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

MCPB
Item #8
July 7, 2011

MEMORANDUM

DATE: June 30, 2011

TO: Montgomery County Planning Board

VIA: Mary Dolan, Acting Chief MD
Functional Planning and Policy Division

Rose Krasnow, Chief RK
Area 1 Division

Larry Cole, Master Planner LC
Functional Planning and Policy Division

FROM: David Anspacher, Senior Planner (301-495-2191) DA
Functional Planning and Policy Division

DISCUSSION: Bradley Boulevard Improvements Project
From Glenbrook Road to Wilson Lane
Phase I Facility Planning Study
Project Prospectus Recommendations

APPLICANT: Montgomery County Department of Transportation

EXECUTIVE SUMMARY:

Staff will brief the Board on the draft Project Prospectus for the Bradley Boulevard Improvements project (see Attachment A: Vicinity Map) and solicit your comments, which will be considered in MCDOT's preparation of the final document to be submitted to the County Council.

MCDOT's recommended alternative includes bikeable shoulders along Bradley Boulevard between Glenbrook Road and Wilson Lane, a sidewalk on the south side, a drainage swale and a shared-use path on the north side, and left turn lanes on Bradley Boulevard at Wilson Lane.

The majority of area residents appear to be in favor of constructing this project, but a sizeable minority have concerns or are opposed; many of the latter are residents of Bradley Boulevard.

We believe that MCDOT has adequately addressed the issues raised and we support the recommended alternative with the comments recommended below.

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RECOMMENDATIONS: Transmit the following comments to the Montgomery County Department of Transportation:

1. The Bradley Boulevard Improvements Study should proceed to Phase II of the facility planning process to develop a detailed design for the completion of the Recommended Alternative (4A).

2. Provide a 6 ft buffer (min.) between the sidewalk and the curb on the south side of Bradley Boulevard by shifting the roadway to the north where right-of-way is available.

3. Ensure that adequate sight distance exists at each of the driveway crossings of the proposed shared use path. Where existing driveways do not allow residents to turn around on their property, consider providing additional driveway pavement to allow them to exit their driveways front first, if desired by property owners.

4. Minimize the number of trees required to be removed for this project, taking particular care to reduce the impact to trees on private property. The type of proposed stormwater management facilities should be carefully located and selected, and the use of a Filterra bioretention system should be considered.

5. Use medians where possible for additional stormwater management.

6. We concur in your decision to examine the following items in greater detail during Phase II of this Facility Planning Study and look forward to their resolution at the time of Mandatory Referral:

    a. Lighting at intersections and mid-block crossings,
    b. Setback of shared-use paths at intersections,
    c. ADA access to bus stops and at intersections,
    d. Additional striped crosswalks, and
    e. Use of porous pavement for the sidewalks and shared use path

PREVIOUS BOARD ACTIONS: None

SITE DESCRIPTION

The project study area includes approximately one mile of Bradley Boulevard, between Glenbrook Road and Wilson Lane. Bradley Boulevard is a six-lane major highway from Glenbrook Road to Goldsboro Road and a two-lane arterial road from Goldsboro Road to Wilson Lane. Average Daily Traffic (ADT) is approximately 15,000 vehicles. The posted speed limit is 30 mph and the public right-of-way is 100 ft wide.

The study area is approximately one mile to the west of the Bethesda CBD and is largely characterized by single-family residences. Community facilities directly adjacent to Bradley Boulevard include the Radnor Center, Bethesda Community School (a private preschool and kindergarten), and the Chabad Center of BCC.

Ride On Route 36 provides bus service along Bradley Boulevard between Potomac and the Bethesda CBD. There are 17 bus stops in the study area with an average of 88 boardings and alightings per day.

There are three signalized intersections on Bradley Boulevard in the study area: Glenbrook Road, Goldsboro Road, and Wilson Lane.

STUDY DESCRIPTION

The purpose of this project is to improve pedestrian and bicycle safety and connectivity on Bradley Boulevard between Glenbrook Road and Wilson Lane, improve access to transit, and improve traffic operations. Currently, Bradley Boulevard has bikeable shoulders of varying width and deterioration that are used by experienced cyclists, but there are no off-road facilities for less-experienced cyclists.

Over the entire one-mile length of the project, sidewalks exist for only 800 ft on the north side and 500 ft of the south side at the east end of the study area. For most of the project length, pedestrians must walk in the shoulder of this fairly busy road.

The Phase I study conducted by MCDOT evaluated six alternatives, including a no-build alternative (Attachments B-1 thru B-6 show the typical sections for each alternative). Each build alternative is composed of two vehicular travel lanes, a pedestrian/bicycle element, and stormwater management:

- Alternative 1 is the No-Build alternative and proposes no construction, leaving inadequate facilities for pedestrians and less-experienced cyclists.

- Alternative 2 includes a 10 ft shared use path on the north side and 4 ft bikeable shoulders on both sides. This alternative would accommodate both experienced and less-experienced cyclists and provide improved access for pedestrians. However, residents living on the south side and bus patrons traveling in the direction of Wisconsin Ave would have to walk in the shoulder or cross the street to use the proposed shared use path.

- Alternative 3 includes a 12 ft shared use path on the north side, 6 ft bikeable shoulders, and a 5 ft sidewalk on the south side. The widths of the shared use path and bikeable shoulders are at the high end of design standards and would have the greatest impacts on the surrounding area.

- Alternative 4A is the **Recommended Alternative**. It includes an 8 ft shared use path on the north side, 4 ft bikeable shoulders, and a 5 ft sidewalk on the south side. The widths of the shared use path and the bikeable shoulders are at the low end of the design standards.

- Alternative 4B includes 5 ft sidewalks on both sides of the road and 4 ft bikeable shoulders. It does not include an off-road shared use path.

- Alternative 4C includes bikeable shoulders varying from 4 ft to 12 ft and a 5 ft sidewalk on the north side. It does not include a sidewalk on the south side or an off-road shared use path.

