



US 29 - Fairland Road to Musgrove Road, Interchange Improvements, Mandatory Referral No. 2016002

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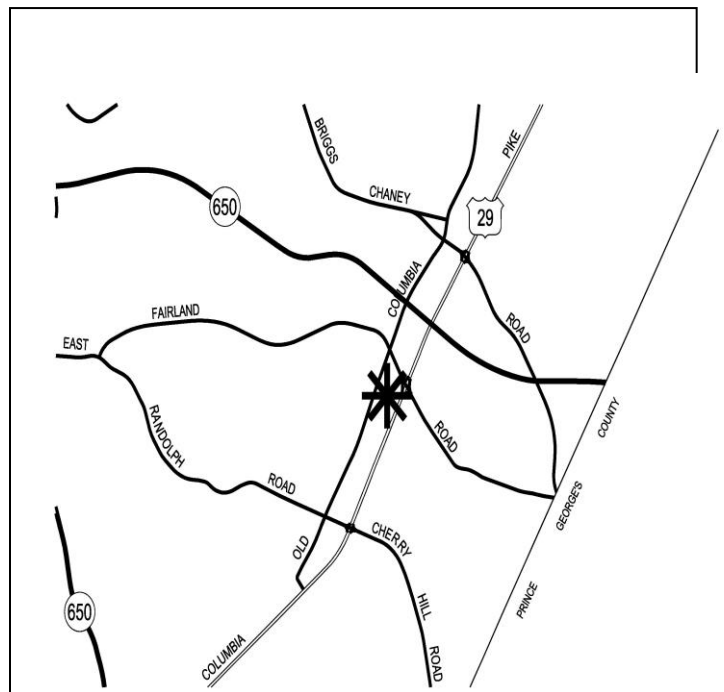
Completed: 09/23/15

Description

The Maryland State Highway Administration proposes to construct a grade-separated interchange on Columbia Pike (US29) at Fairland Road.

Fairland Road would be carried over US29 and ramps would be constructed to access northbound and southbound US29.

Access to and from US29 at Musgrove Road would be eliminated.



Summary

We recommend that the Board DISAPPROVE this project with the following comments to the Maryland Department of Transportation:

1. This project's proposed closure of Musgrove Road at US29 is inconsistent with the Fairland Master Plan, which recommends that access continue to be provided via an interchange at this location.
2. This project is inconsistent with the Countywide Transit Corridors Functional Master Plan since no provision has been made in the design for the planned Bus Rapid Transit station and future station access could likely be made more difficult by the proposed ramps on the east side of US29.

3. The proposed ramp configuration would make travel in the project area more circuitous and difficult for the public to understand. This problem would exacerbate the lack of legibility for the roadway network in this area created by the unusual location of the ramp from northbound US29 to Briggs Chaney Road, which begins in the middle of the ICC interchange immediately north of this project.
4. The funds dedicated to the design of this project should be reallocated to updating the planning and conceptual designs of the unbuilt interchanges along US29 in Montgomery County. The current conceptual designs are two decades old and do not reflect the changes that have occurred in this corridor including the Federal Drug Administration's move to White Oak, the end of a building moratorium in the US29 corridor, and the approval and adoption of both the White Oak Science Gateway and Countywide Transit Corridors Functional Master Plans in 2013. The updated conceptual designs should facilitate transit-oriented development and redevelopment in the US29 corridor.
5. In the update of the planning for this project, the proposed shared use path on US29 should include a signalized crossing at Musgrove Road. A grade-separated tunnel for the shared use path at Fairland Road should be considered to provide better accommodation for through travel on the path rather than require users to make an almost one-quarter-mile diversion with an unsignalized crossing of Fairland Road.

Previous Board action

The Planning Board reviewed the 15% design of this project on May 7, 2015 and sent comments to SHA (see Attachment 1). As of this date, they have not replied nor did they hold the additional public meeting that the Board recommended.

Site Context

In general, the US29 corridor is characterized by predominantly detached single-family homes on the west side and multi-family housing on the east side. In the immediate project limits of the proposed interchange, there are two Verizon buildings that take up the frontage of US29 between Musgrove Road and Fairland Road, with the one on the west side housing all or most of the employees. The south side of Musgrove Road is fronted by single-family residential. Immediately north of Fairland Road on US29 is the Intercountry Connector interchange.

