, with Strategies for Future Protection, p.57, October 2004)

The *Open Space & Greenway System Map* illustrates that the majority of Important Sites are located outside of the Development Areas. Only a small portion of the site that follows the North Fork of the Rivanna River reaches into the westernmost section of the Piney Mountain development area. A small site of importance for biodiversity is located east of US 29 close to the southernmost tip of the Hollymead area, north of the North Fork of the Rivanna River. Overall, it appears that almost all Important Sites are associated with or located near rivers, creeks or other water bodies in the area.

### 4. Areas with Critical Slopes

The Albemarle County Comprehensive Plan explains the importance of Critical Slopes as follows: Critical Slopes “require protection in order to maintain the existing balance between slope, soils, geology, and vegetation. Critical slopes are defined as areas with a slope of 25 percent or greater. Clearing, grading, building, cropping, and overgrazing of these lands can result in extensive erosion and landslides or sloughing of soil and rock; excessive stormwater runoff, increased siltation and sedimentation; loss of aesthetic resource; and, in the event of septic system failure, a greater travel distance of septic effluent.” (Comprehensive Plan, Natural Resources and Cultural Assets Section, p. 107)

An understanding of where within the Northern Development Areas critical slopes are located is of importance for the development of future land use patterns and the relationship of natural areas with critical slopes to existing and new development contemplated as part of the Master Plan.

A review of the Water Resources and Critical Slopes map shows that areas of critical slopes are primarily associated with river banks and creek beds. Concentrations of areas
The contemplation of future land uses close to areas with critical slopes should take into account the General Standards for areas with critical slopes contained in the Comprehensive Plan as well as regulations to protect critical slopes included in the Zoning Ordinance.

A.7 Transportation

1. Existing Transportation Networks

1.1 Transit Service

There are currently three Charlottesville Transit System (CTS) routes that serve portions of the US 29 North Corridor. These routes are graphically depicted in the figure entitled Bus Routes in the Appendix. As shown, transit service is available along the corridor via Routes 5, 7 and 20, extending as far north as the Wal-Mart near Hilton Heights Road.

Route 5 is a secondary CTS route, running between the Barracks Road Shopping Center and Fashion Square / Rio Road. This route operates Monday through Saturday from 6:00 a.m. to 6:30 p.m. on 60 minute headways. There is no evening service. Originating in the Barracks Road Shopping Center, the route follows Barracks to Georgetown, then to Hydraulic Road, to Commonwealth Drive to Rio to Fashion Square Mall. Based upon the recent ridership data collected during the preparation of the Charlottesville Transit Improvement Study (BMI/SG, April 2005), there are 170 daily boardings on route 5. Fifty percent of the trips are for commuting purposes and over 40 percent are for personal business and shopping.

Route 7 originates in Downtown Charlottesville, travels west on Main Street, then north on Emmet, past Route 250 (now along Seminole Trail), generally following the US 29 corridor although deviating to parallel streets to serve major commercial traffic generators. These parallel facilities include Hillsdale Drive and Berkmar Drive. Daily service is provided Monday through Saturday from 6:00 a.m. to 6:45 p.m. on 15 minute intervals. Evening service runs from 6:45 p.m. to the last scheduled run at 11:12 p.m. on a 30 minute headway. Evening service runs along a truncated route that has a northern termination at Albemarle Square/Fashion Square.

Ridership data collected during the preparation of the Charlottesville Transit Improvement Study revealed that 7 has over 900 boardings during daytime service and approximately 150 boardings during the evening. Route 7, which is one of the primary routes in the system, carries over 25 percent of the daily system ridership. Surveys found that
fifty-seven percent of these trips were for commuting, 12 percent were for personal business and 19 percent for shopping purposes.

Route 20 provides evening service only (6:50 p.m. to 11:52 p.m.), along a segment of US 29 North from Hydraulic Road to Greenbrier Drive. Operating on 30 minute frequency, the route extends from the UVa Hospital to Whitewood Village.

Service configuration improvements recommended in the Charlottesville Transit Improvement Study include a major change to Route 7, which is that the northern portion of the route between Fashion Square and Wal-Mart/Sam’s Club, served by every other trip, should be removed from Route 7 and be combined with Route 5. This would significantly reduce the running time for Route 7 and result in all Route 7 trips having the same endpoints. With this adjustment, the route would continue to require a 90-minute running time to achieve schedule reliability.