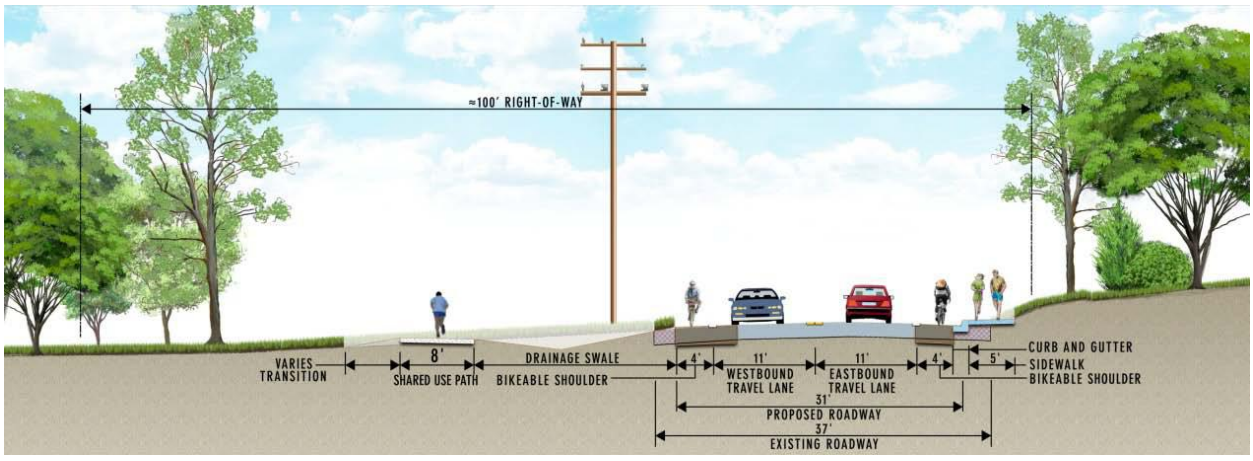
Currently, none of the approaches to the intersection of Bradley Boulevard and Wilson Lane have left-turn bays. This increases delay and queuing for thru and right turning vehicles and creates a potential safety hazard for cyclists riding in the shoulder, as motorists use the shoulder to bypass left-turning vehicles. The Phase I study proposes left turn bays from Bradley Boulevard to Wilson Lane in both directions for each of the build alternatives.

The project study area does not currently have a stormwater management system. This results in standing water on the roadway during rain events, which is a safety problem for motorists and bicyclists and causes deterioration of the roadway and shoulders. Each of the build alternatives includes stormwater management by means of a drainage swale on the north side of Bradley Boulevard between the roadway and the path or sidewalk, including some stormwater management bioswales intended to filter pollutants and sediments from stormwater runoff before it enters the groundwater.

Alternatives 2 and 4C leave an open section for drainage along the south side of the roadway. Alternatives 3, 4A, and 4B add curb and gutter along the south side between the roadway and the sidewalk. All drainage on the south side would be collected in inlets and discharged to the swale on the north side.

A typical section of the Recommended Alternative 4A is shown in Figure 1 below. Three plan views are shown in Attachments C-1 thru C-3, and a rendering is shown in Attachment D comparing the existing condition to the Recommended Alternative.

Figure 1: Cross Section for Recommended Alternative (4A)



MASTER PLAN CONSISTENCY

The following recommendations in the approved and adopted 1990 Bethesda Chevy Chase Master Plan and the 2005 Countywide Bikeways Functional Master Plan should be considered in the evaluation of the Bradley Boulevard Improvements Project:

- The Countywide Bikeways Functional Master Plan recommends a Dual Bikeway (DB-4) on Bradley Boulevard from Wisconsin Ave to Persimmon Tree Road, including an off-road shared use path and an on-road signed shared roadway (p.35 and 44).

- An overarching goal of the Bethesda Chevy Chase Master Plan (p.97) is the "Expansion of the system of pedestrian paths and bikeways to link residential areas with public facilities, commercial areas, and transit services."

- The Bethesda Chevy Chase Master Plan also recommends the "expansion of pedestrian paths and bikeways to form a network linking residential neighborhood with public facilities" (p.102). Further, the Plan also recommends improving pedestrian safety along major highways and arterials, such as Bradley Boulevard (p.103).

- The Bethesda Chevy Chase Master Plan recommends improvements to the intersection of Bradley Boulevard and Wilson Lane to increase intersection capacity (p.118).

The No-Build Alternative is not consistent with these Master Plan recommendations, since they recommend an expansion of pedestrian and bicycle facilities, as well as traffic improvements. The build alternatives are all consistent to varying degrees but only Alternatives 3 and 4A fully meet the intent of these Master Plans, because they include pedestrian facilities on both sides of Bradley Boulevard as well as both on- and off-road bicycle facilities. Alternative 3 provides the best accommodation but has the greatest impacts. MCDOT selected Alternative 4A as the preferred alternative because it accomplishes the project objectives with lesser impacts.

STAFF ANALYSIS OF THE RECOMMENDED ALTERNATIVE

We concur with MCDOT's evaluation of the Bradley Boulevard study area, which found that there is a need for better pedestrian and bicycle safety and connectivity, to improve traffic flow, and to introduce stormwater management in the study area; and we concur with their selection of Alternative 4A as the preferred alternative.

Benefits of Recommended Alternative

The Recommended Alternative addresses the need for continuous pedestrian facilities on both sides of Bradley Boulevard, as well as a dual bikeway - both on-road and off-road bicycle facilities. These facilities would greatly increase pedestrian and bicyclist comfort and accommodation, serve bus stops and local destinations and community facilities, and enhance connections to the Bethesda CBD, the Capital Crescent Trail, and the Bethesda Metrorail station.

The proposed shared use path would serve pedestrians and less-experienced cyclists. More experienced cyclists will continue to travel along the bikeable shoulders, where they can travel at higher speeds. These shoulders will have a consistent width and will be less susceptible to deterioration.

A map of existing and proposed bikeways and trails in the vicinity is shown in Attachment E. The Capital Crescent Trail is located just east of the proposed Bradley Boulevard dual bikeway. In addition, on-road bike lanes are planned on Goldsboro Road (BL-1) and Wilson Lane (BL-3), and signed-shared roadways are planned on Glenbrook Road (SR-10) and Little Falls Parkway (SR-9). When fully implemented, these bikeways will comprise a robust network that enables cyclists of various skill levels to access local and regional destinations.

Providing left turn lanes on Bradley Boulevard at Wilson Lane in both directions would improve traffic flow and bicycle safety. Thru and right-turning motorists would no longer need to travel in the bikeable shoulder to bypass left turning vehicles.

The Recommended Alternative includes stormwater management on the north side of Bradley Boulevard by means of a drainage swale that runs the length of the project between the roadway and the shared use path, and periodic stormwater management bioswales. Curb and gutter would be installed along the south side between the roadway and the sidewalk. All drainage on the south side would be collected in inlets and discharged to the swale on the north side. This would reduce the deterioration of the pavement, thereby improving safety for on-road cyclists and motorists.

Impacts of Recommended Alternative

The Project Prospectus identifies environmental impacts of the Recommended Alternative, based on field reviews and readily available information from resource agencies. These preliminary assessments will be refined in Phase II when a Natural Resources Inventory/Forest Stand Delineation (NRI/FSD) is performed and more facility design details are developed. The environmental impacts identified in the Prospectus include 3-4 specimen trees (>30" diameter), 7-12 significant trees (24" to 30" diameter), and 76-138 smaller trees (<24" diameter), and 0.7 acres of additional impervious area.

The Project Prospectus states that no additional right-of-way is needed and no buildings will be impacted. Grading easements will be required on between 0.5 and 1.0 acre of private property.

On-street parking does not exist for most of the project length but a limited number of spaces in front of five houses would be removed at the western project limit. No objections to the removal of on-street parking have been received. To the contrary, MCDOT has received a request to limit this parking to two-hours because of various concerns with its current daytime use.

