

M-NCPPC



MONTGOMERY COUNTY DEPARTMENT OF PARK AND PLANNING

THE MARYLAND-NATIONAL CAPITAL
PARK AND PLANNING COMMISSION

8787 Georgia Avenue
Silver Spring, Maryland 20910-3760

MCPB
Item No. 10/11
11-01-2001

October 26, 2001

MEMORANDUM

TO: Montgomery County Planning Board

VIA: Jeffrey Zyontz, Chief
County-wide Planning Division

Richard C. Hawthorne, Chief
Transportation Planning

A handwritten signature in black ink, appearing to read "RCH", is written over the typed name of Richard C. Hawthorne.

FROM: Larry Cole: 301-495-4528, for the Park and Planning Department **LC**

PROJECTS: US 29 From South of Blackburn Road to North of Dustin Road
Mandatory Referral No. 01809-SHA-1

US 29 at East Randolph Road/Cherry Hill Road
Mandatory Referral No. 01810-SHA-1

REVIEW TYPE: Mandatory Referral

APPLICANT: Maryland State Highway Administration (SHA)

APPLYING FOR: Plan Approval

COMMUNITY-BASED PLANNING TEAM AREA: Eastern County

RECOMMENDATION: TRANSMIT COMMENTS TO SHA

Given the overall scope of these two significant projects, the designs are basically in conformance with the Planning Board's previous guidance. The major outstanding issue is the provision of a grade-separation for the US 29 Commuter Bikeway at Cherry Hill Road. Also, lighting is an issue that has not been addressed previously but one that is important to ensure the safety for all users of these facilities. Staff believes that the overall operation for vehicles would be good. The comments in regard to pedestrian accommodation are more fine-tuning an otherwise good plan. The landscaping and aesthetic treatments have not been finalized but staff is in agreement with the guidelines SHA will use in developing them.

The following specific comments are recommended on the proposed project (see Attachment 1a - Location Map for US 29/MD 198 and Attachment 1b - Location Map for US 29/Randolph Road).

Roadway

1. Provide traffic-signal controlled dual right-turn lanes from southbound existing US 29 to westbound MD 198 and from northbound Relocated US 29 to eastbound MD 198.
2. Extend the median on the east leg of MD 198 at the intersection with existing US 29.

US 29 Commuter Bikeway

3. Provide a ten-foot high by twelve-foot wide underpass for the US 29 Commuter Bikeway at Cherry Hill Road and revise the adjacent proposed bike path alignments accordingly.
4. Construct the US 29 Commuter Bikeway at a ten-foot width except where severely constrained by right-of-way, topography or environmental concerns.

Other Bike Paths and Sidewalks

General

5. Special attention should be given to maintaining safe and convenient pedestrian and bicycle access along US 29 and the other roads covered by these projects.

At the Existing US 29/MD 198 intersection

6. Enlarge the traffic island in the northwest quadrant of and the refuge on the west leg of MD 198 to accommodate waiting bicyclists.

Along MD 198

7. Increase the width of the offset of the sidewalk from MD 198 roadway between existing US 29 and the Burtonsville Crossing driveway or construct the sidewalk on top of the proposed retaining wall.
8. Reduce or eliminate the five-foot wide median shoulder on westbound MD 198 between the northbound ramps and the left-turn lanes to southbound US 29 and reallocate this width to the sidewalk on the north side of MD 198.
9. Increase the steepness of the slope under the proposed Relocated US 29 bridge over MD 198 if possible to provide a wider sidewalk and bike path.

At Blackburn Road

10. Replace the proposed sidewalk on the north side of Blackburn Road with a bike path and use high-visibility pavement markings for the crosswalk on US 29. Consider installing "countdown" pedestrian signals.

At the East Randolph Road/Old Columbia Pike intersection

11. Construct the sidewalks and bike paths behind the proposed handicap ramps so that sufficient storage will exist for bicyclists waiting to cross at the traffic signal.
12. Retain the traffic island in the northeast quadrant of the East Randolph Road/Old Columbia Pike intersection to serve as a pedestrian refuge.
13. Construct a sidewalk on the west side of Old Columbia Pike south of East Randolph Road to the bus stop. Construct the sidewalk on the opposite side with a landscape panel with street trees.
14. Construct sidewalks at a seven-foot minimum width along Old Columbia Pike north of East Randolph Road where insufficient room exists to provide a landscape panel.

At the Prosperity Drive/Cherry Hill Road intersection

15. Construct dual handicap ramps where feasible and provide a wider pedestrian and bicyclist refuge in the median of Cherry Hill Road.

Lighting

16. Provide sufficient lighting of the roadway, bike paths and sidewalks in conformance with the current guidelines of the Illuminating Engineering Society of North America (IESNA).

Landscaping and Aesthetics

17. Use the US 29 Corridor-Wide Aesthetics Guidance to develop the aesthetic and landscaping treatments, but continue to coordinate with M-NCPPC staff in developing the final treatments.
18. Provide street trees between the proposed sidewalk and the south side of Cherry Hill Road between US 29 and Prosperity Drive by relocating the proposed retaining wall and provide an appropriate aesthetic treatment to the office building side of the retaining wall.
19. Widen the median on MD 198 between the proposed ramps to and from northbound Relocated US 29 and the intersection with existing US 29.

20. Pave the slope under the Relocated US 29 bridge at MD 198 with concrete using a patterned formliner.

Environmental

21. Every effort should be made to reduce and mitigate the impact to forests including the use of retaining walls. Particular consideration should be given to reducing the width of the stormwater management pond in the northeast quadrant of the Randolph Road interchange and modifying the alignment of the US 29 Commuter Bikeway.
22. Bottomless arch culverts should be used wherever possible to ensure water quality and wildlife accessibility.
23. Construct the Option 1 noise wall in Noise Sensitive Area (NSA) #5 at the US 29/MD 198 interchange.
24. Construct the noise wall in NSA #1 at the US 29/Randolph Road interchange if the homeowners agree to pay for costs in excess of SHA's \$50,000 cost per benefited household threshold, or some other means of cost-sharing can be found. If not, some lesser form of noise mitigation should be provided.

PROJECT DESCRIPTION

The two subject interchange projects would implement the recommendations of the Fairland Master Plan. The projects are described as follows:

US 29 From South of Blackburn Road to North of Dustin Road

At Blackburn Road

A new traffic signal would be installed at the Columbia Pike (US 29)/Blackburn Road intersection (see Attachment 2a). Ramps to Blackburn Road would be installed from both northbound and southbound US 29. No left-turns would be allowed directly from US 29 at this intersection but would be allowed via Blackburn Road. (Because of space constraints, the ramps to Blackburn Road are not shown in the attachment but will be shown in the presentation materials at the Board's meeting.)

A five-foot sidewalk would be constructed along the north side of Blackburn Road between the ramp termini. Off-road eight-or ten-foot bike paths would be constructed along both sides of US 29 between Blackburn Road and Spencerville Road (MD 198).

Relocated US 29

US 29 would be rebuilt on a new alignment to the east of the existing US 29 between north of Blackburn Road and north of Dustin Road near the Howard County line at the Patuxent River. The realigned US 29 north of the ramps to and from MD 198 would be built with two through lanes in each direction reflecting the configuration of the

Patuxent River Bridge. Both the inside and outside shoulders would be built to accommodate bus traffic.

Relocated US 29/MD 198 Interchange

US 29 would be carried over MD 198 via a new bridge (see Attachment 2b). Ramps would be constructed to and from northbound US 29 meeting at a new traffic signal on MD 198. The ramp from northbound US 29 to MD 198 would widen from its initial single lane to three lanes at the intersection, a right-turn lane and two left-turn lanes. The ramp from MD 198 would have a mirror configuration, two lanes to receive left-turns from eastbound MD 198 and a single right-turn lane from westbound MD 198.