Currently, Route 7 travels through the shopping areas between Kmart and Seminole Square, in the northbound direction and on US 29 in the southbound direction. Passengers who wish to board or alight in the southbound direction must cross Route 29 to access the shopping areas. It was recommended that the bus be routed through Seminole Square in both directions (when time permits) and only in the southbound direction if time is limited.

The major change to Route 5 is the addition of the former northern portion of Route 7 that runs between Fashion Square and Wal-Mart/Sam’s Club. This increases the running time of the route from 60 to 90 minutes. Funding for this route service is primarily by Albemarle County.

1.2 Pedestrian Facilities

Existing pedestrian facilities along both sides of US 29 extend from the vicinity of the southern study limits north to approximately the South Fork of the Rivanna River. Sidewalks are also present along several of the major crossroads along the corridor (Hydraulic, Seminole Court, Greenbrier, and West Rio Road). A figure showing the locations of existing sidewalks on existing roads has been provided in the Appendix. The lack of pedestrian crosswalks crossing US 29 is a notable impediment to pedestrian travel within the corridor.

The recent U.S. Route 29 Pedestrian Study (VDOT, 1999) mentions that there is one crosswalk and one pedestrian signal head between Barracks Road and the South Fork of the Rivanna River, but they are not at the same location. The report recommends the implementation of many pedestrian improvements along the corridor that will receive further consideration as part of this study.

1.3 Bicycle Facilities

The existing bicycle facilities within the Northern Development Areas are shown on the Existing Bike Route Map (see Appendix of Illustrations). Within the study area, bicycle facilities exist on Hydraulic Road and Rio Road. The increasing popularity of bicycling for recreation and transportation purposes has been highlighted in recent planning efforts.
by Albemarle County. The Albemarle County Bicycle Plan contains quite a few bicycle facility improvements on both urban and rural roadways in the study area.

The proposed primary bicycle routes within the urban portion of the study area include:

- US 29 Seminole Trail
- Rio Road West/Fifth Street Extension
- Dickerson Road
- Polo Grounds Road
- Airport Road/Proffit Road
- Hydraulic Road
- Greenbrier Drive (west of US 29 to Whitewood)
- Commonwealth Drive
- Berkmar Drive
- Hilton Heights Road

Secondary bicycle routes, or neighborhood level facilities in the urban portion of the Places29 study area include:

- Rio Mills Road
- Woodburn Road
- Dominion Drive
- Carrsbrook Drive
- Pepsi Place
- Inglewood Drive
- Idlewood Drive
- Woodbrook Drive
- Brookmere Road
- Clarke Lane
- Northfield Road/Hillsdale Drive
- North Hollymead Drive
- Timberwood Boulevard
- Timberwood Parkway
- Ashwood Boulevard

1.4 Rail Service

Norfolk Southern, which is the second largest railroad in Virginia and one of the four largest railroads in the United States, operates a north/south running line for freight service, which traverses Albemarle County east of the Northern Development Areas. AMTRAK service for passengers in the region is provided in and out of the City of Charlottesville’s Union Station on West Main Street. There are no AMTRAK stops in Albemarle County.

The Virginia State Rail Plan includes a reference to concepts that contemplate using the Norfolk Southern line for passenger service from Bristol to Richmond and Washington, D.C. (Trans Dominion Express). The Plan states that “several reports have been prepared evaluating the potential of operating rail passenger service between Bristol to Richmond and Washington, D.C. The proposed service, known as the TDX, would link Southwestern Virginia to Richmond via Lynchburg and Southwestern Virginia to Washington, D.C., via Lynchburg and Charlottesville. The proposal calls for improvements to NS track to accommodate a high level of service with European style cars and amenities.” (Virginia State Rail Plan, p. 80, 2004)

1.5 Air Travel

The Charlottesville-Albemarle Airport (CHO) is located west of US 29, approximately eight miles north of the City of Charlottesville. It provides non-hub commercial and general aviation services, offering 60 flights daily. Service is provided to and from Charlotte NC, Pittsburgh PA, Washington Dulles, New York LaGuardia, Philadelphia PA, and Cincinnati OH. CHO is served by Comair, The Delta Connection, United Express (Atlantic Coast Airlines), and US Airways Express (Piedmont Airlines).