No rare, threatened or endangered species are known to exist in the study area. MCDOT will need to document these impacts through submission of the NRI/FSD and a Forest Conservation Plan (FCP) during Phase II activities.

Additional Public Concerns

As noted below, two public meetings were held for this study. Public comments in opposition to the project have focused on several concerns:

- Character of Bradley Boulevard: Many citizens are concerned that the removal of trees along the corridor will diminish the character of Bradley Boulevard. MCDOT believes that the tree impacts noted above can be reduced during Phase II Facility Planning by employing tree save methods and redesigning the size of the drainage swales and bioswales.

- Conflicts at driveways: There are driveways to 27 residences on the north side of Bradley Boulevard in the study area where an additional conflict point would be created between cyclists using the shared use path and motor vehicles entering and exiting the driveways. Many residents commented that it is already difficult to enter and exit their driveways due to high traffic volumes and cyclists riding on the shoulders. They expressed concern that this will become even more difficult if they have to watch out for pedestrians and cyclists on the shared use path as well. We believe that while the shared use path will likely experience a moderate amount of use by cyclists during peak periods and on the weekends, there should be no significant increase in difficulty for residents to enter and exit their driveways.

- Existing demand does not warrant the public investment: Some citizens commented that there is little existing bicycle or pedestrian demand on Bradley Boulevard, and therefore the project is not a good use of public funds. This concern is somewhat at odds with the above comment that there are existing conflicts between motorists and bicyclists. In any event, existing use is a poor predictor of future demand when existing facilities require that all pedestrians and cyclists travel in deteriorating shoulders along a busy roadway. We believe that the proposed facilities will serve latent demand and are likely to result in greater walking and bicycling on Bradley Boulevard due to the proximity to local and regional destinations. These facilities would also provide better access to the bus stops along Bradley Boulevard, supporting the County's goal of increasing transit use.

- High speed bikeway: Some citizens have expressed the concern that the proposed shared use path will become a high-speed bikeway. However, cyclists that desire to travel at a high speed typically prefer to ride on the road where they encounter fewer obstacles and can therefore be expected to use the improved bikeable shoulders.

- Bikeway to nowhere: Several citizens expressed concern that the project would build a bikeway that does not connect to anything. However, this project is envisioned as the first phase of a future dual bikeway on Bradley Boulevard between Persimmon Tree Road and Wisconsin Ave. Additionally, this project would provide important connections to the Capital Crescent Trail (via Little Falls Parkway) and provide pedestrian connections to Bethesda CBD and the Bethesda Metro station, as shown on Attachment E.

- Left turn lanes will increase traffic and reduce gaps: As noted above, there are no left turn bays from Bradley Boulevard to Wilson Lane. This increases delay and queuing for thru and right turning vehicles and creates a safety hazard for cyclists riding in the shoulder, as motorists use the shoulder to bypass left-turning vehicles. Some citizens are concerned that adding left turn bays on Bradley Boulevard will increase traffic and reduce the gaps in traffic that enable motorists to enter and exit their driveways. While we are unable to determine the impact on traffic volumes, we agree that there will likely be fewer gaps in traffic.

RECOMMENDATIONS

To enhance the proposed project, staff recommends that MCDOT make the following changes:

Landscaped Buffer: To the extent possible, a minimum 6 ft buffer should be provided between the sidewalk and the curb on the south side of Bradley Boulevard by shifting the roadway to the north where right-of-way is available. This will accommodate street trees and improve pedestrian comfort. A six-foot-wide buffer is also the minimum needed to avoid adjusting the sidewalk vertically or horizontally at every ADA ramp and driveway, which would make travel for disabled persons more difficult.

Driveway Conflicts and Reduced Gaps: MCDOT should ensure that adequate sight distance exists at each of the driveway crossings of the proposed shared use path. Where existing driveways do not allow residents to turn around on their property, consider providing additional driveway pavement to allow them to exit their driveways front first, if desired by property owners.

Tree Impacts: The number of trees required to be removed or adversely affected by this project should be minimized, in part by carefully locating and selecting the type of proposed stormwater management facilities. There is some flexibility in the location of proposed stormwater management facilities that could facilitate minimizing the number of trees that would need to be removed. In addition, MCDOT should consider the use of a Filterra bioretention system in place of some of the proposed bioswales. Filterra is a Maryland Department of the Environment-approved device that removes the pollutants in stormwater. This device is a sort of special concrete catch basin that achieves the same goals as the bioswales in a much smaller space and its use could result in the loss of fewer trees along Bradley Boulevard.

Stormwater Management: Use medians where possible for additional stormwater management.

Additional Items for Preliminary Design: We concur with MCDOT's decision to examine the following items in greater detail during Phase II of this Facility Planning Study and look forward to their resolution at the time of Mandatory Referral:

- Lighting: The adequacy of lighting in the study area should be addressed, particularly at intersections and mid-block crossings.

- Setback of shared-use paths at intersections: The shared-use path should cross minor streets closer to Bradley Boulevard, so that motorists turning off of Bradley Boulevard are better able to detect bicyclists. This is particularly important at the intersections with Oldchester Road and Burling Road where the shared use path is set back from the road by over 30 ft to accommodate the proposed stormwater management bioswales.

- Access to bus stops: All bus stops must have ADA-accessible crosswalks in close proximity to provide all transit patrons with safe access.

- Pedestrian crossings at intersections: Legal crosswalks exist at the intersection of all public streets whether or not they are marked. Since ADA requires that all pedestrian facilities be ADA-compatible, every intersection should have handicap ramps wherever a sidewalk or shared use path is proposed, whether or not the crosswalks are marked. This includes unsignalized intersections and three-legged intersections, but the need is particularly great where there are bus stops.

- Additional striped crosswalks: To facilitate safer pedestrian crossings of Bradley Boulevard, additional striped crosswalks may be needed between signalized intersections at Goldsboro Road and Wilson Lane. In addition, striped crosswalks should be provided on the northern and southern legs of the Bradley Boulevard / Glenbrook Road intersection crossing Glenbrook Road and Little Falls Parkway.

