

Appendix 2. Implementation Project Descriptions

This appendix provides a more detailed description of each of the Places29 Implementation Projects than is given in the List of Implementation Projects in Chapter 8. The projects in this appendix follow the same order and have the same organization as they do in the List at the end of Chapter 8. In other words, they are grouped by timeframe, then by project type (i.e., Transportation, Land Use & Development, Community Facilities & Services, Parks & Green Systems). The project reference number in the upper left hand corner of each page corresponds to the project reference number in the List of Implementation Projects. These numbers are provided for convenience; they do not indicate a priority.

The **project descriptions** of the transportation projects are taken from the US 29 North Corridor Transportation Study. The descriptions of the other projects are from other planning documents or the County's Capital Improvements Program (CIP).

Timing indicates when a project is expected to *begin*.

The **estimated costs** listed for each project have come from one of two sources:

1. The Places29 transportation consultants, Meyer Mohaddes Associates, developed the transportation project estimates, based on cost factors supplied by VDOT. These cost estimates include design, planning, and construction. Also, staff has used the same VDOT factors to prepare an estimate for right-of-way acquisition and utility relocation. (See Technical Memo 11 from the US 29 North Corridor Transportation Study for a list of these cost factors.) These cost estimates have been escalated to Fiscal Year (FY) 2101-2011.
2. Estimates for non-transportation projects, where they are available, are taken from the County's Capital Improvements Program (CIP) for the current year (FY 2009-2010).

It is important to remember that these cost estimates have been prepared to assist users of this Master Plan in understanding the relative magnitude of the costs for different projects. Except where noted otherwise, preliminary engineering for the projects has not yet been done, so these estimates are more subject to change than project estimates based on engineered plans. The original estimates were prepared by the US 29 North Corridor Transportation Study consultants and were updated by the consultants to 2007. Staff has escalated the costs further to the fiscal year 2010-2011, which is expected to be the first full fiscal year after adoption of this Master Plan. Since it is not certain when many of the projects will begin, these costs have not been escalated to the time when design or construction is expected to begin. For additional information about these cost estimates, including the methodology used to develop them, see the text of Chapter 8, Implementation.

The **issues to be addressed** are those which must be dealt with before a project can be completed.

The **milestones** will affect the timing of the project, especially in relation to other projects and funding.

There is also an indication whether the project is currently included in one of the County's or Planning District Commission's planning/budget documents.

The **illustrations** of each project are from one of three sources and are labeled in the caption:

1. The Places29 Future Land Use Map. The complete Future Land Use Map is included at the end of Chapter 4. Illustrations from the Future Land Use Map show the land use designations and recommended roadway projects.
2. The US 29 North Corridor Transportation Study Concept Maps. This is a series of four diagrams that were prepared by the Places29 transportation consultants to show projects in greater detail than is possible on the Future Land Use Map or Transportation Network Map (also in Chapter 4). These diagrams are intended to make it easier for users of the Plan to see how parts of the transportation network, such as the grade-separated interchanges and ring roads or jug handle connections, would work. The diagrams are approximately to scale, but are *not* engineering drawings; they do *not* show precise final locations of road improvements. They should be viewed as possible road layouts subject to further refinement during preliminary engineering of each road improvement project. It is important to recognize that the actual project could be significantly different than what is shown in these illustrations once the project has been designed and engineered.
3. The two transit projects are illustrated with schematic diagrams from Chapter 4.

The colors on the excerpts from the Future Land Use Map relate to the legend below:

Legend

| | | |
|---|---|--|
| ■■■■ Proposed Roadway Network (1) | | Residential - Neighborhood Density |
| ----- Possible Additions to Roadway Network (beyond 2025) | | Office / R & D / Flex / Light Industrial |
| Potential Connections (Pedestrian, Bicycle, or Vehicular) |  Small Area Plan Recommended (2) | Light Industrial |
|  Neighborhood Service Center |  Airport District | Heavy Industrial |
|  Community Center |  Urban Mixed Use (in Centers) | Institutional |
|  Destination Center |  Urban Mixed Use (in areas around Centers) | Public Open Space |
|  Uptown |  Commercial Mixed Use | Semi-Public Open Space/ Floodplain / Stream Buffers |
|  Development Area Boundary |  Residential - Urban Density | |

The colors on the excerpts from the Transportation Study Concept maps relate to the legend below:

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|---|-----------------------------|
|  | US 29 New Modifications |
|  | US 29 Removal |
|  | US 29 New Undercrossing |
|  | New Road Overcrossing |
|  | New Bridge |
|  | Parallel Road Modifications |
|  | Other Network Modifications |

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| Project Reference No. 1 | Project Title: Access Management Improvements along US 29 from the 250 Bypass to the Green County line | |
| Project Description: Access management is intended to maximize the effectiveness and safety of the roadway system, particularly in relation to land adjacent to the roadway. Access management recognizes the need for roadways to accommodate varying degrees of through traffic movement at the expense of access to abutting property. Under this basic principle of access management, higher order roads favor through traffic movement over direct access to adjacent property. This means that property access needs to be from lower order roads that intersect with the higher order roads. In this context, traffic function (i.e., the degree to which through traffic movement is given priority) controls the design of the roadway. Access management improvements along US 29 will facilitate the movement of through traffic along US 29 by encouraging access to adjacent property from other roads wherever possible. | | |
| Timing: Ongoing | Estimated Cost: Variable; to be determined | Responsible Parties: VDOT, City and/or County, adjacent property owners & businesses |
| Issues to Be Addressed: <ul style="list-style-type: none"> ▪ These improvements will be based on the Access Management Plan, as detailed in Technical Memo 7 of the US 29 North Corridor Transportation Study. ▪ Design incremental improvements as developments are approved and other US 29 transportation improvements are designed ▪ Determine funding arrangements on a project-by-project basis ▪ Some of these projects will be funded by private developers as part of development projects | | |
| Milestones: <ul style="list-style-type: none"> ▪ Each development project and transportation improvement should be reviewed by County and VDOT staff for compliance with the Access Management Plan. ▪ Continues throughout 20-year plan timeframe | | |
| Comments/Notes: | | |
| Included in Planning/Budget Document: No. | | |

1. For a complete set of maps and diagrams depicting the recommended access management projects, please consult the *US 29 North Corridor Transportation Study Access Management Plan*, dated May 25, 2007, prepared by Meyer, Mohaddes Associates. This document is available on the County's Places29 website and a copy is in the Community Development Dept. lobby in the County Office Building.

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| Project Reference No. 2 | Project Title: Intelligent Transportation Systems Strategies (ITS) | |
| Project Description: Intelligent Transportation Systems (ITS) collectively refers to technology-based approaches to managing traffic operations. Traffic signal systems, automated vehicle identification systems, and traveler information systems are among the approaches included in ITS. | | |
| Timing: Ongoing | Estimated Cost: Variable, subject to a separate study by VDOT | Responsible Parties: VDOT, City |
| Issues to Be Addressed: <ul style="list-style-type: none"> ▪ Design an ITS for the US 29 corridor, including improved monitoring of traffic conditions, communications infrastructure, traffic signal improvements, and, possibly, a management center to oversee traffic. | | |
| Milestones: <ul style="list-style-type: none"> ▪ Continues throughout the implementation timeframe. | | |
| Comments/Notes: | | |
| Included in Planning/Budget Document: UnJAM 2035 Constrained Long Range Plan, I-37. | | |