MD 198 at the intersection with the ramps would have three through lanes in each direction plus auxiliary lanes east of the intersection. The roadway of MD 198 would taper to its existing width of two lanes in each direction one-quarter mile east of the traffic signal.

Existing US 29/MD 198 Intersection

The existing northbound lanes of US 29 between the start of the relocation north of Blackburn Road and the existing US 29/MD 198 intersection would be removed (see Attachment 3a). The existing southbound lanes in this segment would be reduced from three lanes to two and would serve as an on-ramp to Relocated US 29. The bike path would run along this ramp and would have a two-foot to six-foot grass strip separating it from the ramp. Where less than a five-foot grass strip is feasible, a barrier or curb will be provided between the ramp and the bike path.

MD 198 would be widened to accommodate the addition of an eastbound through lane, additional auxiliary lane storage and the widening of the eastbound right-turn lane, which is almost narrows to about three feet in one location. The medians of both the west and north legs of the intersection would be widened to allow the planting of street trees.

An eight-foot bikeway would be constructed along the south side of MD 198 and a five-foot sidewalk would be constructed along the north side of MD 198 through the limits of construction.

Burtonsville Park and Ride Lot

Ramps to and from southbound US 29 would be constructed to serve the Burtonsville Park and Ride Lot (see Attachment 3b). The lot would be expanded and would be reconfigured to better accommodate pedestrians and transferring transit patrons.

Dustin Road

Dustin Road would be carried over Relocated US 29 via a new bridge (see Attachment 4a). The existing southbound lanes of US 29 would be realigned and

converted to a single lane ramp to a new roundabout at the intersection of existing US 29 and Dustin Road. All southbound US 29 traffic headed to Burtonsville and MD 198 would use this ramp. A ramp east of the bridge would be constructed to northbound US 29. This ramp would serve Dustin Road and Burtonsville Shopping Center traffic headed north on US 29.

A ten-foot wide sidewalk would be constructed on the south side of the bridge that would serve equestrians in this area as well as pedestrians.

US 29/Randolph Road

Randolph Road Interchange

East Randolph Road/Cherry Hill Road would be carried over US 29 via a new bridge (see Attachment 4b). The interchange would be constructed as a single-point urban interchange with all turning traffic brought to a single central set of traffic signals at the mid-point of the bridge, similar to what exists at the Falls Road/I-270 interchange. The ramps from northbound and southbound US 29 would each consist of a single lane flaring out to two left-turn lanes and a right-turn lane at Randolph Road. The ramps to US 29 would each consist of two lanes merging to a signal lane before they enter US 29. Both the inside and outside shoulders of US 29 would be rebuilt to accommodate bus traffic.

An additional underpass would be built under East Randolph Road to accommodate a future ramp from Musgrove Road. This ramp would allow traffic from Musgrove Road headed for southbound US 29 to bypass the Randolph Road interchange.

Prosperity Drive Intersection

Cherry Hill Road would be widened to add an eastbound right-turn lane to Prosperity Drive and to start the westbound left-turn lane at the intersection (see Attachment 5a). Prosperity Drive would remain unchanged but would be rebuilt to reflect the change in elevation of Cherry Hill Road.

Old Columbia Pike Intersection

One lane would be added on the south leg of Old Columbia Pike at East Randolph Road. Two lanes would be added on the north, west and east legs of this intersection (see Attachment 5b).

Pedestrian and Bicyclist Accommodation

A bike path would be built along the south side of East Randolph Road from the western project limit to the intersection of Old Columbia Pike. The bikeway would cross East Randolph Road and continue along the north side of East Randolph Road and Cherry Hill Road to the eastern project limit. Sidewalks would be constructed as

necessary along East Randolph Road and Cherry Hill Road on the opposite side of the street from the bike path within the project limits.

An eight-foot bike path would be constructed along the east side of Prosperity Drive from the southern project limit to Cherry Hill Road. The bike path would cross Cherry Hill Road at the traffic signal. From the north side of the intersection, the bike path would be built running northwest until it comes close to the ramp to northbound US 29, and would run parallel to the ramp until it joins the existing Deer Park Drive just south of Shannandale Drive. Bollards and warning signs would be placed at the road junction.

Maintenance of Traffic

Unlike the MD 198 project, which would build a new bridge for Relocated US 29 a significant distance away from the existing intersection, Randolph Road would need to be elevated to carry it over US 29 in its existing horizontal location. SHA has already started construction on a temporary relocation of East Randolph Road/Cherry Hill Road, which requires the taking of three houses in the northeast quadrant of the existing intersection. A new underground utility corridor will be built in this alignment and a large stormwater management pond will be just to the north of this utility corridor.

STAFF ANALYSIS

The Board's review of the design of these two interchanges is being done in conjunction with its review of the US 29 Commuter Bikeway and Bus Priority Lanes. Specific staff recommendations on those two issues are presented in a separate memo to the Board.

Roadway

Existing US 29/MD 198

SHA is concerned that the dual right-turn lanes would create adverse operations for coordinated signal phasing and timing that are not explicitly reflected in the planning-level capacity analysis. Staff recommends that the dual right-turn lanes be included as the preferred option at this point in the study process and analyzed further during detailed design.

At both the northbound off-ramp from Relocated US 29 to eastbound MD 198 and southbound existing US 29 to westbound MD 198, the right-turn movement is proposed to be a single lane which is not signal controlled, separated from the other lanes via a triangular island, and requires a merge onto MD 198, a treatment called a "free right-turn". This treatment maximizes vehicular throughput, but places pedestrians at a disadvantage because the crossing is not protected by signal control.

Staff recommends that at both locations, the single free right-turn be replaced with two signal-controlled right-turn lanes. The additional lane at each location would be to provide sufficient storage capacity for cars waiting to make the turn and to increase

the number of cars that can make the turn during the signal phase. The primary advantage of this treatment is that it provides a level of vehicular speed control that staff feels is more appropriate for the Burtonsville business district than a merge operation. The pedestrian crossing distance would be increased on the leg in question but would be decreased on the leg where traffic would be received since the acceleration lanes for the free-rights could be eliminated.

Staff now concurs with SHA that four lanes are appropriate to accommodate the left and thru movements on southbound US 29 at MD 198. Previously, during review of concepts that included a Blackburn Road interchange, staff had recommended that three lanes would suffice at this intersection. With the deferral of the Blackburn Road interchange from this project, additional traffic is forecast to use the existing US 29 intersection with MD 198. The number of lanes SHA proposes on this approach does not require additional widening (and staff believes that this statement would remain true even with the dual signal controlled right-turn lanes). The sufficiency of this operation should be reviewed again if and when the Blackburn Road interchange is re-evaluated.

At the intersection of existing US 29 and MD 198, *staff recommends that the median on the east leg of the intersection be lengthened to better control traffic movements.*

The projected level-of-service (LOS) for the existing US 29/MD 198 intersection in the year 2020 is LOS D.

US 29/Randolph Road

At the intersection of Randolph Road and Old Columbia Pike, an additional southbound thru lane is required on Old Columbia Pike through the intersection. Staff feels this recommendation is consistent with the 1997 Fairland Master Plan which changed the designation of Old Columbia Pike between Randolph Road and Tech Road from a two-lane primary road to a four-lane arterial road.