Background

The County's master plans recommend grade-separated interchanges along US29 from New Hampshire Avenue north to the Howard County line. The Final Environmental Impact Statement for the corridor was published in 1995. The design of this interchange was put on hold after a public hearing in 2000, but the adjacent US29/ICC interchange was subsequently constructed along with the rest of the ICC. The design of this project was restarted in 2013 following a gas tax revenue increase.

This project is currently funded for Preliminary Engineering (PE) only.

Project Description

This heavily traveled roadway segment experiences accident rates higher than the statewide average for similar types of roadways and is projected to carry more than 69,000 vehicles per day by 2040. The proposed improvements include:

US29 from approximately 1,400 feet south of Musgrove Road to approximately 200 feet north of Fairland Road. The existing traffic signals at Fairland Road and Musgrove Road would be removed. A new interchange would be constructed at Fairland Road to provide full access to and from US29.

Fairland Road from approximately 1200 feet west of Old Columbia Pike to approximately 700 feet east of US29 (Fairland Road/Brahms Avenue roundabout). Improvements include two through lanes in each direction and turn lanes at the intersections.

Old Columbia Pike from approximately 1000 feet south of Fairland Road to approximately 1,500 feet north of Fairland Road and the Fairland Road/Old Columbia Pike intersection would be reconstructed to add capacity.

Musgrove Road from Old Columbia Pike to the Fairland Road/Musgrove Road/Marlow Farm Terrace roundabout east of US 29. Musgrove Road would be truncated with a cul-de-sac on the west side of US29 and a new roundabout would be constructed on the east side of Columbia Pike to provide access to and from northbound US 29.

A new US29 frontage road with bike lanes and shared use path lane would be constructed on the east side of US29 from Musgrove Road to Fairland Road. Two new traffic signals would be installed on Fairland Road at the frontage road and at Ramp B and would be interconnected with two existing traffic signals to improve operational efficiency.

Other improvements include landscaping, aesthetic treatments on the bridge and retaining walls, drainage systems, and storm water management improvements. All new sidewalks, shared use paths, pedestrian ramps, and driveway openings would be ADA-compliant.