2. No illustrations are available for these strategies.

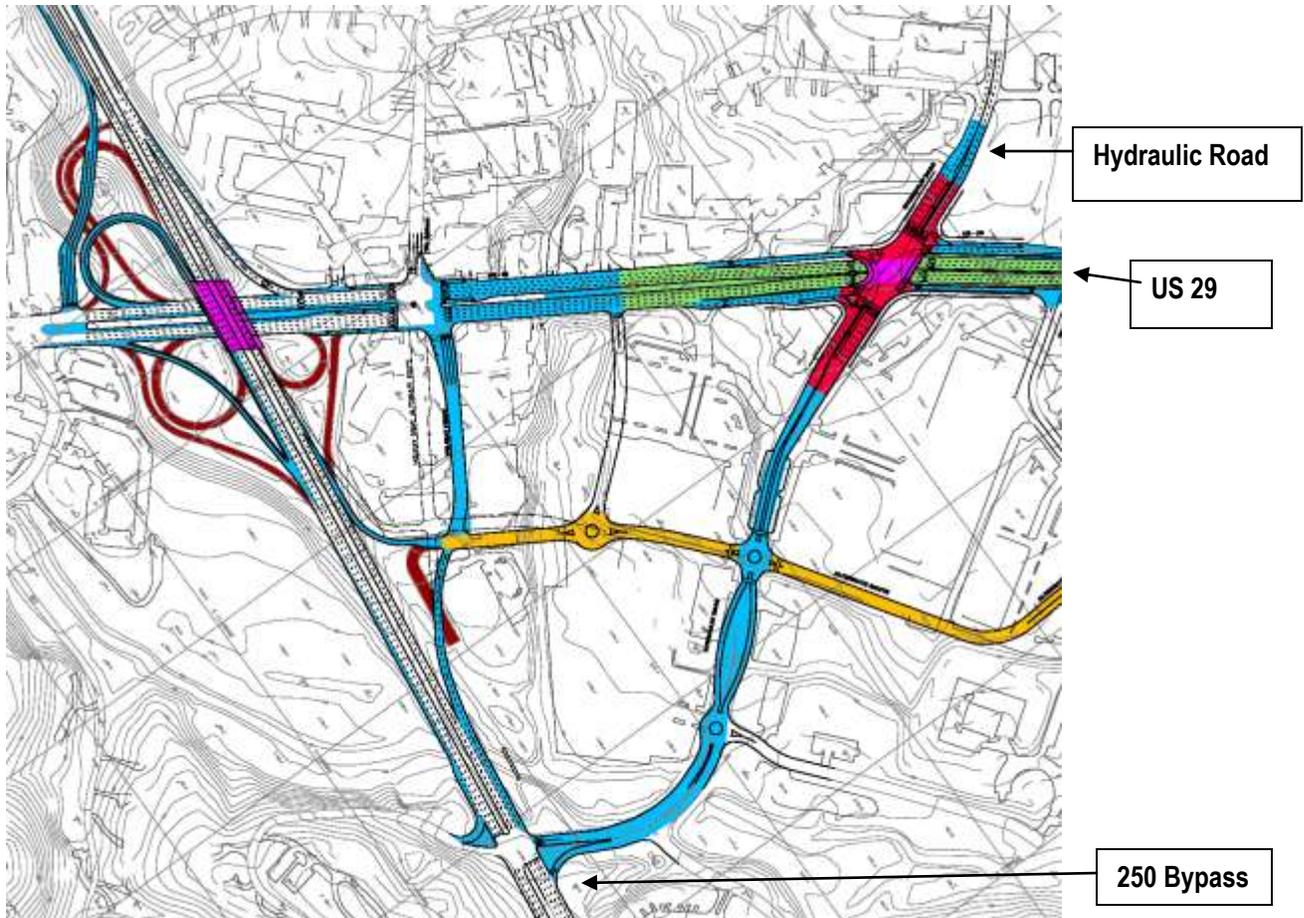
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| Project Reference No. 3 | Project Title: Places29 Community Advisory Council (P29CAC) | |
| Project Description: The Council will be established and staffed once the Master Plan is adopted. | | |
| Timing: Ongoing | Estimated Cost: NA— included in Community Development Dept. budget, for staff time and other resource needs. | Responsible Parties: County Staff |
| Issues to Be Addressed: | | |
| Milestones: | | |
| Comments/Notes: The P29CAC will be similar in purpose and composition to the CACs for Crozet and Pantops. | | |
| Included in Planning/Budget Document: NA | | |

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| Project Reference No. <p style="text-align: center;">4</p> | Project Title: <p style="text-align: center;">Places29 Master Plan Administration and Management</p> | |
| Project Description: <ul style="list-style-type: none"> ▪ Neighborhood Planner monitors plan implementation ▪ Staff facilitates plan implementation initiatives (ZTAs, studies, capital project planning, etc.), as necessary ▪ Staff pursues new federal, state, and other funding sources for transportation projects and other projects, as needed ▪ Staff conducts five-year plan review and update, in conjunction with the Planning Commission and the P29CAC ▪ Staff monitors development review projects (ZMAs and SPs) for conformity with the Plan ▪ Staff organizes and facilitates preparation of Small Area Plans (see Projects 10 and 47). | | |
| Timing: Ongoing | Estimated Cost: Included in CDD budget for staff time | Responsible Parties: Places29 Neighborhood Planner, County staff |
| Issues to Be Addressed: | | |
| Milestones: <ul style="list-style-type: none"> ▪ Administration/management begins when Master Plan is adopted ▪ Periodic written reports on progress will be prepared for the Planning Commission ▪ Planning for five-year review will begin in year 4 of each five-year cycle | | |
| Comments/Notes: | | |
| Included in Planning/Budget Document: Included in County operating budget. | | |

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| Project Reference No. 5 | Project Title: 29H250 Study Recommended Improvements A HIGH PRIORITY IMPLEMENTATION PROJECT | |
| Project Description: Project includes the following improvements, most located in the City: | | |
| a. A HIGH PRIORITY IMPLEMENTATION PROJECT: Expand the southbound-to-westbound onramp at US 29/250 Bypass (near Best Buy) and add a westbound auxiliary lane between the widened US 29 southbound onramp and the Barracks Road offramp. This auxiliary lane is essential to the operation of the onramp from southbound US 29. | b. A HIGH PRIORITY IMPLEMENTATION PROJECT: construct westbound merge lane on 250 Bypass at Barracks Road interchange | \$2,432,000 (a & b) |
| c. Construct eastbound to northbound/southbound offramp at US 29/250 Bypass and construct new offramp at Holiday Drive | d. Close eastbound to northbound/ southbound offloop at US 29/250 Bypass and reconstruct northbound to eastbound onramp | \$23,160,000 (c - f) |
| e. Reconstruct southbound to eastbound onloop at US 29/250 Bypass | f. Expand US 29 from Morton Drive to Seminole Square | |
| g. Reconstruct 250 Bypass/Hydraulic Road intersection | h. Reconstruct Hydraulic Road from US 29 to 250 Bypass | \$9,565,000 (g) |
| i. Design and construct the US 29/Hydraulic intersection as a single point urban interchange (SPUI) | | \$9,554,000 (h) \$39,372,000 (i) |
| Timing: Begin during the first ten years | Estimated Cost: \$84,083,000 | Responsible Parties: City of Charlottesville, VDOT |
| Issues to Be Addressed: <ul style="list-style-type: none"> ▪ Most of these projects are in the City, but they are included in the Master Plan because they are essential to the overall transportation plan for the US 29 North Corridor. ▪ A grade-separated intersection at Hydraulic and US 29 will protect pedestrians and bicyclists from exposure to heavy traffic on US 29 and provides a safe connection between areas east and west of US 29. (Pedestrian and bicycle facilities are included in the project.) ▪ A single-point urban interchange (SPUI) works most efficiently with the existing topography in the area ▪ A partial design has been completed ▪ Facilitates redirection of more local trips to Hillsdale Drive Extended and connector roads to the west of US 29 | | |
| Milestones: <ul style="list-style-type: none"> ▪ Funding has been identified for the first two items (a & b) ▪ Determine which of these improvements needs to be done within the first 10 years ▪ Begin planning & design of remaining projects within first 10 years | | |
| Comments/Notes: Reconfiguring the US 29/250 Bypass interchange reduces the amount of land occupied by on/offramps and creates new developable land in the triangle area. It provides better access to nearby businesses and creates the potential to expand the sites of some of | | |