Additional turning lanes are required at this intersection to achieve a 2025 level of service that is commensurate with both SHA objectives and the congestion standards for the Fairland/White Oak Policy Area. The Planning Board expressed its agreement with the widening of this intersection at its meeting on April 12, 2001.

The plans submitted for staff's review do not reflect one improvement that is included in SHA's traffic analysis – an eastbound right turn lane on East Randolph Road. *Staff does not feel that this lane is necessary for the intersection to operate acceptably and recommends that it not be constructed.*

The projected level-of-service (LOS) for the US 29/East Randolph Road/Cherry Hill Road interchange in the year 2020 is LOS E.

Pedestrian Accommodation

Sidewalks would generally be provided adjacent to all roadway work within the project limits opposite proposed off-road bike paths. Several locations exist however where five-foot sidewalks are proposed directly behind the curb. Since none of the roads covered by this project are low-volume residential streets, staff believes that these sidewalks need to be improved.

On Old Columbia Pike south of East Randolph Road, less than the Master Plan recommended right-of-way is proposed to be purchased, which forces the proposed sidewalk on the east side up against the curb line. Staff recommends that sufficient right-of-way be purchased to provide a landscape panel with street trees to separate the sidewalk from the roadway. On the west side of the street, a similar sidewalk should be provided to provide access to the bus stop at the driveway to the Seventh Day Adventist Church parking lot.

At the church's other driveway entrance on East Randolph Road, the proposed sidewalk would be relocated to the edge of the driveway, eliminating the line of trees that now exist when the area is regraded. Staff recommends that the sidewalk be rebuilt in its existing horizontal location and that the trees be replaced.

On Old Columbia Pike north of East Randolph Road, the sidewalk should be offset from the roadway by a landscape panel or should be built to a seven-foot minimum width.

The intersection of Old Columbia Pike and East Randolph Road should have dual handicap ramps on each corner where feasible to reduce the crossing distance. Sidewalks and bike paths should be built behind the ramps wherever possible to keep pedestrians and bicyclists away from traffic, to avoid forcing them down into the ramps when they aren't crossing the street and to provide storage areas for people waiting to cross.

As proposed, the unprotected crossing distance of the north leg of Old Columbia Pike at East Randolph Road would be increased from forty-eight feet to one hundred feet because of the combination of road widening and the proposed elimination of the existing traffic island in the northeast quadrant of the intersection. *Staff recommends that the traffic island be retained, and that the curb radius in this quadrant be increased as necessary, to keep the crossing distance as short as possible.*

Along the north side of MD 198 between existing US 29 and the Burtonsville Crossing driveway, a retaining wall of about 350' in length is proposed. The five-foot sidewalk would be offset from the road and the wall by two feet on each side. Increasing the width of the landscape panel to support street trees and give pedestrians a greater offset from the roadway is preferred, but would require greater slopework. One alternative to be considered is to place the retaining wall between the sidewalk and roadway, elevating the sidewalk and giving the pedestrian one unconstrained edge rather than two. *Staff recommends that the width of the offset from the roadway be increased or that the sidewalk be built on top of the proposed retaining wall.*

A five-foot wide shoulder is proposed adjacent to the median along westbound MD 198 in the vicinity of the proposed Relocated US 29 bridge. SHA has stated that this offset is needed for the travel lanes to have sufficient sight distance around the bridge piers, however that sight distance is based on a 40 mph design speed while the posted speed is anticipated to be 30 mph. Given that the bridge will be between two closely spaced traffic signals and will define the edge of the Burtonsville commercial area, a 30 mph design speed is more appropriate. As long as sufficient sight distance can be achieved for a 30 mph design speed, staff recommends that the shoulder width be reduced or eliminated in favor of a widening the sidewalk on the north side of MD 198. Whatever shoulder width remains does not need to be paved. *Staff recommends that any remaining median shoulder be eliminated in favor of widening the median to provide more room for landscaping.*

Under the proposed Relocated US 29 bridge over MD 198, riprap is proposed slope protection is proposed adjacent to the five-foot sidewalk on one side and the eight-foot bike path on the other. Because the sidewalk and bike path in this location are already constrained by being directly adjacent to the curb, the material should be changed to something that is less visually aggressive, such as patterned concrete. *Staff recommends that this slope be paved with a patterned concrete and that the steepness of the slope be increased in order to provide a wider sidewalk and bike path.*

Bicyclist Accommodation

The two projects include off-road bike paths and on-road bike lanes on all roads within the project limits and would generally accommodate bikes very well. The area, which most needs improvement, however is the US 29 bikeway crossing of Cherry Hill Road. SHA staff does not feel that an underpass at this location because of concerns about cost, personal safety, and usage. Therefore, an at-grade crossing is now proposed at Prosperity Drive. No protected signal phase would be provided for bicyclists and pedestrians.

Staff believes that cost is not a significant factor as a percentage of the total project cost, that studies of many other underpasses have shown personal safety not to be a major problem, and that high-quality bikeways attract more usage than bikeways segmented by major roadways. The greater safety problem is the large traffic volumes at this intersection and the conflicts with turning traffic. Therefore, *staff recommends that an underpass be provided at Cherry Hill Road, with appropriate relocations of the off-road bike paths in this area.* More detail on this topic is provided in a separate memo to the Board on the US 29 bikeway and bus lanes.

An at-grade crossing of this intersection will remain for local circulation even if the underpass is built and should be improved by using dual handicap ramps at the corners and by offsetting the median refuge a bit further back to increase its size and protection.

Another location where some improvement needs to be made is at the East Randolph Road/Old Columbia Pike intersection where the off-road bike path crosses from one side of East Randolph Road to the other. *Staff recommends that the sidewalks*

and bike paths at this intersection be constructed behind the proposed handicap ramps so that sufficient storage will exist for bicyclists waiting to cross at the traffic signal.

The Fairland Master Plan calls for an off-road bike path on existing US 29 north of MD 198. No construction for this path is included in this project, but will likely be included in a Burtonsville Neighborhood Conservation project to be undertaken by SHA in the future once DPWT has finished its facility planning for the local access road to the northwest of the existing US 29/MD 198 intersection. The design of this project should be modified however to provide for a good connection between the bike path along MD 198 and the future bike path on existing US 29. *Staff recommends that the traffic island in the northwest quadrant and the refuge on the west leg of the existing US 29/MD 198 intersection be enlarged to accommodate waiting bicyclists.*

At Blackburn Road a five-foot sidewalk north-south is proposed to run east-west along the north side of the road between the proposed north-south bike paths on either side of US 29. *Staff recommends that this connection instead be built as a bike path to better facilitate bike travel.*

Given that the proposed traffic signal at Blackburn Road would be a changed condition in addition to the interchange at MD 198, special attention needs to be given to the safety of bicyclists and pedestrians who will be crossing at this location. *Staff recommends that high-visibility pavement markings be used for the crosswalk. Also, "Countdown" pedestrian signals, which show the amount of time remaining to cross, should be considered for this long crossing.*

Lighting

While the lighting design for the Randolph Road project has not yet been done, staff believes that the lighting for both these projects is an area of concern. SHA generally lights only intersections, and often not unsignalized intersections. Existing State highways that have had problems with pedestrian crashes also have large gaps in lighting that could contribute to these crashes because of drivers not being able to see pedestrians in the roadway.

On the current project, the proposed lighting plan for the MD 198 project includes no lighting for either Blackburn Road itself or even for the ramp termini. Bike paths and sidewalks would only be minimally and incidentally lighted. Ornamental lighting on bridges will relieve this problem at those locations but most sidewalks and bike paths are far from bridges. Lighting under the relocated US 29 bridge over MD 198 is also a concern.