Figure 1: Planned Interchanges along US29 in the Fairland Master Plan

STREET & HIGHWAY PLAN

FIGURE 38

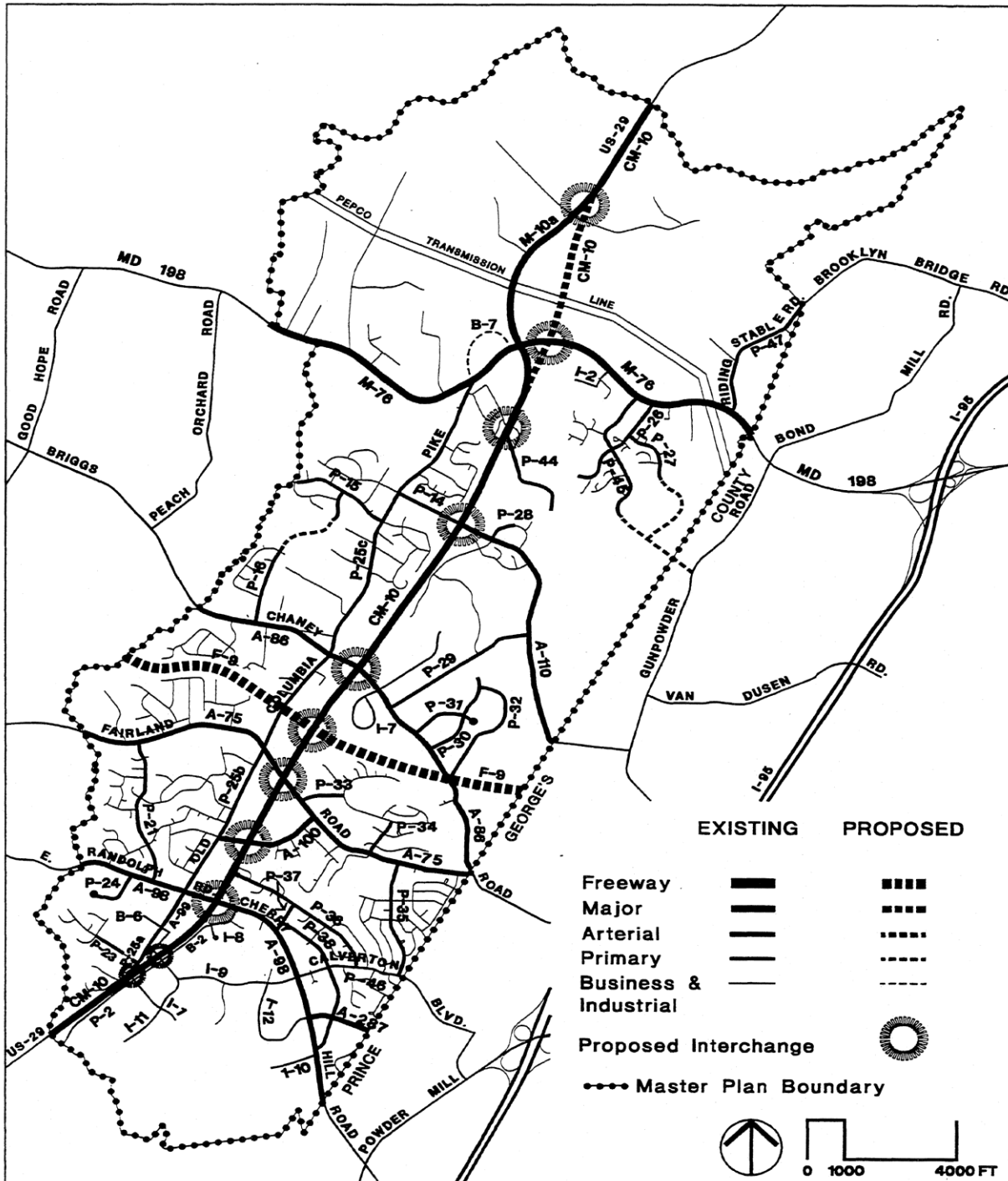
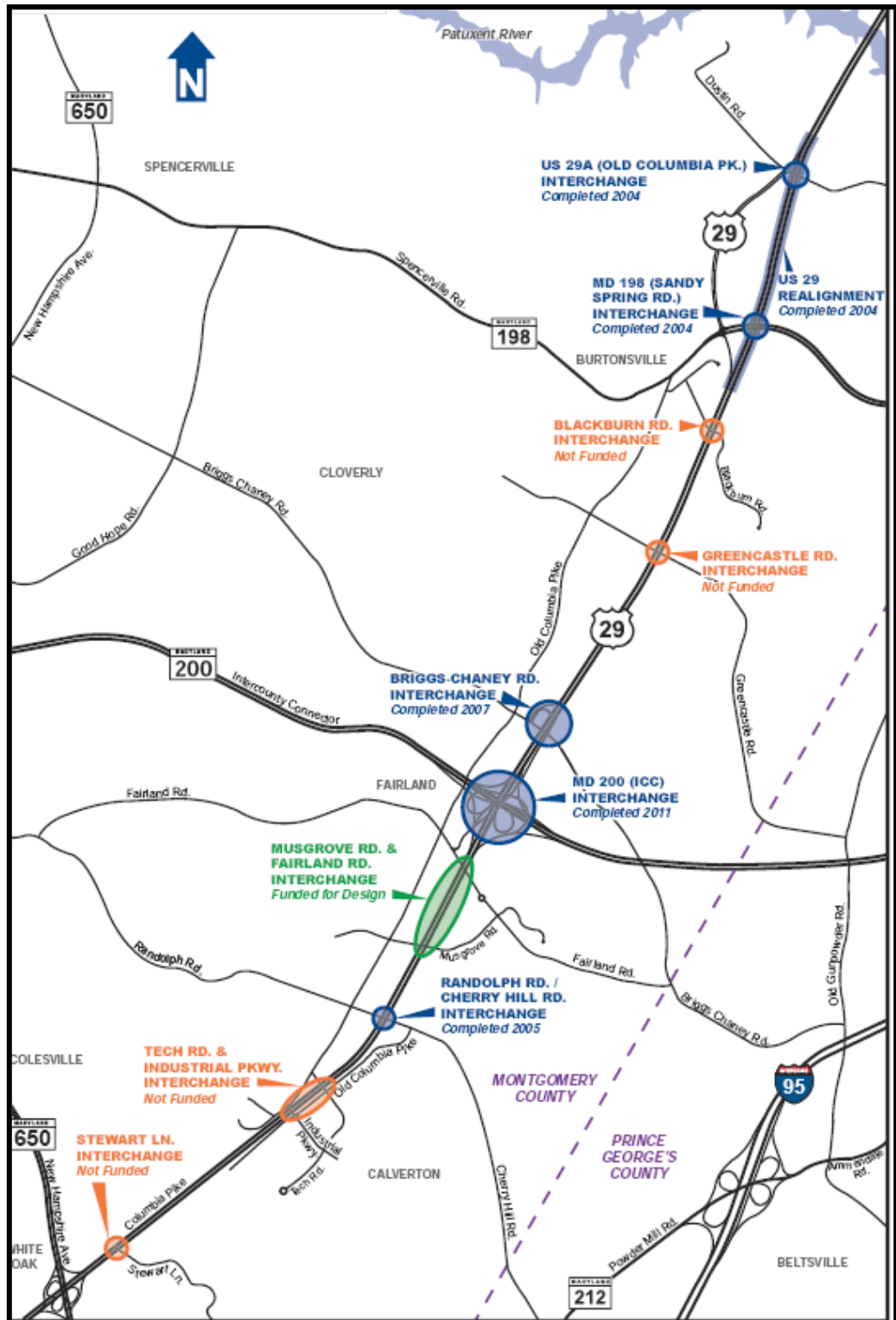