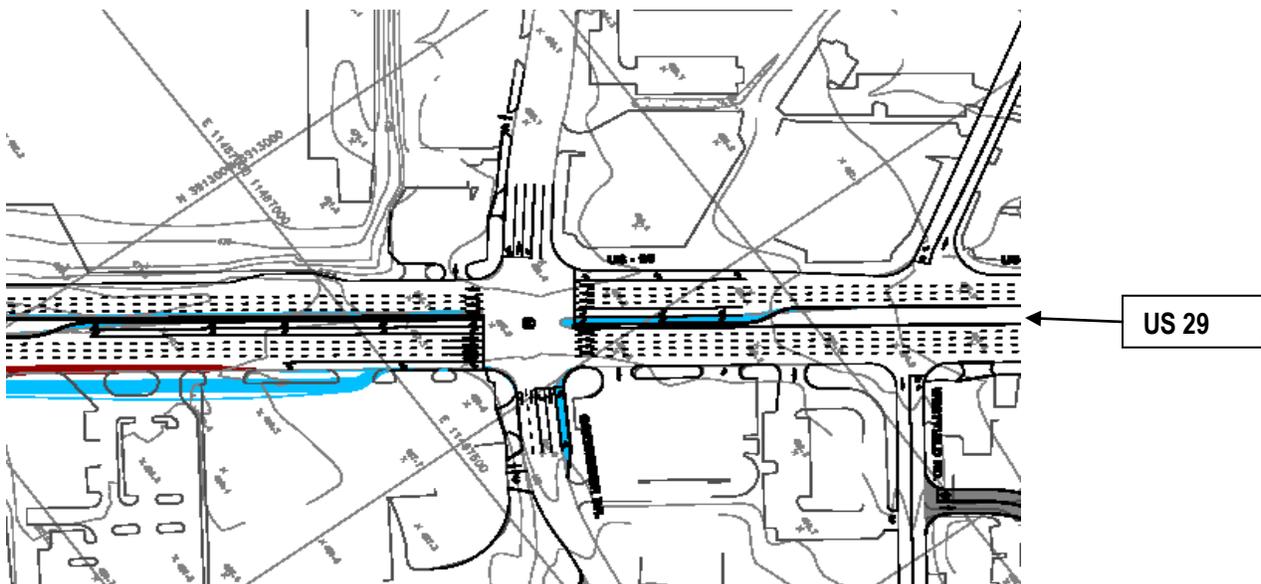
these businesses. It requires pedestrian and bicycle access improvements through the interchange with particularly improved access potential on the east side of US 29.

Included in Planning/Budget Document: Projects a and b are in the TIP



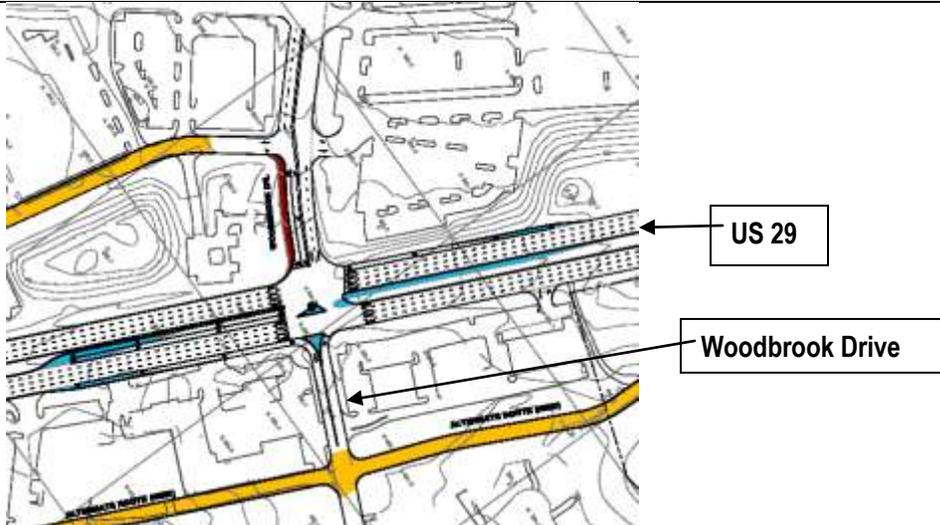
5. This schematic diagram from the US 29 North Corridor Transportation Study shows the various road improvements recommended by the 29H250 study and incorporated in the Places29 Master Plan. North is to the right, US 29 runs horizontally through the center of the diagram, and the 250 Bypass slants to the left. The intersection of Hydraulic Road and US 29 shows the Single Point Urban Interchange (SPUI) that is the recommended form of grade separation. The SPUI is shown in red crossing over US 29 that is shown in green to reflect that US 29 will probably be depressed slightly.

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| Project Reference No. 6 | Project Title: Intersection improvements at Greenbrier Drive and US 29 | |
| Project Description: Add southbound left turn lane and westbound right turn lane at Greenbrier Drive and US 29 | | |
| Timing: First ten years | Estimated Cost: \$313,000 | Responsible Parties: VDOT |
| Issues to Be Addressed: <ul style="list-style-type: none"> Improvements will address intersection LOS and traffic management. | | |
| Milestones: <ul style="list-style-type: none"> This project is the first major 4-way intersection north of the high priority project at Hydraulic Road and US 29. Once the Hydraulic Road/US 29 intersection functions more effectively, the next capacity issue will be at the intersection of Greenbrier and US 29. In order to address the capacity issue at Greenbrier and keep traffic moving on US 29, these intersection improvements will be necessary. So, this project is included among those to begin during the first ten years of plan implementation in order for plans and designs to be ready for construction to begin as soon as the Hydraulic/US 29 improvements are nearing completion. | | |
| Comments/Notes: Included in Planning/Budget Document: No. | | |



6. This schematic diagram from the US 29 North Corridor Transportation Study shows the intersection improvements at Greenbrier Drive and US 29, which include an additional southbound left turn lane and a westbound right turn lane. North is to the right and US 29 runs horizontally through the center, Greenbrier runs from bottom to top in the diagram.

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| Project Reference No. 7 | Project Title: Intersection improvements at Woodbrook Drive and US 29 | |
| Project Description: Several improvements are necessary at this intersection to address the Level of Service (LOS) and to manage traffic. The improvements will ultimately result in a partial access intersection configuration and will allow the intersection to remain open; the congestion that would result from a full access intersection would create a bottleneck. The improvements, which will be done at different times during the 20-year plan implementation timeframe, are: | | |
| <ul style="list-style-type: none"> a. Extend northbound left turn and right turn storage lanes (first ten years). b. Remove the southbound left turn lane (first ten years). c. Channelize the westbound approach to right-out only (second ten years). d. Channelize the eastbound approach to right-out/left-out only (second ten years). | | |
| Timing: First ten years | Estimated Cost: \$1,089,000 | Responsible Parties: VDOT |
| Issues to Be Addressed: <ul style="list-style-type: none"> ▪ Address intersection LOS and traffic management. | | |
| Milestones: <ul style="list-style-type: none"> ▪ At peak periods, such as Saturday morning, traffic now warrants these improvements. ▪ This project is included in the first ten years so that, as higher priority projects to the south are completed and the knot of congestion shifts north along the US 29 corridor, the County is ready for the improvements to be made at Woodbrook Drive and US 29. | | |
| Comments/Notes: | | |
| Included in Planning/Budget Document: No. | | |



7. This schematic diagram from the US 29 Transportation Study shows the intersection improvements at Woodbrook Drive and US 29. North is to the right and US 29 runs from left to right, with Woodbrook Drive going from top to bottom.