Along some existing State highways, the Montgomery County Department of Public Works and Transportation (DPWT) has installed supplemental lighting to reduce this problem. On new projects however, we should avoid creating more potential problems. The lighting design should take the needs of pedestrians and bicyclists into account, focusing first on the potential conflict points at intersections, but also ensuring that pedestrians and bicyclists can see and be seen by drivers in the public right-of-way. *Staff recommends that the proposed lighting levels be reviewed and revised to conform*

to the current guidelines of the Illuminating Engineering Society of North America (IESNA) for lighting of roadways, bike paths and sidewalks.

Landscaping and Aesthetics

SHA has created a set of design guidelines for landscaping and aesthetics that would provide a good treatment for the entire US 29 corridor. The guidance in this document has not yet been fully reflected in the plans for these two projects, however SHA staff has said that it will be used in developing the final plans. (Attachment x shows two alternative treatments for bridges.) To date, the Randolph Road bridge plans show a treatment which is less than what the guidelines call for, but the Dustin Road bridge plans show perhaps a bit more than what is appropriate for a location in the agricultural reserve. *Staff recommends that SHA use these guidelines in developing the aesthetic and landscaping treatments, but continue to coordinate with MNCPPC staff in developing the final treatments.*

A retaining wall is proposed to run along the ramp from northbound US 29 and continue east along Cherry Hill Road for a distance of about 450'. The retaining wall does not run parallel to the proposed right-of-way line but is moved toward the roadway, keeping the pedestrian area a bit cramped by reducing it to a minimum of nine feet in some locations – a five-foot sidewalk with a two-foot offset to the roadway and to the wall. No street trees are proposed for the south side of the roadway between US 29 and Prosperity Drive. While SHA has located the wall to create an area at the bottom of the wall for landscape screening for the adjacent office building, staff believes that the public right-of-way should be used more for the benefit of the public and that the pedestrians should be separated from the roadway by street trees wherever possible. *Staff recommends that the proposed sidewalk in this area be offset by a landscape panel with street trees and that the office building side of the retaining wall receive an appropriate aesthetic treatment.*

Environmental

The alignment of Relocated US 29 North of MD 198 falls in the headwaters of the Lower Patuxent watershed. This watershed is identified in the FEIS reevaluation as Use IV Recreational Trout Waters with an additional designation of public water supply and the associated State Anti-degradation Policy, COMAR 26.08.02.04. This area drains directly to the Rocky Gorge Reservoir, a source of public drinking water. The realignment of US 29 within this area will result in disturbance to forests and woodlands. Every effort should be made to reduce and mitigate the impact to forests including the use of retaining walls.

Improvements to US 29 at the Randolph Road intersection fall within the Paint Branch watershed. This watershed has a use III classification by the County's guiding water policy document, the County-Wide Stream Protection Strategy (CSPS). Every effort should be made to locate stormwater management facilities out of forested buffers. Relocate the bikeway and stormwater management facility shown on the Temporary Easement for Entrance Adjustment map closer to the edge of the new rights-of-way for the intersection. Preserve as much of the existing forest by resizing the

stormwater management pond to a smaller horizontal dimension if possible and by using retaining walls.

Expanded tributary crossings for any part of the highway should refer to the Interim Environmental Guidelines for Culvert Design, June 24, 1997, Montgomery County Department of Permitting Services, for culvert and bridge designs. Bottomless arch culverts should be used wherever possible to ensure water quality and wildlife accessibility.

US 29/MD 198

For Noise Sensitive Area (NSA) #5, the Country Place Apartments and Burtonsville Commerce Center on the east side of US 29 between Blackburn Road and MD 198, SHA proposes to construct a noise wall called Option 2. Option 2 would protect seven residences at an estimated per benefited household cost of \$37,995, with a total cost of \$265,963.

Option 1 would provide noise mitigation for ten residences plus a daycare facility with an outdoors playground that are counted as ten equivalent households in SHA's benefit calculations, for a total of twenty benefited households. Option 1 would therefore have an estimated cost of \$27,734 (less than Option 2) but would have a greater total cost of \$554,685. The daycare center would not be protected from highway noise under Option 2. *Staff recommends that SHA construct the Option 1 noise wall.*

US 29/Randolph Road

SHA does not propose to build a noise wall for the nine affected homeowners in NSA #1, the northeast quadrant of the interchange, because the construction costs for noise mitigation would be in excess of the \$50,000 per benefited household State feasibility threshold. The per benefited household cost would be approximately \$56,173, exceeding the threshold by \$6,173 each. The total cost would be approximately \$505,560.

Staff recommends that SHA approach the affected homeowners and inform them of the merits of contributing to the cost of the noise wall. The benefits would be in reduced exterior noise levels and probably a greater value for their homes. *If the homeowners agree to contribute their share, or some cost-sharing agreement with Montgomery County Government can be made, staff recommends that SHA build the noise wall in this area. If homeowners do not or cannot participate, staff recommends that SHA consider providing some lesser form of noise mitigation, such as the concrete fence offered to residents of the Luxmanor neighborhood on the north side of I-270 west of Old Georgetown Road.*

BACKGROUND

The Planning Board has reviewed the conceptual design for the whole US 29 corridor from Stewart Lane to the Howard County lane several times as the preliminary

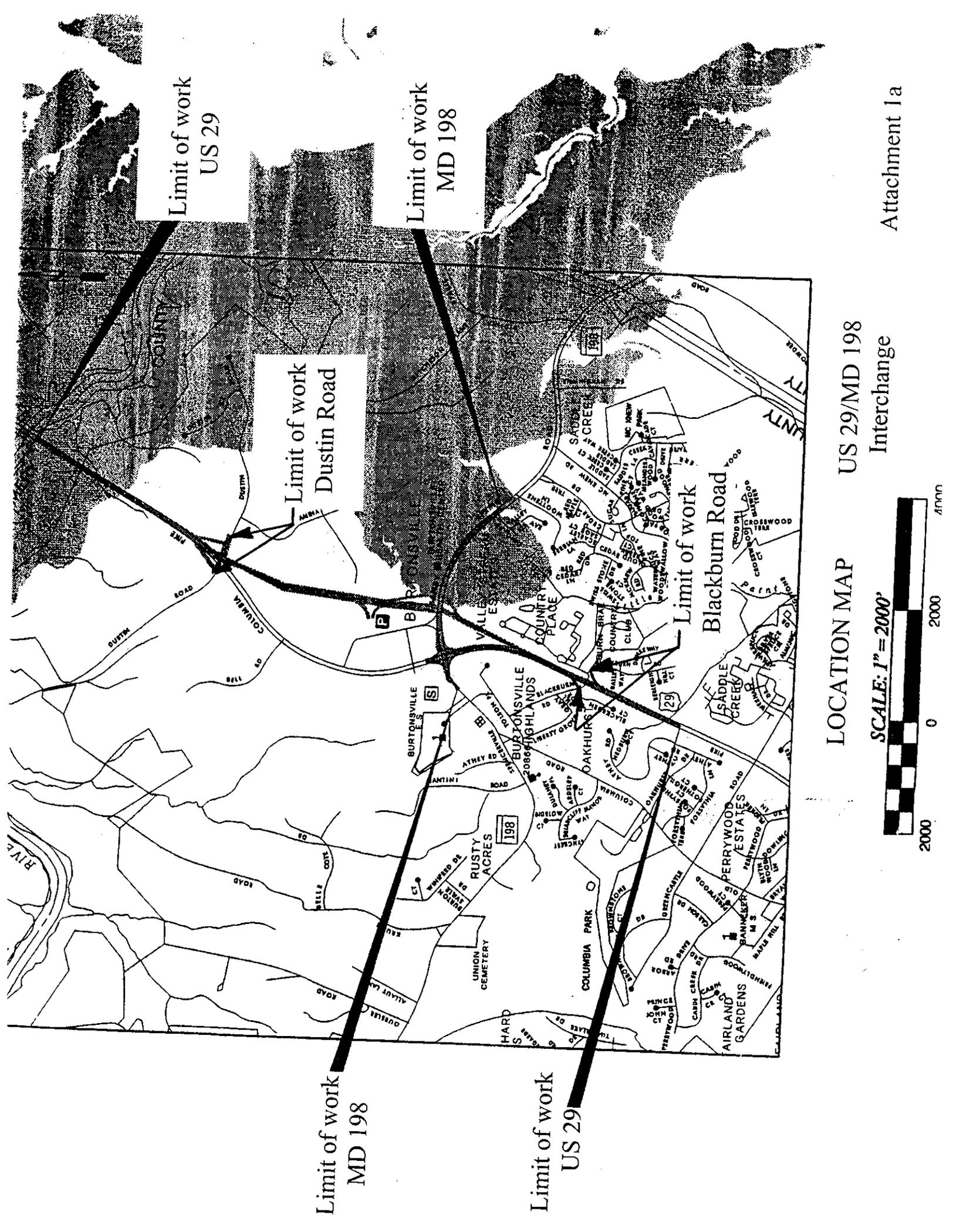
design has proceeded, including a discussion of bicyclist accommodation and bus priority lanes on June 28, 2001. The Board last reviewed the preliminary designs for the two subject interchanges on April 12, 2001. At that time, several detailed recommendations were made which are shown as Attachment 6. SHA's responses to the Board's comments are shown as Attachment 7.