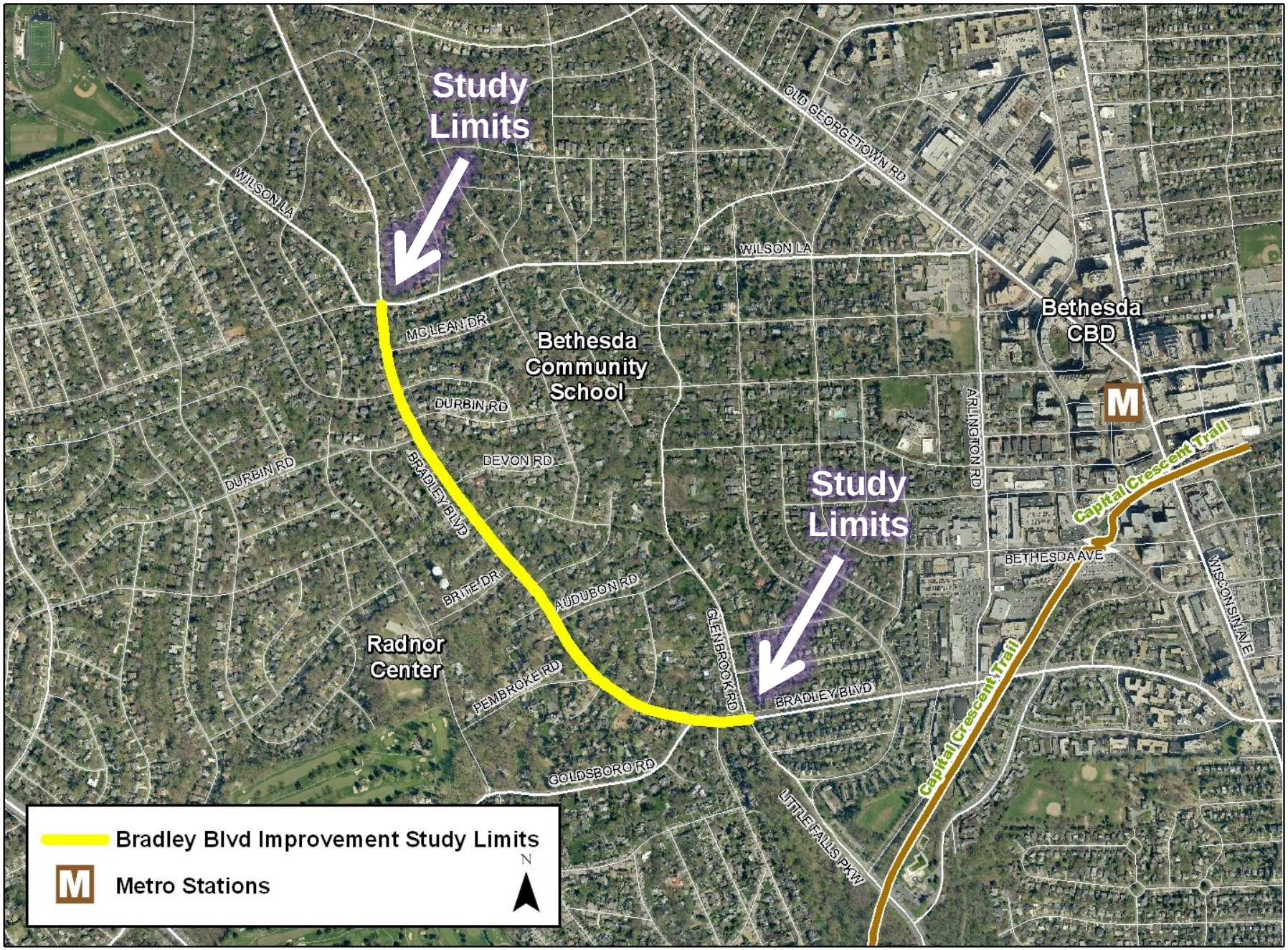
- Use of porous pavement for the sidewalks and shared use path: The use of porous pavement for the sidewalks and shared use path would reduce the amount of stormwater runoff requiring treatment. This would in turn reduce the size of drainage swales and the impact on nearby trees.

PUBLIC OUTREACH

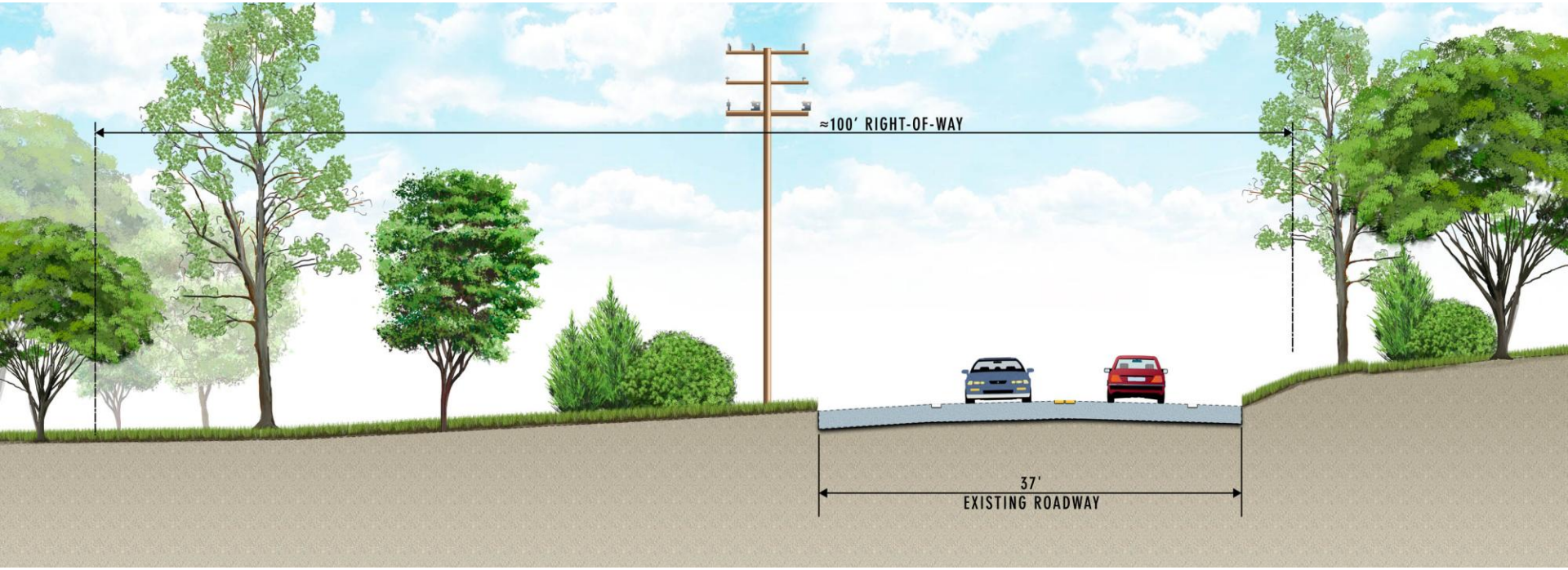
Two public meetings were held for this project on October 27, 2009 and November 10, 2010. The purpose of these meetings was to introduce the project alternatives, process, schedule, and background, and to receive community input and answer questions. The first meeting was attended by approximately 40 citizens and the second meeting was attended by approximately 55 citizens.

During the first comment period after the first public meeting, 158 comments were received, of which two-thirds supported the project and one-third opposed it. During the second comment period after the second public meeting, 86 comments were received, of which three-quarters supported the project and one-quarter opposed it. Most comments did not specify a preferred alternative, but provided comments on elements of the alternatives. Additional comments were received on MCDOT's project blog and in response to project newsletters. The most frequently cited comments are addressed above.