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| Project Reference No. 8 | Project Title: Widen US 29 to six lanes from Polo Grounds Road to Towncenter Drive A HIGH PRIORITY IMPLEMENTATION PROJECT |
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Project Description:

Widen US 29 from four lanes to six lanes between Polo Grounds Road and Towncenter Drive, resulting in a six-lane rural cross section with full shoulders and a center median. There will be a multi-purpose path on at least one side of the road. The County also plans landscaped/ forested buffers on both sides to preserve the wooded, rural character of this stretch of US 29, maintaining a visual break between the more urbanized areas north and south of this section of US 29. Future volumes projected for this stretch of US 29 require that the roadway be widened. The process to plan and design this improvement should begin as soon as the Master Plan is adopted in order to determine actual cost, permit right-of-way acquisition, begin utility relocation, and begin construction as soon as funding is available. Other improvements, such as the “jug handle” road at Ashwood Blvd., may be affected by the design of this widening.

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| Timing: Begin during the first ten years | Estimated Cost: \$18,528,000 ROW (est.): \$11,117,000 | Responsible Parties: VDOT |
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Issues to Be Addressed:

- Planning & preliminary design cost estimate: \$800,000
- Project is necessary to address existing deficiencies in the road network by providing a consistent number of lanes throughout the US 29 North Corridor. This project will also address vertical curvature deficiencies along this stretch of US 29.
- Design and ROW acquisition for jug handles at Ashwood to be considered as part of this project, if funding permits

Milestones:

- Provide funding for design and begin design in years 1 – 5
- Accrue construction funding
- Construction to begin as soon as design is complete and funding identified—anticipated by year 10.

Comments/Notes:

Included in Planning/Budget Document: UnJAM 2035 Constrained Long Range Plan, I-5.



8. This portion of the Future Land Use Map shows Polo Grounds Road on the left and the dashed lines along US 29 (through the center) show the area to be widened (north is to the right).

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| Project Reference No. 9 | Project Title: Construct an access lane on the east side of US 29 from the US Postal Service (USPS) to Greenbrier Drive | |
| Project Description: This lane will consolidate the number of access points from the USPS to Greenbrier Drive into a one-way access lane. The number of access points along this segment of US 29 is currently higher than appropriate for the traffic volumes on US 29. Consolidating driveways into an access lane would reduce the number of access points on US 29 to a number appropriate for the area. | | |
| Timing: Complete | Estimated Cost: \$811,000 | Responsible Parties: City of Charlottesville, VDOT, Property owners |
| Issues to Be Addressed: <ul style="list-style-type: none"> ▪ Intended to be an uninterrupted right turn lane for the length of this block. | | |
| Milestones: <ul style="list-style-type: none"> ▪ Now complete, except for one “bumpout” near the Post Office exit. Removal of the bumpout is desired. | | |
| Comments/Notes: This project is nearly complete, so no ROW or utility relocation costs have been included. | | |
| Included in Planning/Budget Document: No. | | |

9. Since this project is nearly complete, no illustration has been provided.

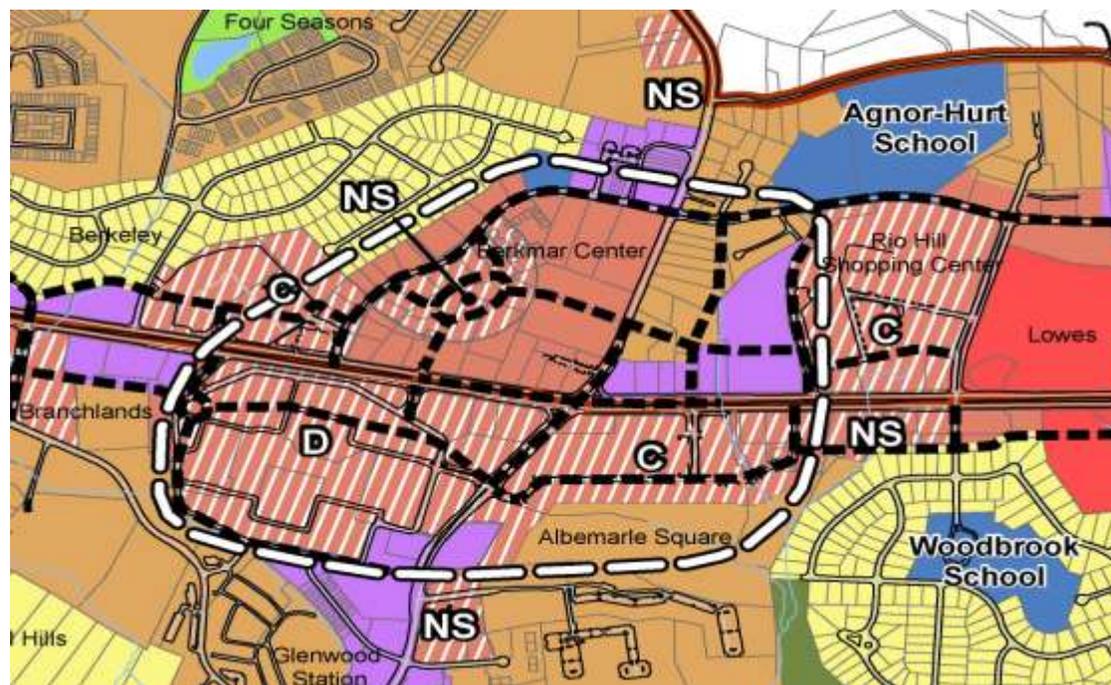
| | |
|--|---|
| Project Reference No. <p style="text-align: center; font-size: 1.5em;">10</p> | Project Title: <p style="text-align: center;">Grade-separated Intersection at Rio Rd. & US 29 A HIGH PRIORITY IMPLEMENTATION PROJECT</p> |
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Project Description:

This Master Plan recommends a grade separation at the intersection of Rio Road and US 29 in order to handle the volume of traffic expected to pass through the intersection. The grade separation would put Rio Road over US 29 and include direct ramps from eastbound to southbound US 29 and westbound to northbound US 29. Rio Road would cross over US 29 because the intersection is at the crest of a vertical curve on US 29. By depressing US 29, US 29 becomes a flatter roadway and there is less excavation. Putting Rio under US 29, since Rio is largely at a common elevation from Berkmar Drive to south/east of Mall Drive, would cause a longer run of excavation on Rio Road—potentially from west of Berkmar Drive to east of Mall Drive and might cause those intersections to be moved further away from US 29.

The project provides for future local street/bicycle facilities and connections throughout the project area.

The project also includes four Ring Roads to provide for connections to US 29. The Ring Roads will serve the local uses and redevelopment of the four quadrants better. The “Ring Road” configuration was also chosen over a single point urban interchange (SPUI, similar to the one recommended at Hydraulic Road and US 29) to allow the intersection of US 29 at Albemarle Square to remain a full access intersection. With a SPUI, there would be full access to Rio Road, but the intersection at Albemarle Square would be interrupted by the ramps and would become right-in/right-out only. The ring road will support redevelopment in the Rio Road/Midtown area better than a SPUI.



10. This portion of the Future Land Use Map shows the intersection of Rio Road and US 29. The area inside the white dashed line will be included in the Small Area Plan. US 29 runs from left to right in the center of the map (north is to the right).