The Charlottesville-Albemarle Airport has grown from 65,620 passengers departing on commercial flights in 1980 to 132,432 in 1990, and served 163,416 passengers in 2003.

The Charlottesville-Albemarle Airport Master Plan, adopted in 2004, includes among its proposed future improvements a proposal to increasing the airports parking capacity by building a multi-deck parking facility. In addition, plans are under way to realign the intersection of Airport Road and Dickerson Road/Bowen Loop eastward to allow for a redesign of the intersection as a roundabout.

2. Planned Transportation Improvements

The following table gives an overview of roadway and bicycle and pedestrian improvements planned under the UnJAM 2025 program.
## CHART 2025 Project Listing

<table>
<thead>
<tr>
<th>Project #</th>
<th>TIP # (Funding Source)</th>
<th>Project Description</th>
<th>Project Purpose</th>
<th>Total Cost</th>
<th>Remaining Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>I-15</td>
<td>n/a</td>
<td>Route 29 (from South Fork Rivanna River to Airport Road)</td>
<td>Improve roadway to accommodate anticipated traffic due to increased development</td>
<td>$17,500,000</td>
<td>$17,500,000</td>
</tr>
<tr>
<td>I-16</td>
<td>n/a</td>
<td>Route 29 Corridor Improvements (Previously named Route 250/29 Hydraulic-Greenbrier Interchanges)</td>
<td>Provide partial funding for improvements to be recommended from 29H250 P2 Study</td>
<td>$35,649,829</td>
<td>$35,649,829</td>
</tr>
<tr>
<td>N-1</td>
<td>n/a</td>
<td>Berkmar Drive Extended (Town Center Road)</td>
<td>Extend existing roadway from northern terminus of Hilton Heights Road to Rivanna North Fork</td>
<td>$30,000,000</td>
<td>$30,000,000</td>
</tr>
<tr>
<td>N-10(^1)</td>
<td>P-7</td>
<td>Route 29 Bypass (Funding to resolve current litigation of ROW purchases only)</td>
<td>Bypass road with southern terminus from 29-250 Bypass, northern terminus to 29 above Berkmar Drive (See footnote 1)</td>
<td>n/a</td>
<td>$8,381,516</td>
</tr>
<tr>
<td>ST-1</td>
<td>U-13</td>
<td>Route 250/29 Safety/Mobility Study</td>
<td>Conceptual design study leading to PE (29H250)</td>
<td>Improve safety, Better access, Add capacity, Alternate route</td>
<td></td>
</tr>
<tr>
<td>ST-2</td>
<td>n/a</td>
<td>Route 29 Corridor Study (29H250 Phase 3)</td>
<td>Completion of 29H250 as presented in original scope (from Barracks Road to North Fork Rivanna)</td>
<td>Improve safety, Better access, Add capacity, Alternate route</td>
<td></td>
</tr>
</tbody>
</table>

### Vision Projects (Not Fiscally Constrained)

<table>
<thead>
<tr>
<th>Project #</th>
<th>TIP #</th>
<th>Project Description</th>
<th>Project Purpose</th>
<th>Total Cost</th>
<th>Remaining Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>V-4</td>
<td>n/a</td>
<td>Complete Rt. 29 Corridor Study (Charlottesville-North Carolina Border)</td>
<td></td>
<td>n/a</td>
<td></td>
</tr>
<tr>
<td>V-8</td>
<td>n/a</td>
<td>Emmet Street (Rt. 29 Business) from Ivy Road (Rt. 250 Business) to Arlington Boulevard</td>
<td>U3</td>
<td>n/a</td>
<td></td>
</tr>
<tr>
<td>V-15</td>
<td>n/a</td>
<td>Interstate 64 interchanges at Rt. 29, Rt. 250, Rt. 20 and Rt. 250 from Rt. 250 (High Street) to Fontaine Ave (Rt. 654)</td>
<td>Int</td>
<td>n/a</td>
<td></td>
</tr>
<tr>
<td>V-22</td>
<td>n/a</td>
<td>Rt. 29 Seminole Trail intersections (east-west movement)</td>
<td></td>
<td>n/a</td>
<td></td>
</tr>
</tbody>
</table>

### TIP Funding Sources

- **I** = Interstate
- **U** = Urban
- **R** = Rural
- **S** = Secondary
- **n/a** = No funds allocated in TIP

### Project Types

- **U** = Urban Roadway - typically with curb and gutter, and sidewalks
- **R** = Rural Roadway - typically with swales and paths
- **#(after U or R)** = # of travel lanes
- **Spot** = Spot Improvements
- **Int** = Intersection Improvements
- **Br** = Bridge Improvements
- **TSM** = Transportation System Management

---

\(^1\) Route 29 Bypass project is in the listing only to allow for existing right-of-way transactions currently in litigation to be completed. The current amount listed is the latest figure given for existing transactions and is subject to change. Any remaining unspent funds should be reallocated to Project #I-13 (Route 29 corridor improvements - partial funding for improvements to be recommended from 29H250 Ph2 Study), which has the same function.