Attachment A: Vicinity Map

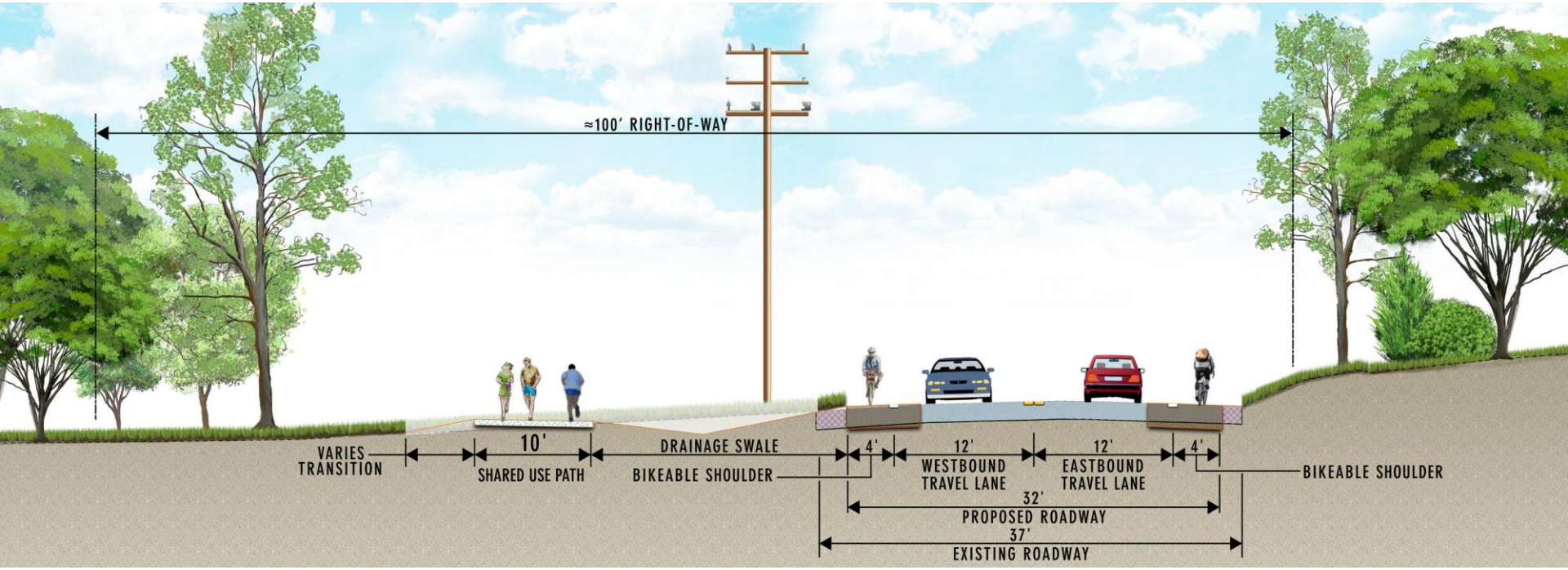


Attachment B-1: Typical Section for Alternative 1



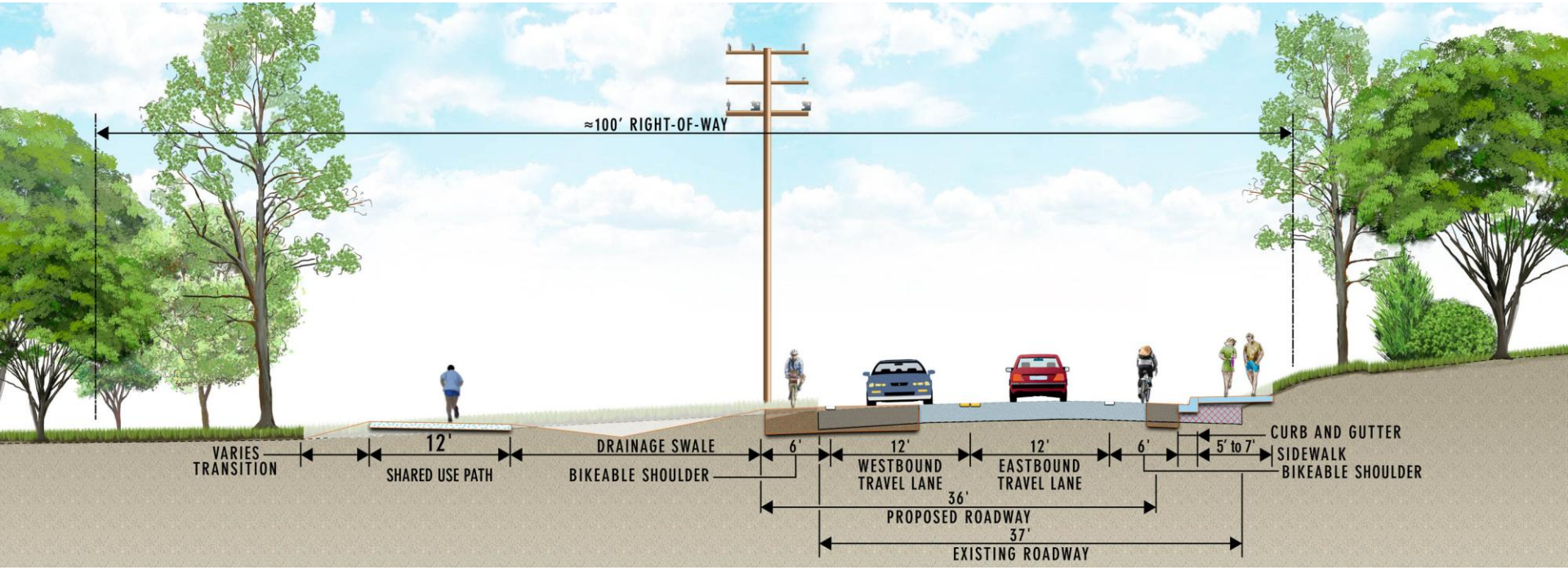
- No changes

Attachment B-2: Typical Section for Alternative 2



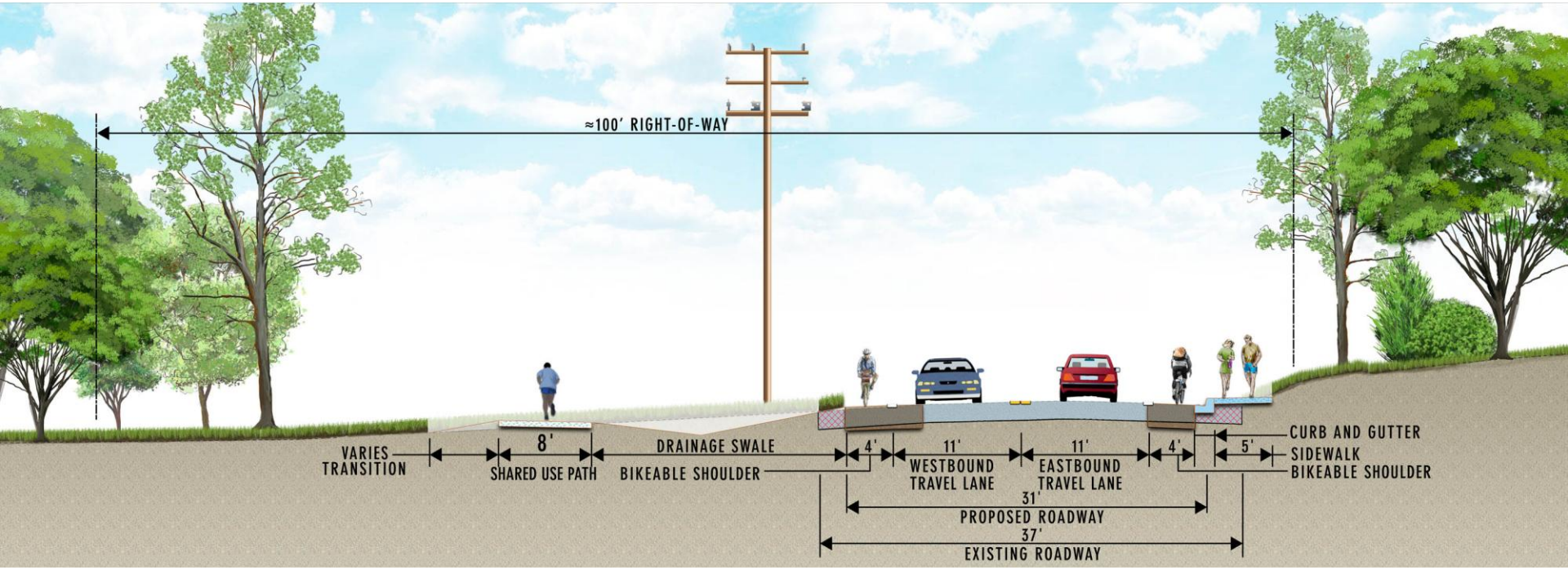
- 10 ft shared use path (north side)
- 4 ft bikeable shoulders