The following projects will be part of the development of this grade separation project:

- a. Prepare a Small Area Plan for the area around Rio Road and US 29, coordinated with the preliminary design by VDOT. The Small Area Plan will help determine more specific land uses and local street network, including the location of the Ring Roads and the conceptual design of the grade separation.
- b. Construct northbound auxiliary lanes for Rio Road intersection to create a parallel roadway adjacent to the part of US 29 that will be most disrupted by construction of the grade separation at Rio Road. Must be completed prior to the grade separation at Rio Road.
- c. Construct southbound auxiliary lane at Berkmar Drive. Construct in conjunction with interchange redesign at US 29 and Rio Road.
- d. Construct Northwest Rio Ring Road—all four ring roads will serve as an at-grade connection between US 29 and the grade separation at Rio Road. The Ring Road concept will support redevelopment of the Midtown area and allow the intersection of US 29 at Albemarle Square to remain full access
- e. Construct Southeast Rio Ring Road
- f. US 29 at Rio Road: replace at-grade intersection with grade separation
- g. Construct southwest Rio Ring Road as a three-lane cross section from Berkmar Drive to Rio Road. Provides opportunities for redevelopment of adjacent parcels in Midtown area.
- h. Construct northeast Rio Ring Road; use existing Albemarle Square Drive and Garden Drive. Will need to address existing connections internal to the existing shopping center.

| Timing: | Estimated Cost: | | Responsible Parties: | |
|--------------------------------------|---|--|---|---|
| | Places29 Consultant | UnJAM Plan | Primary | Secondary |
| To begin during the first ten years. | <p>Plan (a): \$100,000</p> <p>Grade Separation (b, c, & f): \$40,520,000 (Does not include ROW as existing ROW may be sufficient)</p> <p>Ring Roads (d, e, g, & h): \$17,138,400 (\$10,711,500 Const + \$6,426,000 utilities & ROW:)</p> | <p>Plan (a): N/A—UnJAM does not include Small Area Plan</p> <p>Grade Separation (b, c, & f): \$50,620,000 (2025 \$s)</p> <p>Ring Roads (d, e, g, & h): N/A (UnJAM estimate is for a typical urban interchange without ring roads)</p> | <p>Plan (a): County; Preliminary Design- VDOT</p> <p>Grade Separation (b, c, & f): VDOT</p> <p>Ring Roads (d, e, g, & h): VDOT</p> | <p>Plan (a): None</p> <p>Grade Separation (b, c, & f): Local—private sources, including cash proffers, and/or County sources, including property taxes and other tax sources that may in the future be enabled (such as gas sales tax) or created (such as special tax districts)</p> <p>Ring Roads (d, e, g, & h): Local—private sources, including developer land donation, construction and cash proffers, and/or County sources, including property taxes and other tax sources that may in the future be enabled (such as gas sales tax) or created (such as special tax districts)</p> |

Issues to Be Addressed:

- Coordinate preparation of Small Area Plan with VDOT’s design & engineering study for grade-separation at Rio & US 29; develop Memorandum of Agreement between VDOT and County to conduct joint public planning process. Design of the grade separation and location of ring roads will be determined during Small Area Plan process. Identification of the ring road alignments should be completed as soon as possible to inform property owners.
- The potential impact of the construction of Meadow Creek Parkway and long-term implication of a potential Eastern Connector.
- Construction should be coordinated with construction of the SPUI at Hydraulic Road so that both grade separations are not under construction at the same time.
- The design/alignment of the NW and SE Ring Roads will be determined during preparation of the Small Area Plan and will have an impact on and provide access to adjacent property. These two Ring Roads should be complete prior to construction of the grade separation because they are needed to provide for construction of the grade separation.
- The County may have to construct all or some of the Ring Roads if property does not redevelop prior to construction of grade separation at Rio Road and US 29.
- The construction of the SW and NE Ring Roads is not essential prior to grade separation at Rio Road and US 29.

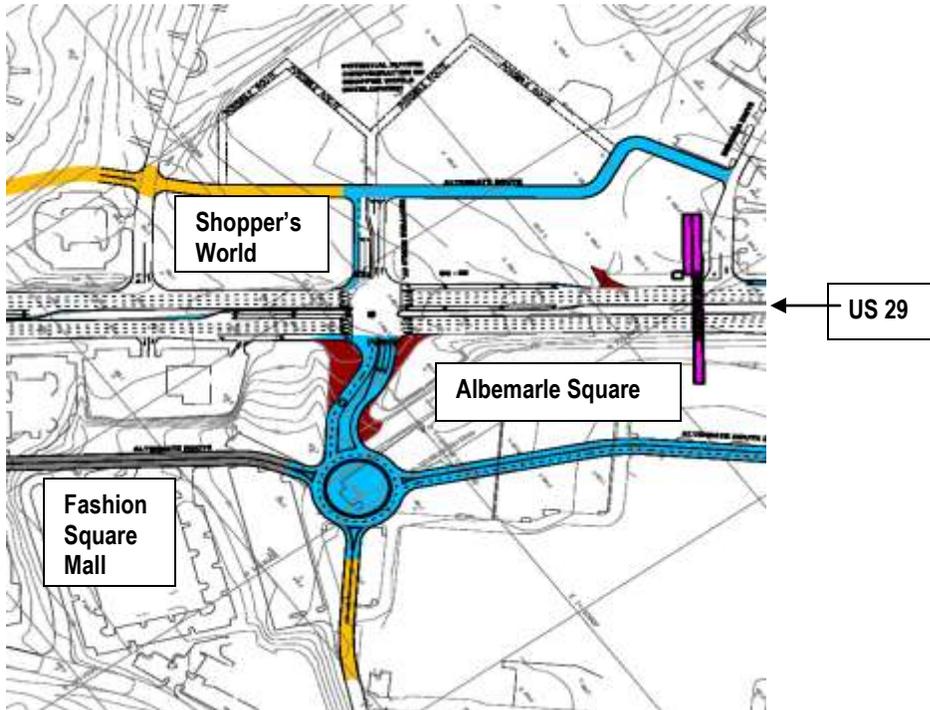
Milestones:

- Begin preparation of the Small Area Plan as soon as funding is identified.
- Auxiliary northbound lanes must be completed prior to construction of the grade separation.
- Construct southbound auxiliary lane in conjunction with interchange redesign.

Comments/Notes: ROW costs could be significantly less for two reasons: 1) the Rio/US 29 intersection is so wide that ROW needs may be less, and 2) property owners may donate ROW, especially for the Ring Roads.

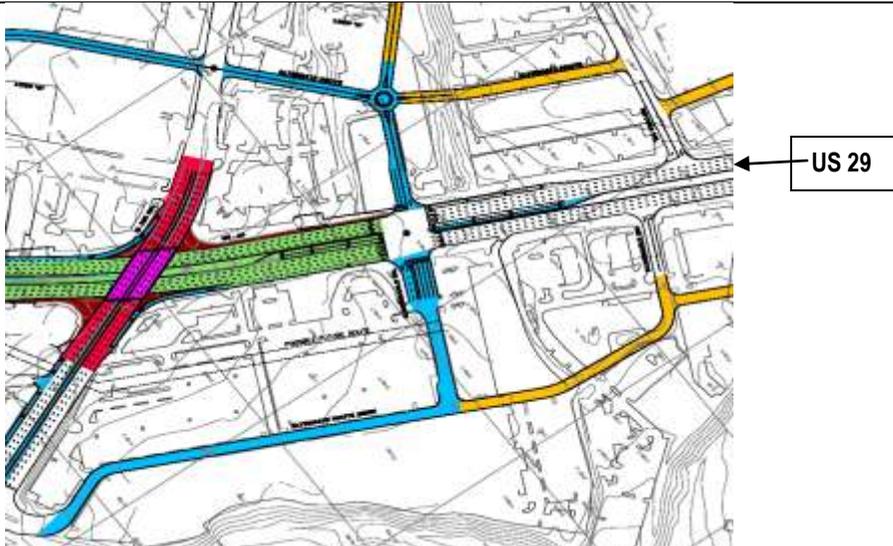
Included in Planning/Budget Document: UnJAM 2035 Constrained Long Range Plan, I-8.