---

### Table 5: CHART Roadway Improvements
### CHART 2025 Plan Update: Recommended Pedestrian and Bicycle Projects

<table>
<thead>
<tr>
<th>Route/Street</th>
<th>From</th>
<th>To</th>
<th>Type*</th>
<th>Current Status</th>
<th>Recommendation</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>P.?? Route 29</td>
<td>North Fork Research Park</td>
<td>Route 250</td>
<td>MUP</td>
<td>Traffic too fast and high volume for safe bicycle and pedestrian use.</td>
<td>Build 6 mile multi-use path</td>
<td>$736,000</td>
</tr>
<tr>
<td>S.?? Berkmar Drive</td>
<td>Rio Road</td>
<td>Route 29</td>
<td>SW/BL</td>
<td>Incomplete systems</td>
<td>Add 0.5 mile bicycle lanes and sidewalk</td>
<td>$40,875</td>
</tr>
<tr>
<td>P.?? Route 29</td>
<td>Airport</td>
<td>Route 250 Bypass</td>
<td>CW</td>
<td>Inadequate and unsafe crossing points for non-motorized traffic</td>
<td>Grade-separated crossings at: Hydraulic, Rio, and Hollymead</td>
<td>Part of larger projects</td>
</tr>
<tr>
<td>U.?? Multiple (Ivy, Fontaine, 5th Ext, Avon, 20,250, 29, Barracks)</td>
<td>Rivanna Trail</td>
<td>Rivanna Trail</td>
<td>CW</td>
<td>Improve crossings of roads where Rivanna trail intersects at-grade</td>
<td>Crosswalks and Median islands</td>
<td>$80,000</td>
</tr>
</tbody>
</table>

* Project Types:
- BL = On-road Bicycle Lane
- MUP = Multi-use Path
- SW = Sidewalk
- CW = Crossing feature

Cost estimates in 2000 dollars from VDOT.

### Table 6: CHART Bicycle and Pedestrian Improvements
2. Street Types

The street system in the Places29 study area is the product of a conventional approach that is based on a system of functional classification of (urban) streets and (rural) roads within a larger network. Roadways are classified primarily on the basis of their regional traffic-carrying role and access characteristics. The functional classes of roadways include principal arterials (interstate, other access-controlled freeways, and other arterials with partial access control), minor arterials, collectors and locals. At a network level, the functional hierarchy is organized to link locals with collectors and collectors with arterials. In concept, arterials are intended to primarily carry regional traffic, while local streets are intended for neighborhood traffic. Collectors and minor arterials are intended to serve a mix of local and regional traffic.

Many roadways, particularly those that carry multiple modes, are multi-function in that they carry a mix of local and regional trips and pass through different types of urbanized environments. This mix of functions complicates the street design process in urbanized and newly urbanizing areas. The relationship between transportation and land use is highly complex, particularly along arterials because these streets are corridors of commerce and residence, as well as of movement.

VDOT regulates the design of roadways on the primary system through its Road Design Manual and on secondary roadways through the Subdivision Street Requirements. The Neighborhood Model (NMD) used by Albemarle County introduces a series of street types that are more specifically related to the neighborhood scale and are currently being considered as an alternate set of design requirements for those contained in the Subdivision Street Requirements. The NMD road designations add street types (boulevards, avenues, lanes and alleys) to the arterial/collector/local system used by VDOT to account for different functions. The NMD road designations generally reduce lane widths and place more emphasis on slower speeds.

The street types suggested for the Northern Development areas are shown in Table 7. Types currently used by Albemarle County for the NMD Road Designations are shaded in the table.