Attachment B-3: Typical Section for Alternative 3



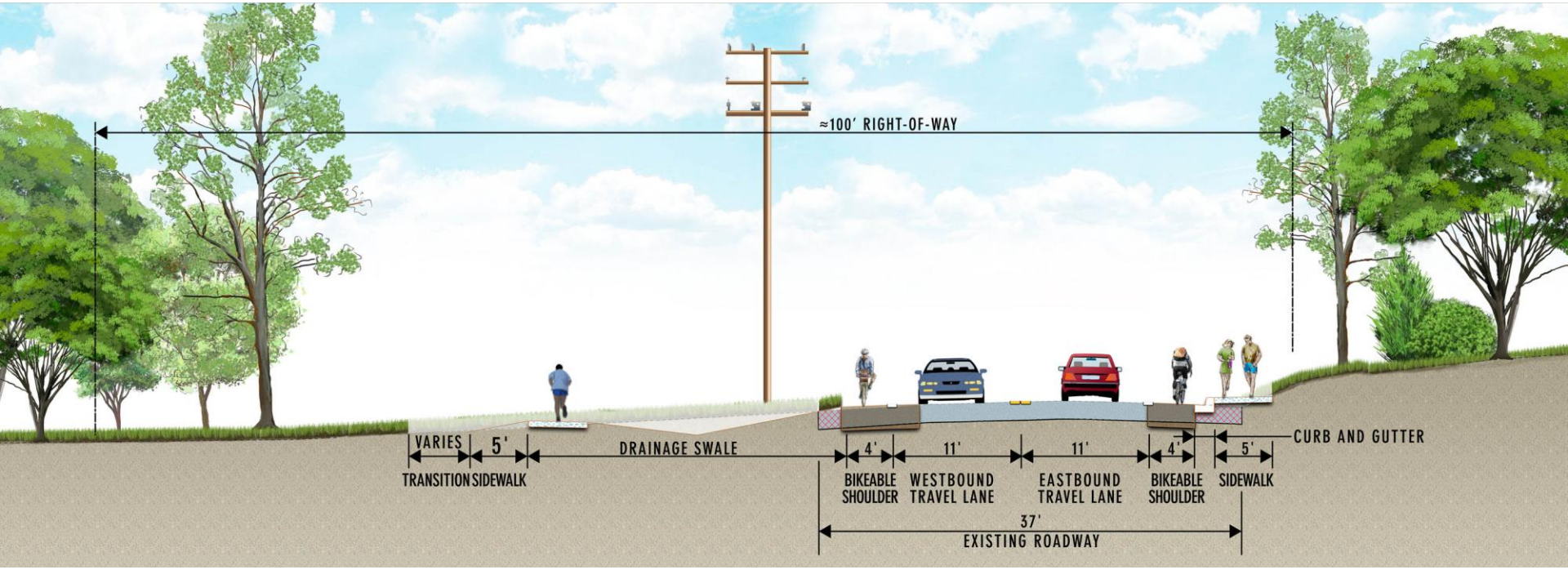
- 12 ft shared use path (north side)
- 6 ft bikeable shoulders
- 5-7 ft sidewalk (south side)

Attachment B-4: Typical Section for Alternative 4A



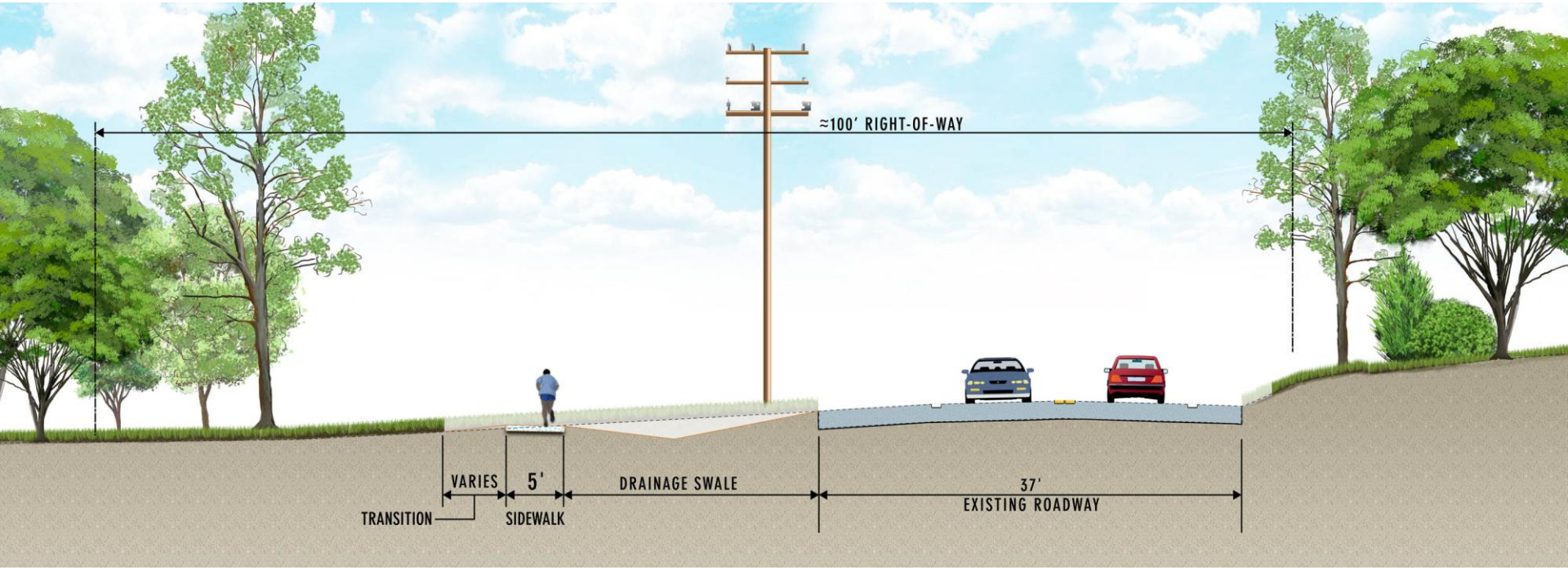
- 8 ft shared use path (north side)
- 4 ft bikeable shoulders
- 5 ft sidewalk (south side)