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| Project Reference No. 11 | Project Title: US 29 at Shopper's World and Mall Drive | |
| Project Description: Add a third lane to the Shopper's World approach; reconfigure the Fashion Square Mall Drive approach, including the channelized right turn lane on Mall Drive. This recommended configuration retains direct access to existing retail areas on both sides of US 29. | | |
| Timing: First ten years | Estimated Cost: \$637,000 | Responsible Parties: VDOT, property owners |
| Issues to Be Addressed: | | |
| Milestones: <ul style="list-style-type: none"> ■ Complete as improvements become necessary to the functioning of US 29 or as property redevelops, whichever comes first. | | |
| Comments/Notes: | | |
| Included in Planning/Budget Document: No. | | |



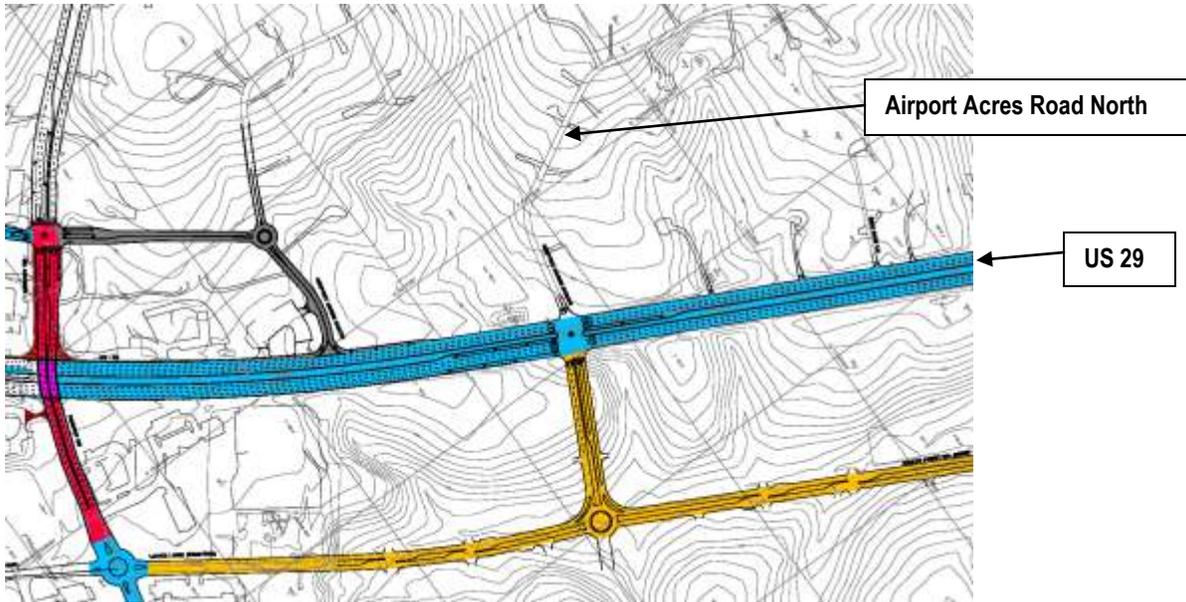
11. This schematic diagram from the US 29 North Transportation Study shows the road improvements at the entrances to Shopper's World and the Fashion Square Mall. These improvements will retain direct access to these existing retail areas. North is to the right and US 29 runs horizontally in the center of the diagram.

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| Project Reference No. 12 | Project Title: Albemarle Square Drive at US 29 | |
| Project Description: Widen the Albemarle Square Drive approach to US 29 to provide two inbound lanes and three outbound lanes. Add a second southbound left turn lane on US 29 and extend the southbound right turn storage. These improvements are needed to provide full access to support the Ring Road system and Rio Road grade separation, since Albemarle Square Drive is expected to be one of the four Ring Roads. Partial access to/from Albemarle Square would improve operations and reduce width requirements on Albemarle Square Drive, but would limit accessibility, and therefore is not recommended. | | |
| Timing: First ten years | Estimated Cost: \$3,127,000 ROW (est.): \$1,876,000 | Responsible Parties: VDOT, developer |
| Issues to Be Addressed: <ul style="list-style-type: none"> Improve traffic management/flow near congested intersection, future interchange | | |
| Milestones: <ul style="list-style-type: none"> Construct in conjunction with redevelopment of Albemarle Square or construction of the grade separation at US 29 and Rio Road, whichever comes first. | | |
| Comments/Notes: Included in Planning/Budget Document: Not included as a separate project; may be part of the Rio Road/US 29 grade separation. | | |



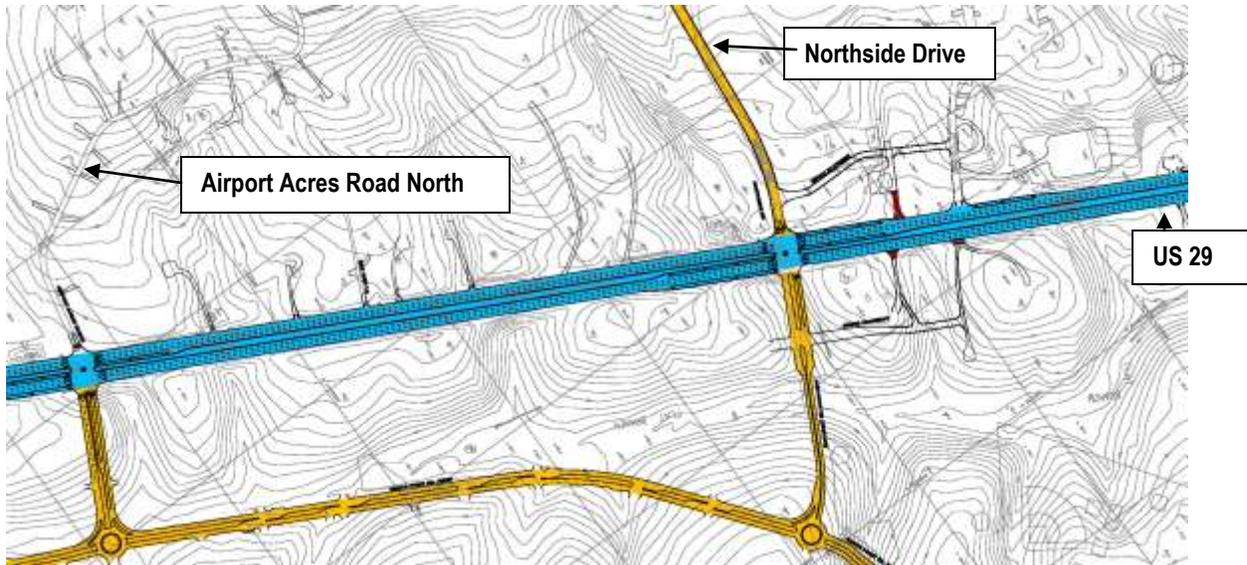
12. This schematic diagram from the US 29 North Transportation Study shows the approach on US 29 to Albemarle Square Drive with the necessary improvements. North is to the right, US 29 runs horizontally through the center of the diagram. The Rio Road grade separation is on the left.

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| Project Reference No. 13 | Project Title: Signalize US 29 at Airport Acres Road North | |
| Project Description: To be provided as part of the North Pointe proffered improvements. Necessary to accommodate projected development in the area. | | |
| Timing: First ten years | Estimated Cost: \$324,000 | Responsible Parties: Property owner/developer |
| Issues to Be Addressed: | | |
| Milestones: <ul style="list-style-type: none"> ■ To be installed with development of North Pointe. | | |
| Comments/Notes: No right-of-way (ROW) will be necessary for this improvement. | | |
| Included in Planning/Budget Document: No. | | |