In the response letter, the Board's recommendation for a grade-separation for the bikeway at Randolph Road (Recommendation A.1, paragraph 2) was not repeated, but the response states that an at-grade crossing will be provided. No design for a grade-separation is shown in the plans.

On the issue of the Patuxent Trail crossing, access would be provided across Relocated US 29 via the new Dustin Road bridge. The equestrian community and our staff find this access acceptable.

LC:cmd

MR US 29-Randolph & MD198.doc



Limit of work
US 29

Limit of work
MD 198

Limit of work
Dustin Road

Limit of work
Blackburn Road

Limit of work
MD 198

Limit of work
US 29

LOCATION MAP US 29/MD 198
Interchange



Attachment 1a

LIMIT OF WORK
US 29 SB
STA 348+50.00
US 29 NB
STA 352+00.00

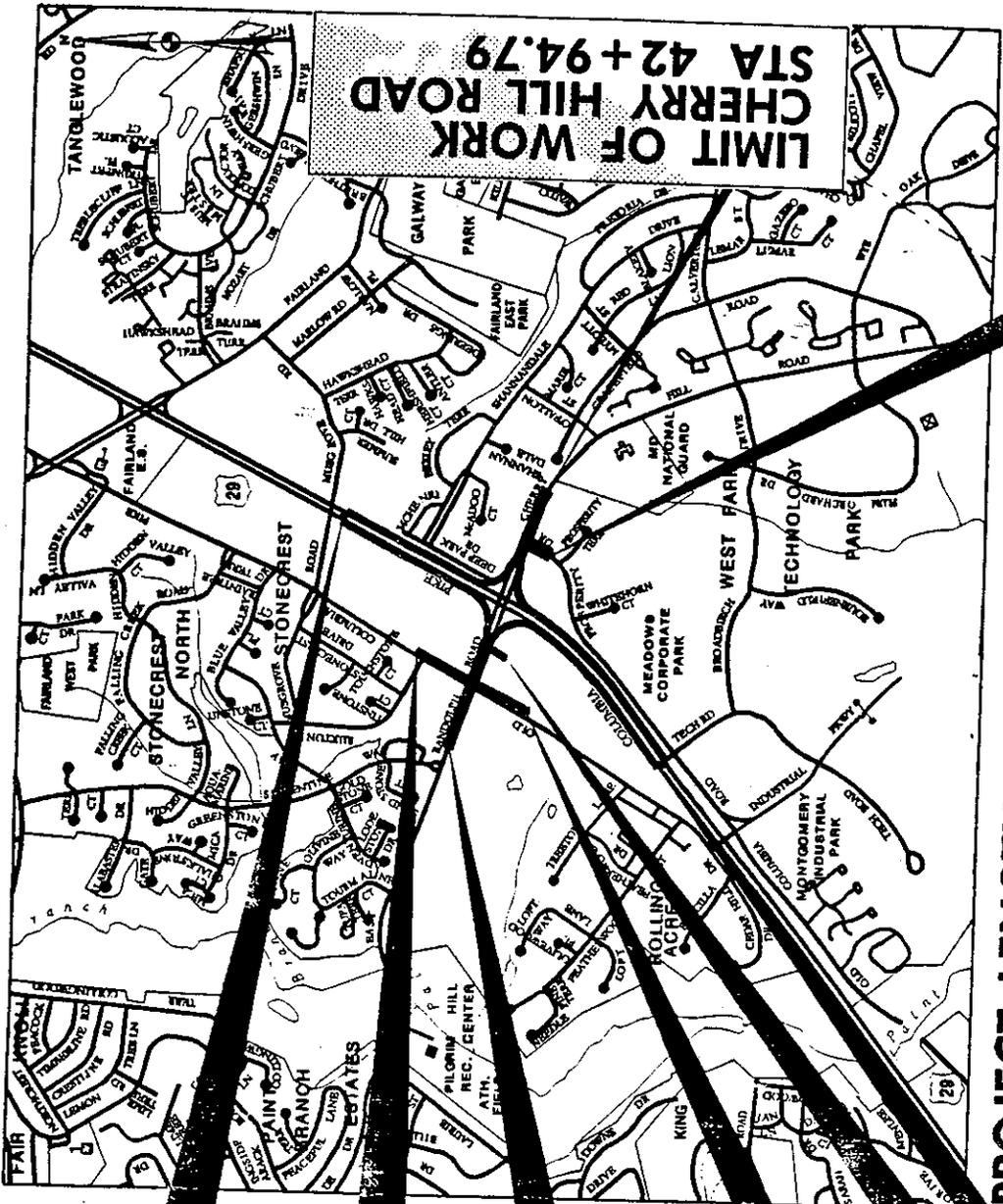
LIMIT OF WORK
OLD COLUMBIA PIKE
STA 65+50.00