<table>
<thead>
<tr>
<th>Street Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freeway</td>
<td>Controlled access multi-lane roadway intended for high speed longer distance travel. Accessed by interchanges with arterials. No provisions for pedestrians, bicycles or local transit.</td>
</tr>
<tr>
<td>Expressway</td>
<td>High-capacity multi-lane thoroughfare designed to carry through traffic, serves longer trips and provide limited access to land. May be high ridership transit corridors. Expressways use access management techniques and medians or center turn lanes are required. Primary goods movement routes. Pedestrian accommodation is buffered from the roadway.</td>
</tr>
<tr>
<td>Boulevard</td>
<td>Multi-lane thoroughfare that may include a center median to create linear park appearance. Bike lanes are generally pro-</td>
</tr>
<tr>
<td>Street Type</td>
<td>Description</td>
</tr>
<tr>
<td>-------------</td>
<td>-------------</td>
</tr>
<tr>
<td>Avenue</td>
<td>Two-lane thoroughfares that connect to important places and/or spaces in Centers, may serve mixed-use areas, function as a &quot;main&quot; street. Parking lanes are provided and diagonal parking may be allowed with the appropriate width. Bikes lanes are generally provided unless determined not applicable. Avenues may include a center median to create linear park appearance. Intended for Centers and General Areas.</td>
</tr>
<tr>
<td>Street</td>
<td>Neighborhood &quot;Street&quot;; local slow-movement thoroughfare that is urban in character and the street is considered a &quot;shared&quot; space. On-street parking is permitted (intermittent or delineated). Intended for Edge, General Areas, Centers and transitions from residential to mixed-use areas.</td>
</tr>
<tr>
<td>Lane</td>
<td>Narrow very slow-traffic street where &quot;yield&quot; movements intended and the street is considered a &quot;shared&quot; space. Intermittent on-street parking is permitted. Intended for Edges and General Areas with limited use in Centers.</td>
</tr>
<tr>
<td>Alley</td>
<td>Narrow accessways at the rear of lots to service areas; garages or designated parking. &quot;Yield&quot; movements intended. Accessways are curbed unless pavement extends to the walls of adjacent structures. Residential alleys are intended for Edges and General Areas. Commercial alleys are intended for Centers.</td>
</tr>
</tbody>
</table>

Table 7. Street Types

The typology is intended to reflect both urban and rural conditions and is organized vertically to reflect higher speed facilities that serve longer distance trips at the top. The types descend to reflect more local, lower speed and more pedestrian-scale facilities at the bottom. The street types have been chosen to emphasize characteristics that serve a distinct function and can also be differentiated for a variety of place types. The street type names are intended to be distinct, such that the meaning of the name conveys the characteristics of the roadway.

2.2 Entrance Corridors

Entrance corridors form a specific overlay for the Northern Development Areas and represent a set of streets that connect neighborhoods. They are characterized below in terms of their current conditions and by the street type most appropriate to their role in the network.

US 29
US 29 in the Northern Development Areas is an expressway that transitions from rural to urban as it traverses the study area. There are five basic cross sections on US 29 in the Places29 study area as follows:

<table>
<thead>
<tr>
<th>Segment</th>
<th>Basic Cross Section</th>
<th>Characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. US 250 Bypass to Hydraulic Road</td>
<td>Six lanes with median, no parking, no bike lanes, sidewalks on both sides of the roadway</td>
<td>Right of way appears equivalent to 8-lane section north of Hilton Heights Road to the Rivanna River</td>
</tr>
<tr>
<td>2. Hydraulic Road to Hilton Heights Road</td>
<td>Eight lanes with median and turn lanes (effectively 10 lanes), no parking, no bike lanes, sidewalks on both sides of the roadway</td>
<td>Widest right of way in the study area</td>
</tr>
<tr>
<td>3. Hilton Heights Road to the Rivanna River</td>
<td>Eight lanes with median, no parking, no bike lanes, sidewalks on both sides of the roadway</td>
<td>Right of way appears equivalent to 6-lane section south of Hydraulic Road</td>
</tr>
<tr>
<td>4. North of the Rivanna River (except through Hollymead Town Center)</td>
<td>Four lanes with wide median, no parking, no bike lanes, no sidewalks</td>
<td>Rural except through Hollymead Town Center</td>
</tr>
<tr>
<td>5. Hollymead Town Center</td>
<td>Six lanes with median, no parking, no bike lanes</td>
<td>Under construction</td>
</tr>
</tbody>
</table>

**Hydraulic Road**

Hydraulic Road is a four lane boulevard without parking or bike lanes. A two-way left turn lane is used in place of a median. A sidewalk is present on the south side of the roadway.