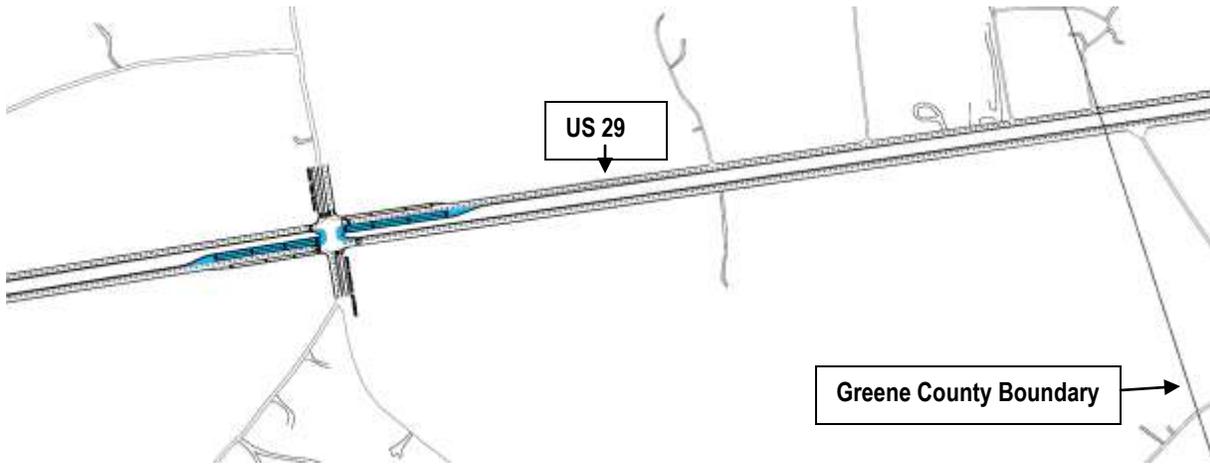
13. This schematic diagram from the US 29 North Transportation Study shows the intersection of US 29 and Airport Acres North in the center. The intersection will be signalized as part of the proffered improvements from the North Pointe rezoning. North is to the right.

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| Project Reference No. 14 | Project Title: Signalize US 29 at Northside Drive | |
| Project Description: To be provided as part of North Pointe proffered improvements. Necessary to accommodate projected development in the area. | | |
| Timing: First ten years | Estimated Cost: \$324,000 | Responsible Parties: Property owner/developer |
| Issues to Be Addressed: | | |
| Milestones: <ul style="list-style-type: none"> ■ To be installed with development of North Pointe. | | |
| Comments/Notes: No right-of-way (ROW) will be necessary for this improvement. | | |
| Included in Planning/Budget Document: No. | | |



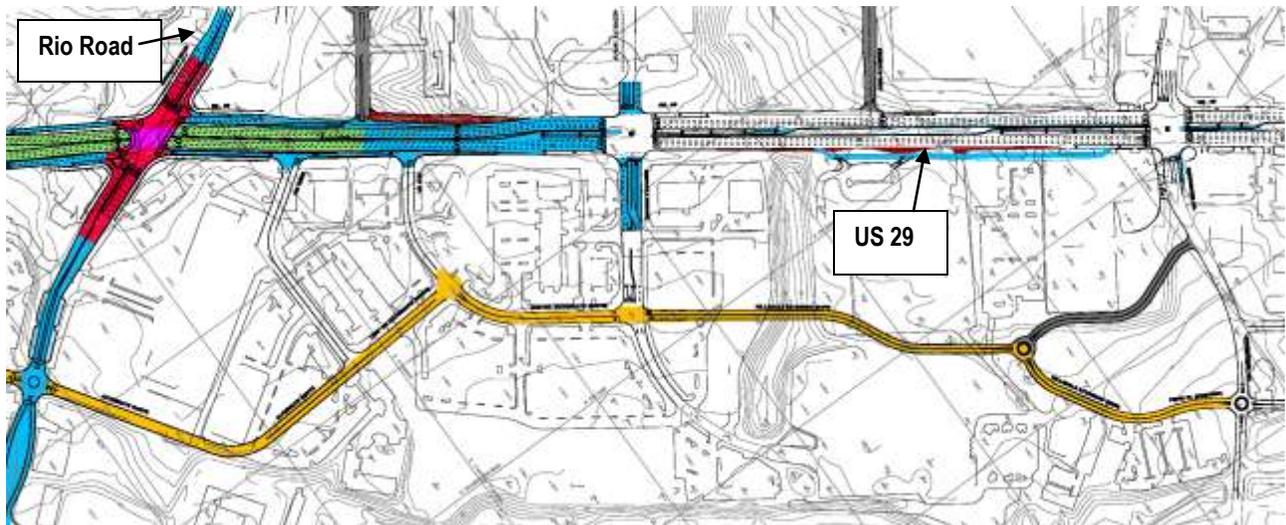
14. This schematic diagram from the US 29 North Transportation Study shows the intersections of Northside Drive to the right and Airport Acres Road North (#13) to the left.

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| Project Reference No. 15 | Project Title: US 29 at Burnley Station Road/Frays Mill Road | |
| Project Description: Add northbound and southbound second left turn lanes on US 29 and widen the eastbound and westbound approaches to US 29. | | |
| Timing: First ten years | Estimated Cost: Turn lanes: \$2,663,000 ROW (est.): \$666,000 | Responsible Parties: VDOT |
| Issues to Be Addressed: | | |
| Milestones: <ul style="list-style-type: none"> ■ Future volumes will require the additional turn lanes, which are to be installed when traffic warrants (expected within the first ten years) | | |
| Comments/Notes: | | |
| Included in Planning/Budget Document: No. | | |



15. This schematic diagram from the US 29 North Transportation Study shows the intersection of Burnley Station Road/Frays Mill Road and US 29. Additional lanes will be part of the improvements made at this intersection. North is to the right and the Greene County boundary is at the right side of the diagram.

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| Project Reference No. 16 | Project Title: Construct Hillsdale Drive Extended north of Hydraulic Road A HIGH PRIORITY IMPLEMENTATION PROJECT | |
| Project Description: Hillsdale Drive will be a three-lane cross section with parking. It will increase the parallel local roadway capacity from Hydraulic Road to Greenbrier Drive. This connection needs to be made before the US 29/Hydraulic Road intersection is constructed in order to provide for construction traffic diversion. The complete extension of Hillsdale will run from Holiday Drive in the City to Greenbrier Drive in the County. The segment north of Hydraulic Road is primarily in the City, with a short segment at the north end in the County. This parallel road system is consistent with the 29H250 Study recommendations. If all of the needed ROW is donated by property owners, the cost for this improvement could be as low as \$8,260,000. | | |
| Timing: First ten years | Estimated Cost: \$30,108,000 (Includes ROW est.) | Responsible Parties: VDOT, City, Property owners/ developers |
| Issues to Be Addressed: <ul style="list-style-type: none"> ▪ Constructing the Hillsdale portion of the recommended parallel road system is consistent with the 29H250 Study recommendations. ▪ Needed to address existing deficiencies. ▪ If all of the needed ROW is donated by property owners and developers, the cost for this improvement could be as low as \$8,260,000. ▪ Hillsdale Drive Extended south of Hydraulic will be constructed as each property redevelops. | | |
| Milestones: <ul style="list-style-type: none"> ▪ Design work underway now. ▪ Need to begin accruing funds for construction. ▪ Construction to begin as soon as funding is available. ▪ The southern portion of Hillsdale Drive Extended (south of Hydraulic Road) will be constructed as each property redevelops. ▪ Needs to be completed before the grade separation at Hydraulic and US 29 is constructed to provide alternate route during construction of grade separation ▪ Due to cost and impacts, completion is expected within 10 years, but is dependent on private development | | |
| Comments/Notes: Note in TIP indicates that the Developer is expected to donate ROW worth approximately \$12,000,000. | | |
| Included in Planning/Budget Document: Project N-2. Not funded at this time. | | |



16. North is to the right in this schematic diagram from the US 29 North Transportation Study. US 29 runs from left to right just above the center of the diagram, the 250 Bypass is on the left. Hillsdale Drive Extended north of Hydraulic Road is shown in yellow. The segment of Hillsdale Drive south of Hydraulic is shown in the illustration for Project 5.