Figure 2: Current Status of Planned Interchanges along US29



Nearby Related Transportation Projects

Ultimately, a completely grade-separated facility is planned along US29 between the New Hampshire Avenue (MD650) interchange and the Howard County line (see Figure 38 above). Five interchanges have been built: Randolph Road/Cherry Hill Road, ICC, Briggs Chaney Road, Spencerville Road (MD198), and Dustin Road; and four others are yet to be funded for design (Stewart Lane, Tech Road/Industrial Boulevard, Greencastle Road, and Blackburn Road).

Although the north-south peak-directional traffic still impacts the at-grade intersections south of New Hampshire Avenue, the interchanges along US29 improve east-west travel by reducing delays encountered in crossing the congested at-grade intersections with US29.

Master Plan Consistency

In accordance with the *Fairland Master Plan* (1997), *Countywide Bikeways Functional Master Plan* (2005), and *Countywide Transit Corridors Functional Master Plan* (2013), the provision of recommended transportation facilities is as follows:

Columbia Pike

Columbia Pike is recommended as a 6-lane divided controlled major highway (CM-10) in a 200-foot-wide right-of-way, with a dual bikeway (DB-9) with bike lanes and a shared-use path. Columbia Pike is recommended as a transit corridor with two additional transit lanes and a BRT station at the intersection of Fairland Road.

Analysis: A six-lane roadway already exists and the roadway shoulders may be used by bicyclists but are not marked as bike lanes. A shared use path would be provided on the east side of the road, adjacent to the proposed ramp between Musgrove Road and Fairland Road. Sufficient space exists in the median to accommodate the planned transit lanes, however the current planning study has not made a recommendation as to whether the transit lanes will be in the median or the outside lanes. No provision has been made for the planned BRT station.

Fairland Road

Fairland Road is recommended as a two- to four-lane arterial (A-75) with an 80-foot wide right-of-way and a shared use path (PB-50). Along Fairland Road, the 2005 *Countywide Bikeways Functional Master Plan* recommends a shared-use path (SP-18) east of US29 and bike lanes (BL-13) west of US29.

Analysis: Four through lanes plus turn lanes would be provided. A shared use path would be provided on the south side of the road east of US29. West of US29, a shared use path would be provided on the south side of the road to a point 800 feet west of Old Columbia Pike; bike lanes would be provided east of Old Columbia Pike to the eastern project limit.