Attachment B-5: Typical Section for Alternative 4B



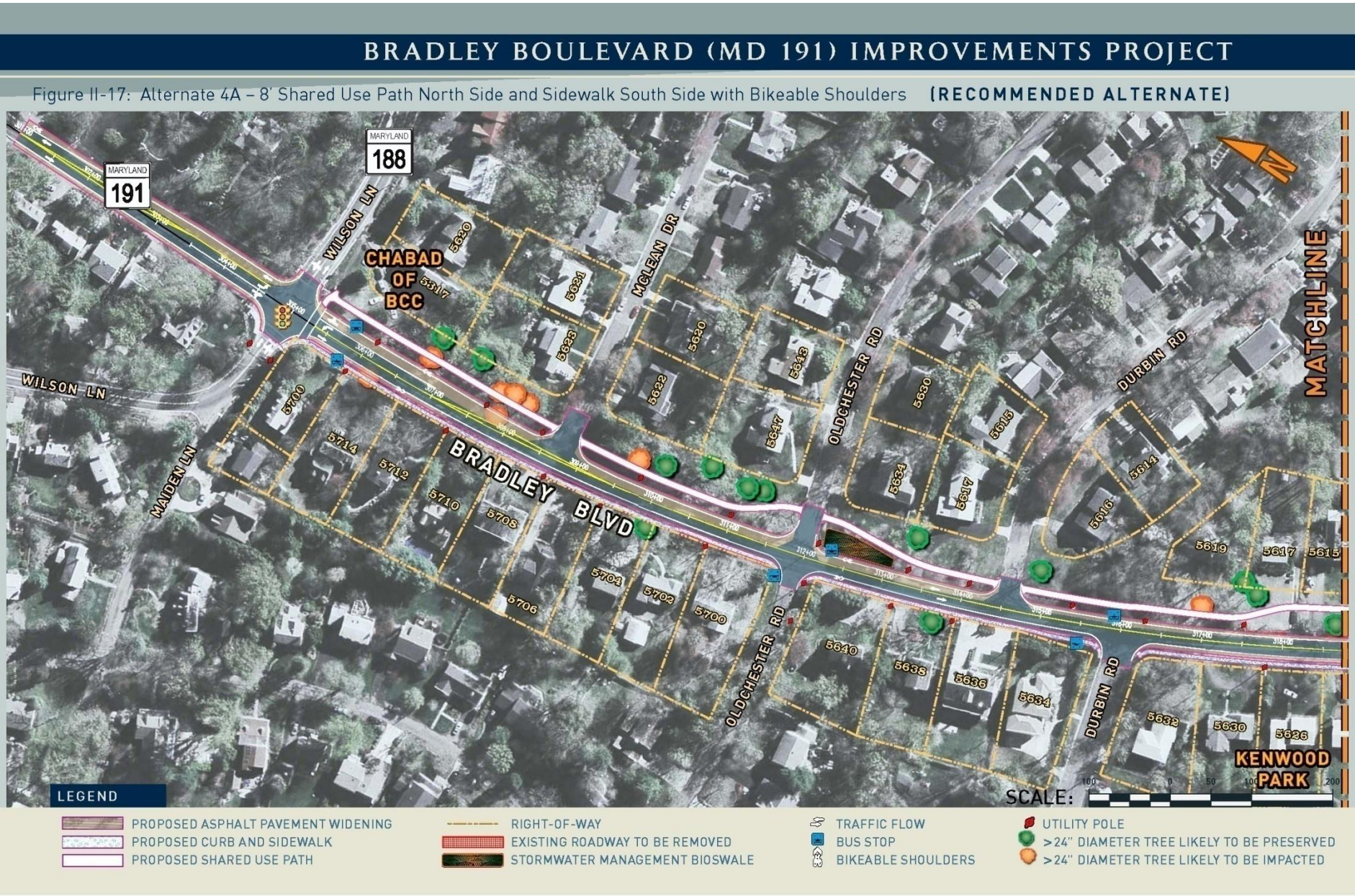
- 5 ft sidewalk (north side)
- 4 ft bikeable shoulders
- 5 ft sidewalk (south side)