| | | |
|---|--|---|
| Project Reference No. <p style="text-align: center;">17</p> | Project Title: <p style="text-align: center;">Berkmar Drive Extended A HIGH PRIORITY IMPLEMENTATION PROJECT</p> | |
| <p>Project Description:</p> <p>This road will be a four-lane divided cross section from a new bridge crossing of the South Fork of the Rivanna River to its connection to Hollymead Drive/Meeting Street. This road is intended to serve as a collector road with a top speed of 35 miles per hour. Berkmar Drive Extended will extend parallel connectivity on the west side of US 29, offering drivers an alternate route to US 29, especially for local trips. Berkmar Drive Extended, if constructed before US 29 is widened between Polo Grounds Road and Towncenter Drive, will provide an alternate route for traffic diversion during construction on US 29.</p> <ul style="list-style-type: none"> ▪ Initiate an alignment study for the Berkmar Drive Extended bridge over the South Fork of the Rivanna River to help determine the full cost of the bridge based on the chosen crossing location and profile. Study will include environmental reviews. ▪ Extend existing roadway from northern terminus of Hilton Heights Road to Rivanna North Fork including the bridge over the South Fork of the Rivanna River. ▪ Widen Berkmar Drive from Rio Road to Hilton Heights Road to a 4-lane, undivided section. | | |
| <p>Timing: First ten years</p> | <p>Estimated Cost:</p> <p>Bridge alignment study: \$155,000 Bridge & Road: \$25,273,000 ROW (est.): 12,637,000 (MPO-TIP: see Budget section below) Widen Berkmar Drive: \$15,054,000 ROW (est.): 7,527,000</p> | <p>Responsible Parties: VDOT, TJPDC, County, Property Owners / Developers</p> |
| <p>Issues to Be Addressed:</p> <ul style="list-style-type: none"> ▪ Funding for the alignment study needs to be identified. ▪ The study should begin as soon as the Master Plan is adopted in order to determine what the best bridge profile is and the resulting cost (expected in the first three years). The full cost of the bridge will be known once design is complete. ▪ The alignment of Berkmar Drive Extended north of the bridge should also be determined at this time, with the right-of-way (ROW) platted to project the alignment. ▪ Property Owners/ Developers may be asked to dedicate ROW and/or construct a portion of Berkmar Drive Extended as part of development of parcels the road crosses. If the parcels do not develop in time, other funding sources for all/part of the costs will be necessary. ▪ Widening the section of Berkmar Drive between US 29 and Rio Road may be shifted to the second ten year timeframe, after Berkmar Drive Extended is completed. The widening will be needed after the bridge over the South Fork of the Rivanna is constructed and Berkmar Drive is extended to Hollymead Town Center. | | |
| <p>Milestones:</p> <ul style="list-style-type: none"> ▪ If Berkmar Drive Extended, including the bridge, is in place before US 29 is widened to six lanes between Polo Grounds Road and Towncenter Drive, Berkmar Drive Extended could serve as an alternate route, especially for local traffic. ▪ Bridge design should begin as soon as the Master Plan is adopted so alignment and cost of both the extension and the bridge can be determined. | | |

Comments/Notes:

Included in Planning/Budget Document: Project N-1 in TIP. Remarks/Comments reads: “Assume Developers to build, donate ROW, and/or donate cash for approximately half of the project (2018 estimate \$44,100,000 use \$21,835,000 for plan.”



17. This portion of the Future Land Use Map shows the recommended extension of Berkmar Drive over the South Fork of the Rivanna River and north to Hollymead. The extension would run from the current southern end of Berkmar Drive at Hilton Heights Road (visible at the left edge of the diagram) to a planned connection with Meeting Street in the Hollymead Town Center, shown on the right side of the map. North is to the right.

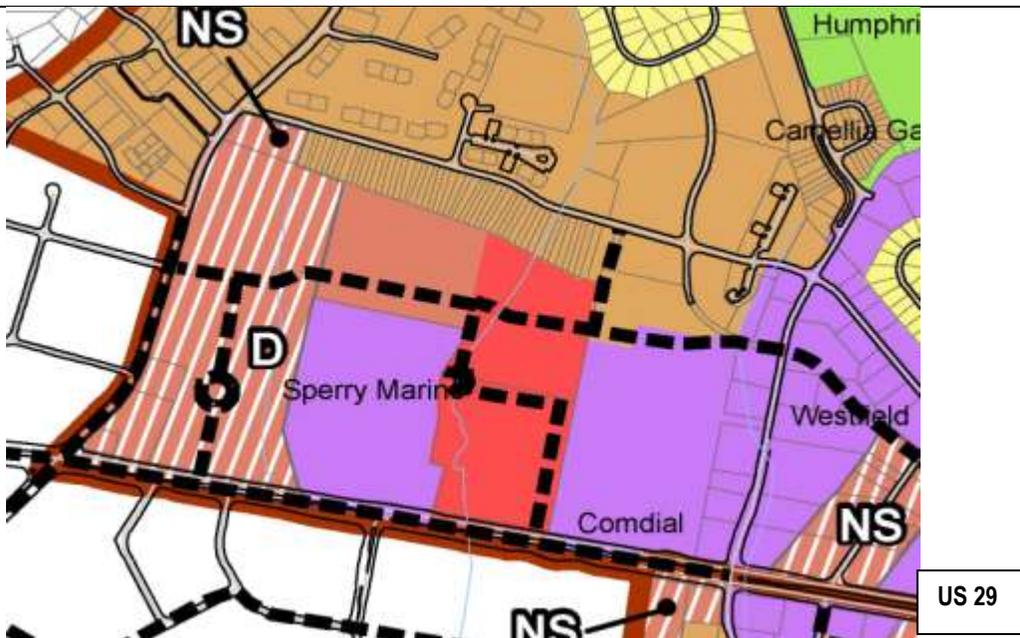
| | | |
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| Project Reference No. 18 | Project Title: Proffit Road Improvements | |
| Project Description: From US 29 east 1.6 miles, address capacity and safety issues by improving the road alignment and constructing an urban section road with sidewalks and bicycle lanes. | | |
| Timing: First ten years | Estimated Cost: NA | Responsible Parties: VDOT |
| Issues to Be Addressed: ■ | | |
| Milestones: ■ Funding is available only for preliminary engineering of these improvements. | | |
| Comments/Notes: | | |
| Included in Planning/Budget Document: Yes, County's Priority List of Secondary Road Improvements | | |

18. No illustration of these improvements is available at this time.

| | | |
|---|--|----------------------------------|
| Project Reference No. 19 | Project Title: Dickerson Road Improvements | |
| Project Description: To improve safety and address public requests, repave the gravel portions of Dickerson Road and replace two bridges. | | |
| Timing: First ten years | Estimated Cost: \$11,608,000 | Responsible Parties: VDOT |
| Issues to Be Addressed: ■ | | |
| Milestones: ■ | | |
| Comments/Notes: | | |
| Included in Planning/Budget Document: Yes, County's Priority List of Secondary Road Improvements | | |

19. No illustration of these improvements is available at this time.

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| Project Reference No. 20 | Project Title: Albemarle Place: Construct Street System | |
| Project Description: The developer of Albemarle Place has proffered a network of internal streets connected to Hydraulic Road, US 29, and the Comdial property. The major north-south street, Cedar Hill Drive Extended, will run from Hydraulic Road north to Fourth Street. Cedar Hill Drive will be a three-lane cross section with parking. These internal streets will provide an essential part of the local street network, including the southernmost segment of Cedar Hill Drive Extended in the County (from Hydraulic Road to 4 th Street). The timing of construction is dependent on development of the property. | | |
| Timing: First ten years | Estimated Cost: Costs expected to be paid for by property owner, developer. | Responsible Parties: Property owner/developer |
| Issues to Be Addressed: | | |
| Milestones: <ul style="list-style-type: none"> ▪ The timing is set by the Albemarle Place proffers; construction is dependent on private development decisions. | | |
| Comments/Notes: The connection from Albemarle Place northward to Greenbrier Drive will be dependent on redevelopment in the area near the “Comdial” site. | | |
| Included in Planning/Budget Document: No. | | |



20. This portion of the Future Land Use Map shows the network of streets that are part of the approved Albemarle Place development. These streets will be constructed as part of the development and include one segment of Cedar Hill Drive. US 29 is toward the bottom of the map and north is to the right.