Musgrove Road

Musgrove Road is recommended as a two-lane arterial (A-100) with an 80-foot wide right-of-way, sidewalks, and no bikeway. A bikeway is not recommended in the 2005 *Countywide Bikeways Functional Master Plan*. The 1997 *Fairland Master Plan* has no

specific recommendation on Musgrove Road other than the interchange shown on Figure 38 on page 89 (see Figure 1).

Analysis: The existing two-lane roadway would be retained.

Old Columbia Pike

Old Columbia Pike on the west side of US29 is recommended as an arterial (A-99) with an 80-foot wide right-of-way and bike lanes (BL-12) along Old Columbia Pike. The roadway is recommended to remain two lanes, however the *Fairland Master Plan* also states that “*widening will depend on occurrence and scale of development.*”

Analysis: The two-lane roadway would be widened to four through lanes for a distance of four hundred feet north and south of Fairland Road.

Master Plan Vision

The Fairland Master Plan envisions “*physical alterations to US29 that will alleviate congestion, improve east-west travel, and most importantly, allow bikes and pedestrians to cross US29 safely to reach facilities and services on either side of the highway.*” (p. 15) The Plan also recommends that we “*enhance mobility by providing a safe and efficient transportation system, offering a wide range of alternatives that serve the environmental, economic, social, and land use needs of the County and provides a framework for development.*” (p. 18, emphasis added)

The Fairland Master Plan has not been updated since 1997, but the White Oak Science Gateway (WOSG) Master Plan, which covers the other half of the grade-separated portion of US29 in Montgomery County, was approved and adopted in 2013. The WOSG plan confirms the earlier guidance in the Fairland plan:

“Reimagining existing centers – and providing a framework for reinvestment - is vital to this community’s longevity. This Plan seeks to leverage White Oak’s assets and establish the foundation upon which the area can evolve into a community that offers more opportunities to live-work-play locally.”

The WOSG plan also responds to the biggest change in the US29 corridor since the Fairland plan was adopted:

“One of this area’s greatest strengths is the consolidated headquarters of the Food and Drug Administration (FDA) at the White Oak Federal Research Center (FRC). FDA brings thousands of employees and visitors to its state-of-the art campus, presenting synergistic opportunities to reimagine and rethink the possibilities for surrounding communities. FDA could serve as a gateway to attract companies that offer high quality employment in fields such as health care, pharmaceuticals, life sciences, and advanced technology.

“The Plan envisions White Oak’s major centers – Hillandale, White Oak, and Life Sciences/FDA Village evolving from conventional, auto-dependent suburban shopping centers, business parks, and light industrial areas into vibrant, mixed-use, transit-served

nodes. Redevelopment of the centers must be carefully integrated with existing residential neighborhoods and designed to enhance the entire area's quality of life, appearance, walkability, and sense of place. Existing residential neighborhoods will be maintained and enhanced within a physical environment that meets the community's needs and aspirations.” (p. 11)

The WOSG plan also responds to the recommendations of the Countywide Transit Corridors Functional Master Plan, which was being completed at the same time:

“This Plan provides a blueprint to connect White Oak's centers to each other and the broader region through a transit system that includes Bus Rapid Transit as an integral component. An enhanced open space, trail, and bikeway network that incorporates the area's natural environmental features will provide opportunities for a range of outdoor experiences.” (p. 11)

*“It is recognized that future social and technological changes may allow for equivalent mobility and capacity to be achieved without building additional grade-separated interchanges. Such mobility and capacity enhancements would need to be considered as alternative solutions to a grade-separated interchange during a transportation project planning study, or the review of a land development project. These enhancements include, without being limited to, increased transit services, implementation of a robust street system that promotes walking and bicycling, managed parking supply, provision of proactive travel demand management services, and operational improvements to at-grade intersections, streets, arterials and highways. Emerging state and federal sustainable community initiatives incorporating climate change and energy concerns may significantly reduce future demand for single occupancy vehicle travel, **potentially reducing the need for interchanges.**” (p. 57, emphasis added)*