Attachment B-6: Typical Section for Alternative 4C

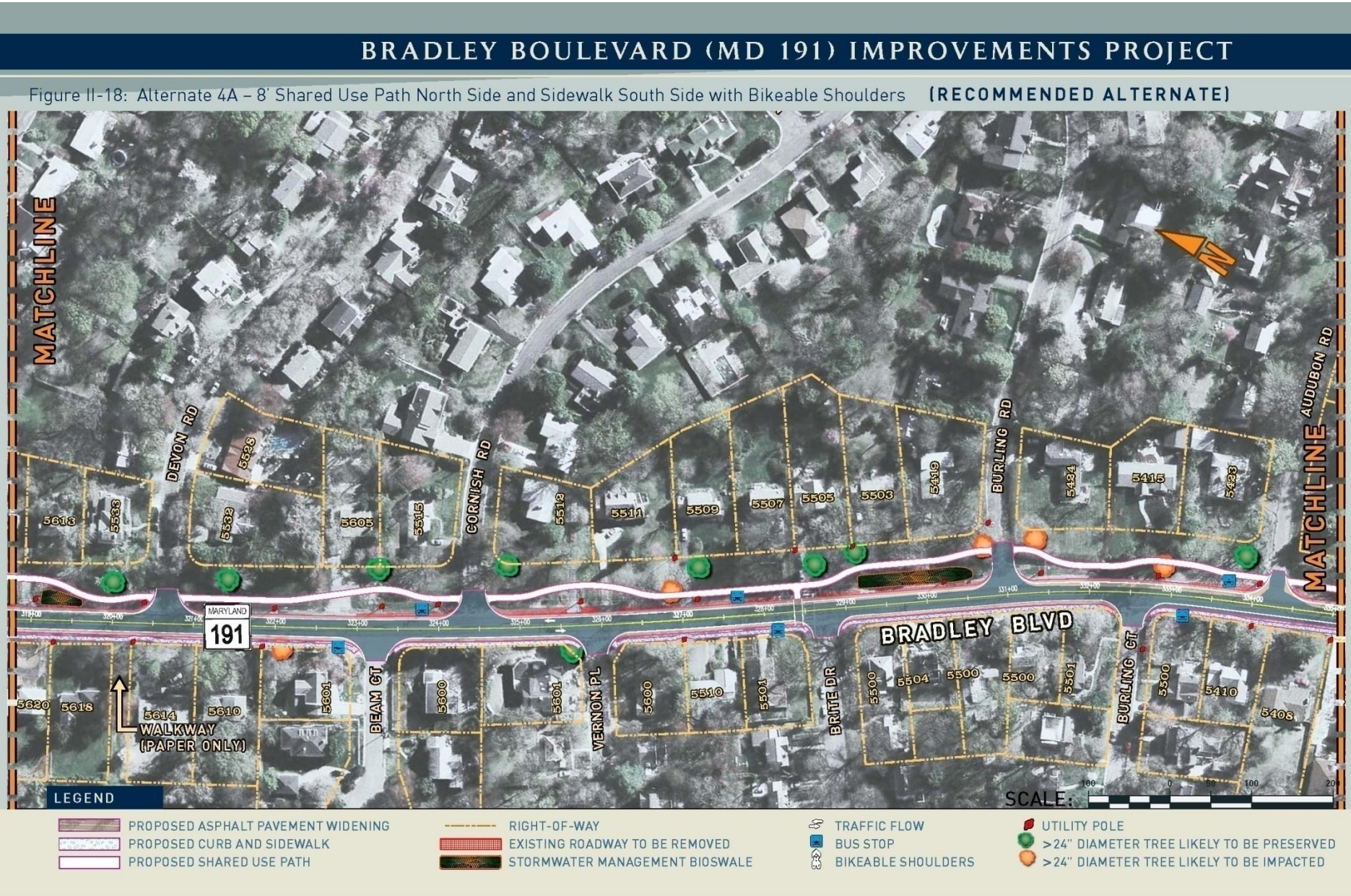


- 5 ft sidewalk (north side)

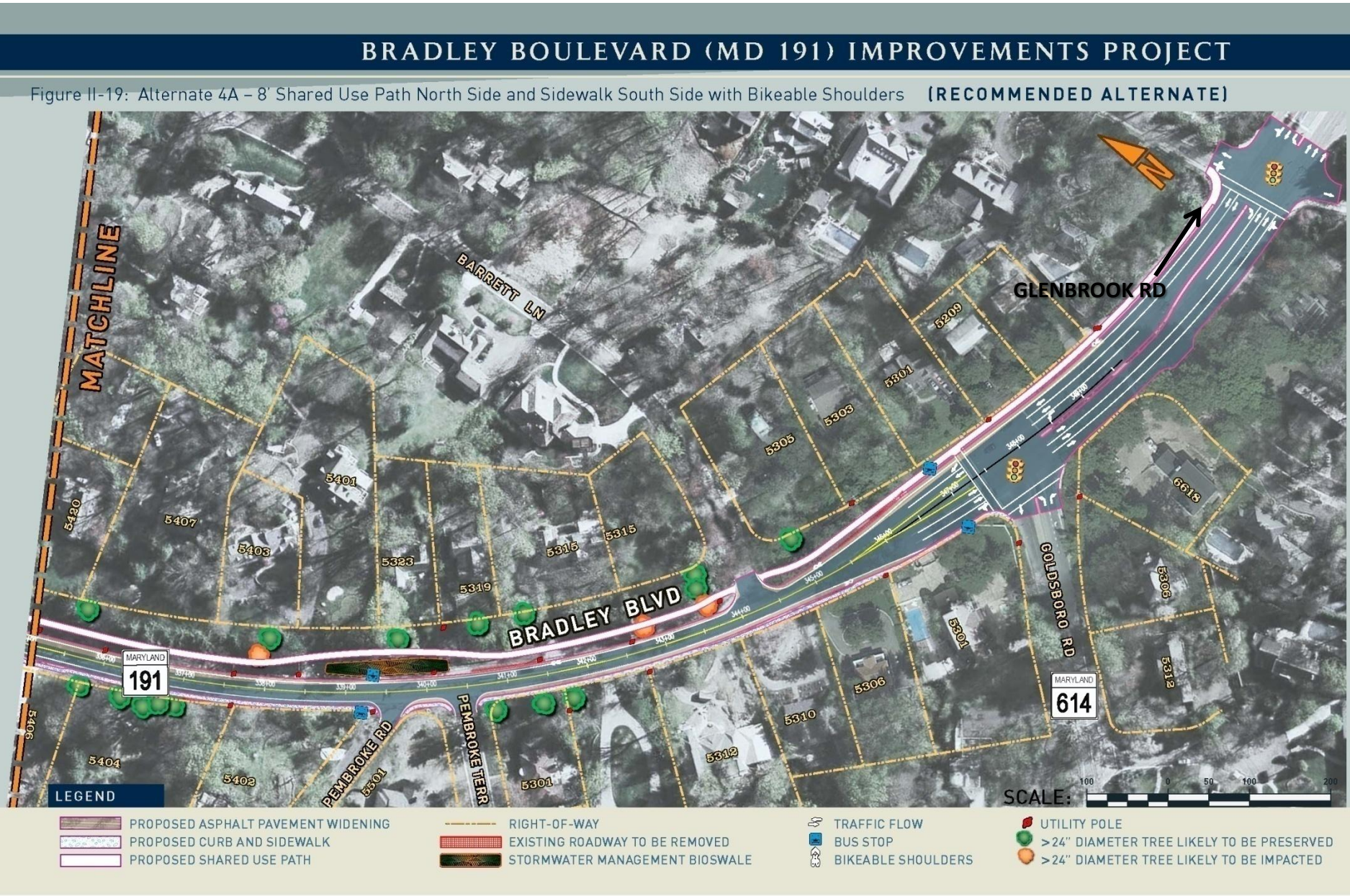
Attachment C-1: Plan View



Attachment C-2: Plan View



Attachment C-3: Plan View



Attachment D: Rendering

BRADLEY BOULEVARD
LOOKING EAST FROM WILSON LANE

EXISTING

PROPOSED ALTERNATE 4A

These are Artistic Renderings, may not represent Final Design

Attachment E: Proposed Bikeway Network