LIMIT OF WORK
RANDOLPH ROAD
STA 13+44.69

LIMIT OF WORK
OLD COLUMBIA PIKE
STA 54+50.00

LIMIT OF WORK
CHURCH ENTR.
STA 72+00.00

LIMIT OF WORK
US 29
STA 314+53.91
US 29 NB
STA 315+00.00



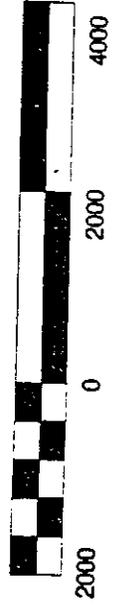
PROJECT LENGTH: = 0.87 MI

FROM TECH ROAD
TO MUSGROVE ROAD
MONTGOMERY COUNTY

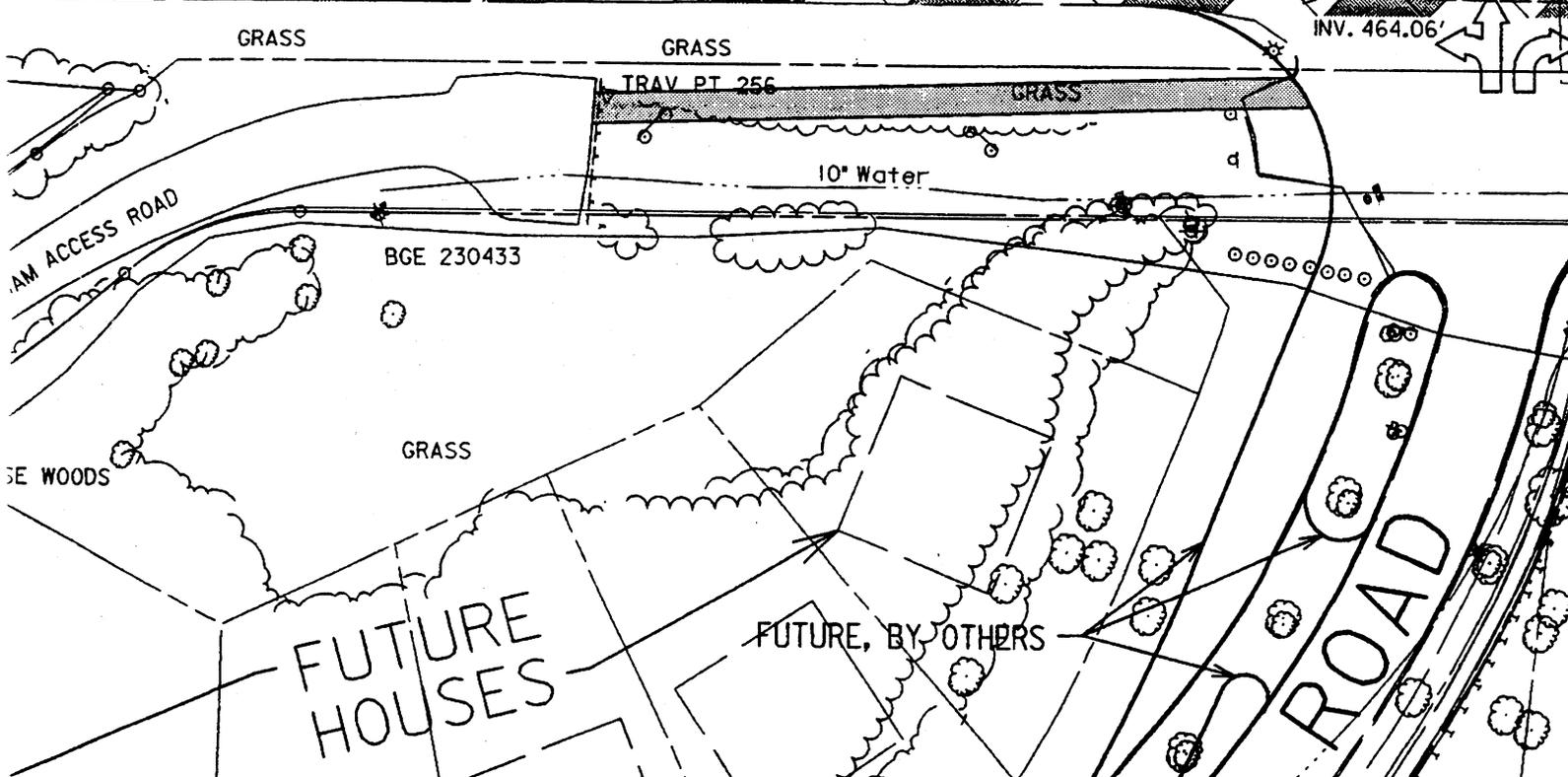
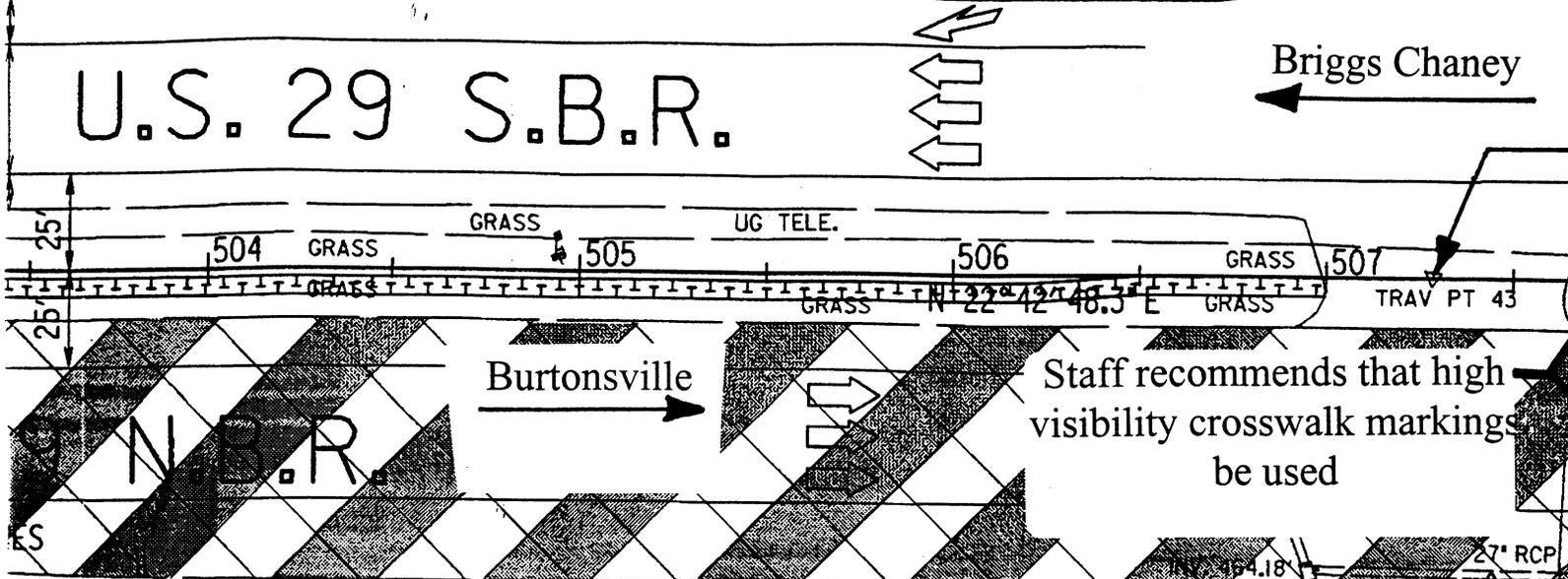
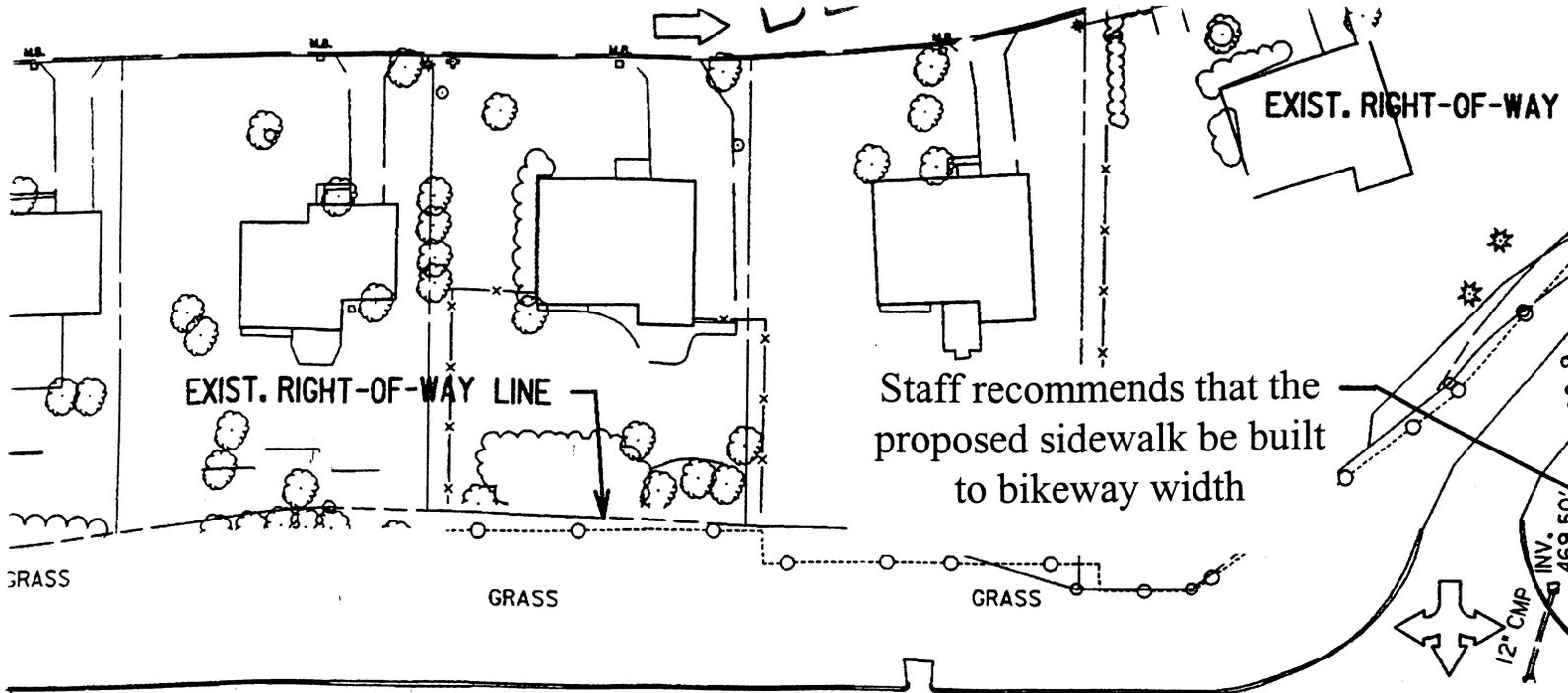
LIMIT OF WORK
PROSPERITY DRIVE
STA 57+50