Analysis

The 1997 *Fairland Master Plan* recommends interchanges at both Fairland Road and Musgrove Road. However, this project would close the current at-grade intersection with Musgrove Road with no provision for a future interchange. Since the overall rationale for the larger objective of converting US29 into a grade-separated facility is to improve east-west travel and connectivity, the proposed project's elimination of the Musgrove Road bridge over US29 is counterintuitive since it reduces connectivity and would create a more circuitous travel pattern. The current design of the US29 on and off ramps was developed to provide safe weaving distances between the subject project's ramps and those of the existing US29/Intercounty Connector interchange immediately north. SHA believes the proposed configuration is optimal among the alternatives studied, however the proposed ramps on the east side of US29 would prove to be confusing to users traveling from Fairland Road bound for US29 north as they would have to travel a considerable distance south before heading in their intended direction. In addition, this ramp arrangement would require a large amount of new pavement compared to the alternative that included a Musgrove Road bridge over US29 and ramps between Musgrove Road and northbound US29.

Staff believes that the project should include a Musgrove Road bridge over US29 and a more straightforward travel pattern that maintains the existing roadway pattern. We find therefore that

the project is not consistent with the *Fairland Master Plan*. There are two additional considerations that weigh against approving this project as currently designed.

As noted above, both the Fairland and WOSG plans state that US29 needs to be designed to provide a framework for development. The reduced connectivity across US29 that would result by closing Musgrove Road and the convoluted traffic pattern that would result from drivers having to go south on the proposed frontage road to go north on US29 would create a traffic pattern that would be difficult for visitors to understand.

Along US29, transit lanes for BRT must be accommodated in the median or in the outside lanes and there is a planned station at Fairland Road. While there is space available for the transit lanes in the existing right-of-way, no accommodation for a station under either scenario is proposed:

Median BRT: The station could be on the proposed Fairland Road bridge but elevators would be needed to access the platform on US29 and additional lanes may be needed for buses and possibly other vehicles to drop off and pick up passengers on the bridge. An alternative might be for the station to be located between Fairland and Musgrove Roads with a bridge over US29 to provide access to the station for patrons, similar to Metro station access on I-66. Elevators would be needed both in the median and on the sides of US29, but locations for the latter, as well as safe patron access to those elevators, would likely be complicated by the proposed project.

BRT in Outside Lanes: Efficient bus circulation would be needed to achieve optimal BRT operations but the elimination of US29 access to and from Musgrove Road would likely increase travel times. The station would have to be located off US29, whereas a station on each side of US29 could be located on frontage roads running between Musgrove Road and Fairland Road.

We believe that the design work on this project should not proceed until a decision has been made as to the location of the US29 transit lanes and station as part of SHA's current planning effort. According to the current schedule, the study will not be completed until next year.

Traffic

SHA did not provide sufficient detailed traffic data for review prior to the completion of this memorandum. The following are SHA's general expectations that were presented to staff at SHA prior partnering meeting concerning the proposed closure of Musgrove Road:

- The 2040 levels of service would operate acceptably well.
- Closing the Musgrove Road crossing of US 29 would not result in any significant increase in 2040 travel times.
- Crash data do not indicate any higher than expected number of crashes.
- No public transit (Metrobus or Ride On) routes would be affected and only minimal impacts on MCPS bus routes would be expected to occur.

Pedestrian and Bicyclist Accommodation

Bicyclists would be accommodated as discussed in Master Plan Consistency above. Pedestrians would have sidewalks on all roads except for US29, on which they would use the proposed shared use path on the east side.

- At Musgrove Road, users of the path would have to cross two legs of the proposed roundabout where drivers going to and from the higher speed US29 may be less likely to yield the right-of-way. We recommend that a signalized crossing be provided.
- At Fairland Road, users of the path would not have direct access to the existing path to the north because of a grade difference, but would have to divert 500 feet to the east to the existing Fairland Road/Brahms Avenue roundabout and backtrack another 500 feet. We recommend that construction of a grade-separated tunnel for the shared use path be considered to provide better accommodation for through travel on the path.

Park Impacts

There are no impacts to public parkland or property owned by MNCPPC.