**Rio Road West and East**

Rio Road West is a four lane boulevard without parking or bike lanes. A two-way left turn lane is used in place of a median. A sidewalk is present on the south side of the roadway west of Berkmar Drive. Between Berkmar Drive and US 29, sidewalks are present on both sides.

Rio Road East is also a four lane boulevard without parking. Between US 29 and Putt Putt Lane, a median is present. East of Putt Putt Lane, a two-way left turn lane is used in place of a median. A bike lane is present on the north side of Rio Road East, between Putt Putt Lane and Gasoline Alley. A sidewalk is present on the south side of the roadway from US 29 to Greenbrier Terrace.

**Airport Road**

Previously an avenue without parking, bike lanes or sidewalks, Airport Road is being reconstructed to be a boulevard without parking.

**Proffit Road (not subject to Entrance Corridor Overlay District)**
Proffit Road is a rural avenue without parking, bike lanes or sidewalks.

2.1 Context-Based Framework
The series of place types introduced under Settlement Patterns (3.B.1) provides the opportunity to take the NMD road designations one step further into a context-based framework. A context-based approach to street design integrates design criteria for an expanded palette of street types with a set of place types that reflect both uses in the public right of way and the character of private development fronting on the roadway and in the larger area. The effectiveness of such a context-based approach is borne out by review of current efforts in other cities that suggests that a framework that pairs street type with place type gives better guidance than the single dimension arterial-collector-local approach now in use.

The nexus of place types by street types will be provided once both the place types and street types are reviewed and approved. This will be a table that has place types on one axis and street types on the other and will designate which pairings are allowable, such that design criteria appropriate to the pairing can be specified.

2.3 Street Templates
[PROTOTYPICAL CROSS SECTIONS WITH DESIGN CRITERIA WILL BE PROVIDED FOR THE CONTEXT-BASED FRAMEWORK]

3. Travel Patterns and Travel Behavior
This is a discussion of the corridor travel market in the context of what portions of the overall volume in the US 29 corridor is represented by 1) through trips, 2) local commute trips, 3) retail trips, and 4) internal trips. The following travel markets will be illustrated:

- External to External trips – trucks and autos (It doesn’t matter where they ultimately come and go to, just that they pass through the corridor.)
- External to Internal trips – stratified by destination zone internal to the corridor and external gateway
- Internal to External trips – stratified by origin zone internal to the corridor and external gateway
- Internal to Internal trips – quantified by zone pair

[SECTION WILL BE ADDED AFTER ANALYSIS OF RECENTLY PROVIDED DATA HAS BEEN COMPLETED]
A.8 Major Utilities

Section will describe in text and an accompanying map the location of high voltage overhead power lines and towers and their associated easements as well as the alignment of oil or gas pipelines and their easements as they may have a bearing on or could interfere with future development, infill, and redevelopment activity in the Northern Development Areas.

[SECTION WILL BE ADDED AFTER DATA ON MAJOR EASEMENTS HAVE BEEN PROVIDED]

4. Economic Framework and Market Assessment

A. Economic Framework

[THIS SECTION IS PROVIDED AS AN ATTACHMENT AT THIS TIME BUT WILL BE INCORPORATED INTO THE FINAL ANO REPORT]

[Please also refer to the “Age” and “Employment” Maps in the Appendix of Illustrations]

B. Market Assessment

[THIS SECTION WILL BE AVAILABLE AS A SEPARATE DOCUMENT BY THE WEEK OF OCTOBER 24]

The market assessment highlights those land uses with the greatest near term development potential. The assessment includes the residential, retail, and office market in the region and the Northern Development Areas. On a preliminary basis, the section will identify the supportable units/square feet by product type for the area over the next ten years. Particularly competitive locations for particular kinds of development will be identified.

1. Retail
2. Office
3. Residential

5. Opportunities for Future Improvement

This section will summarize the opportunities for improvement in the Development Areas
A. Development Opportunities

1. Infill and Revitalization

2. Future Use of Undeveloped Land

B. Mobility and Access Opportunities

This section will include a discussion of how sidewalk, pathway, and roadway connections can help to transform existing Districts into Neighborhoods.