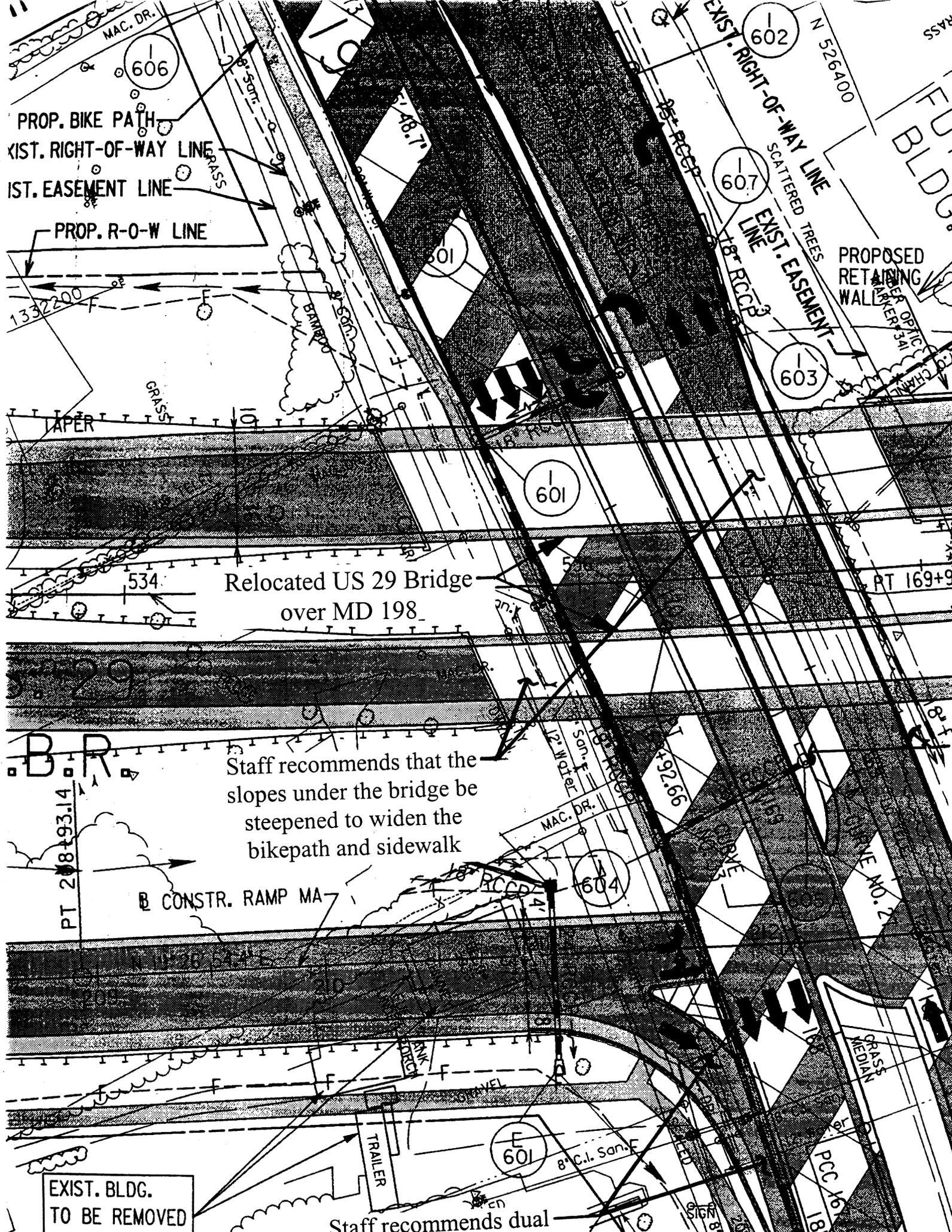
LOCATION MAP

SCALE: 1" = 2000'



US 29/Randolph Road
 Interchange





PROP. BIKE PATH

EXIST. RIGHT-OF-WAY LINE

EXIST. EASEMENT LINE

PROP. R-O-W LINE

Relocated US 29 Bridge
over MD 198

Staff recommends that the
slopes under the bridge be
steepened to widen the
bikepath and sidewalk

EXIST. BLDG.
TO BE REMOVED
(BY OTHERS)

Staff recommends dual

MAC. DR.

606

48.7'

601

601

534

PT 169+92

PT 208+93.14

CONSTR. RAMP MA

MAC. DR.

604

601

8\"/>

EXIST. RIGHT-OF-WAY LINE

602

N 526400

607

EXIST. EASEMENT LINE

603

PROPOSED RETAINING WALL

FULL BLDG.