Historic Preservation

Only one historic property is near the project: the Julius Marlow House is located at 2525 Musgrove Road, about 650 feet east of US29, but it would not be directly affected by the proposed construction. SHA has determined that the project will have no adverse effect on any historic properties, and is awaiting comment/concurrence from the Maryland Historic Trust (MHT).

Public Outreach

After the public hearing in 2000, a public hearing was held on March 24, 2015, at the Paint Branch High School located near the proposed interchange. Citizens at the hearing expressed concern that the proposed Musgrove Road closure at US29 would exacerbate already confusing traffic circulation patterns associated with the completed US29 interchanges at the Intercounty Connector and Briggs Chaney Road. As noted above, SHA has not held an additional subsequent public meeting, as the Board recommended this past May.

A project web page has been created on SHA's website and can be found here:

<http://apps.roads.maryland.gov/WebProjectLifeCycle/ProjectInformation.aspx?projectno=MO8912115>

Conclusion

The project is inconsistent with the County's master plans in some important respects and should not be built as designed. Given that the conceptual designs of the other unbuilt interchanges are twenty years old and do not reflect the planned and actual changes that have occurred in that time, a better use of the design funds available for this interchange project would be to update the planning for all the unbuilt interchanges so that Bus Rapid Transit can be accommodated – after the completion of the current SHA planning effort in this corridor – and so that prospective developers can avoid the inefficiencies associated with setting aside rights-of-way either for old concepts that may have to be reworked or for multiple design possibilities.



MONTGOMERY COUNTY PLANNING BOARD
THE MARYLAND-NATIONAL CAPITAL PARK AND PLANNING COMMISSION

Attachment 1

May 8, 2015

Mr. Douglas Simmons
Deputy Administrator
State Highway Administration
707 N Calvert Street, MS C-411
Baltimore, Maryland 21202

RE: US29, Fairland Road to Musgrove Road
Interchange Improvements
SHA FMIS No. MO891A21

Dear Mr. Simmons:

At our regularly scheduled meeting on May 7, 2015, the Planning Board reviewed the 15% design for the above project and made the following comments:

1. We believe that SHA should hold another public meeting in advance of your anticipated Mandatory Referral submission in July and that all the alternatives developed during the Value Engineering process, including the current and forecast traffic data for those alternatives, should be presented. At the previous public meeting that was held on March 24, 2015, there was a lot of public concern expressed about the proposed closure of Musgrove Road at US29 and the circuitous traffic pattern that would result from the current design. We believe that the public should have a greater opportunity to understand how SHA made the decision to support the current design so that they can make informed comments both to SHA and to the Planning Board.
2. With your Mandatory Referral submission, please provide:
 - a. A narrative that explains how the current design would meet the master plan goals for improving east-west crossings for vehicles and provide residents of the nearby communities, including pedestrians and bicyclists, better access to public facilities and other destinations while closing Musgrove Road.
 - b. A summary of anticipated benefits that explains why this project is being pursued at this time, including a traffic and safety evaluation of the existing traffic signals at Fairland Road and Musgrove Road.
 - c. An analysis of how the proposed improvements would affect other intersections and existing and planned interchanges along US29.

- d. An explanation of why the design effort for this project is a better use of resources than the planned US29/Tech Road/Industrial Boulevard interchange, which is a higher priority on the County's priority list for State transportation projects that was transmitted to MDOT Secretary Pete Rahn on February 11, 2015. The County's prioritization is consistent with the ranking of interchange projects shown on page 90 of the Fairland Master Plan.
3. In regard to the design, we believe that it should:
- a. Look more like a diamond interchange to provide a more understandable traffic pattern and a smaller construction footprint. The design of the I-270 interchanges at Old Georgetown Road and Rockledge Boulevard is a good example.
 - b. Include a traffic signal rather than the proposed roundabout at Musgrove Road and the US29 ramps to improve safety for pedestrians and bicyclists.
 - c. Facilitate potential future development along US29 between Fairland Road and Musgrove Road.
 - d. Include carrying the shared use path on the east side of US29 under the bridge for Fairland Road.

Thank you for the opportunity to review this project and for your attention to this matter. If you have any questions or comments concerning our review, please call Larry Cole at 301-495-4528.

Sincerely,



Casey Anderson
Chair

cc: Marcus Tadros