VE NO. 2

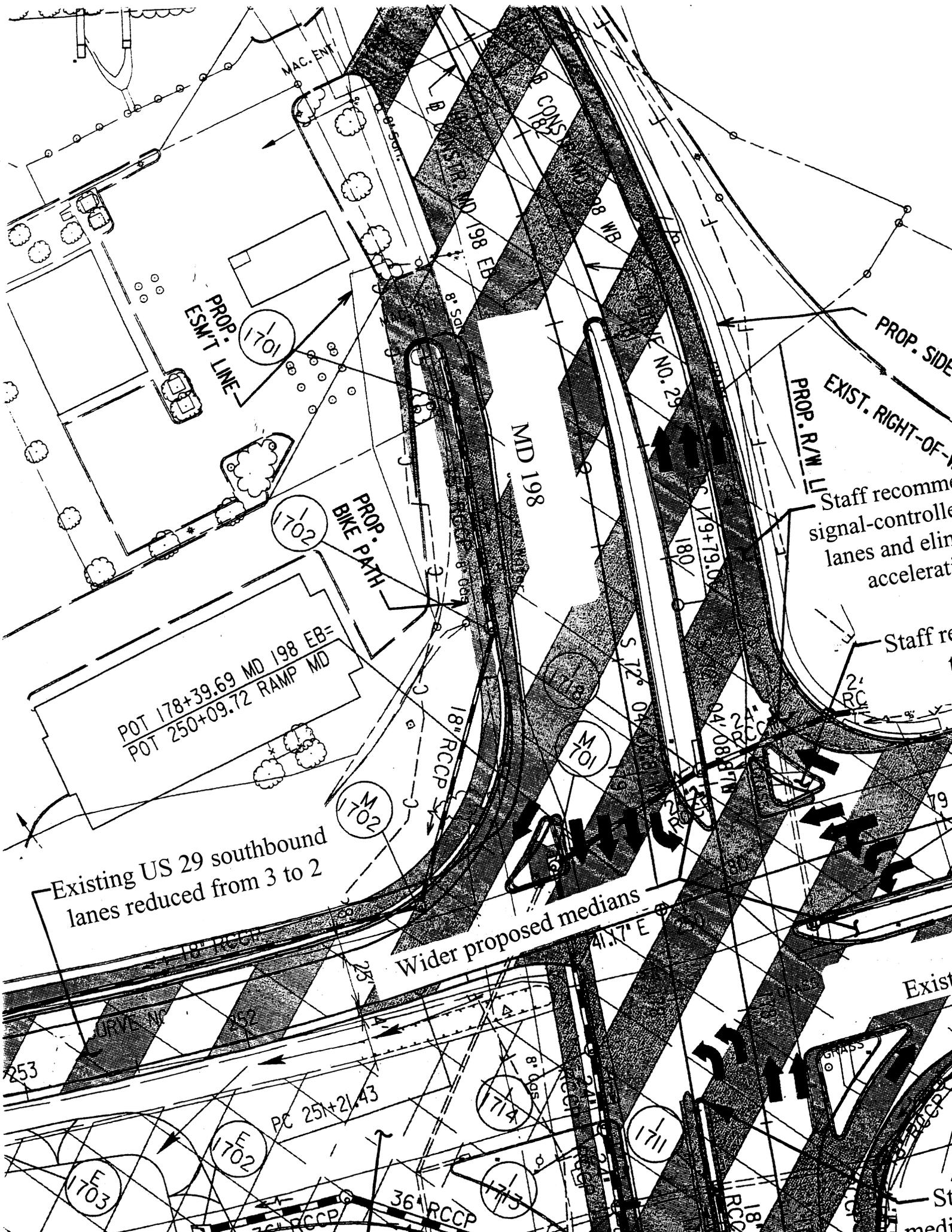
GRASS

MEDIAN

PCC

18\"/>

SIGN



POT 178+39.69 MD 198 EB=
POT 250+09.72 RAMP MD

Existing US 29 southbound
lanes reduced from 3 to 2

Wider proposed medians

Staff recommend
signal-controlled
lanes and elim
acceleration

Staff re
tr

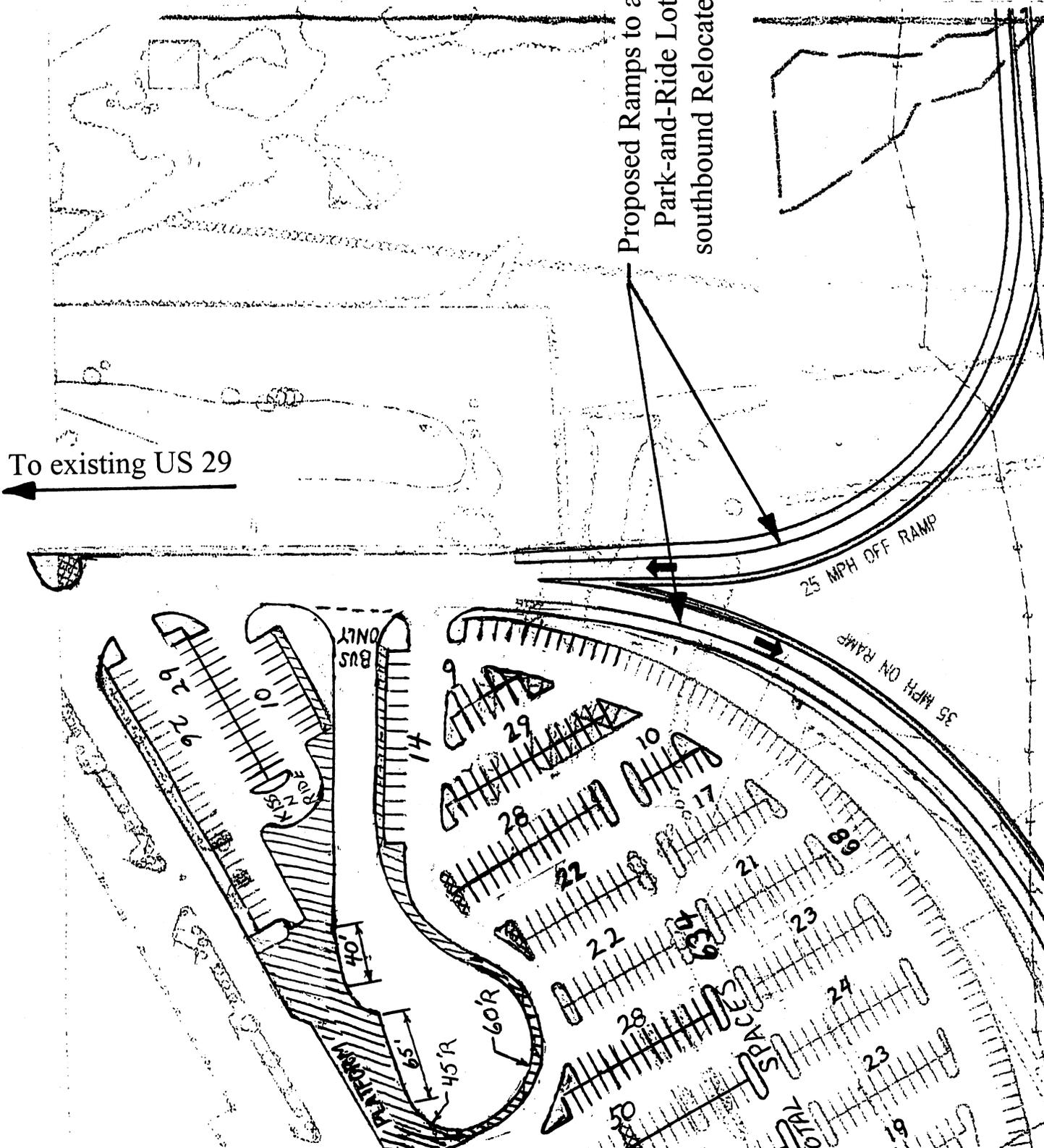
Existi

Sta
media

North

To existing US 29

Proposed Ramps to and from
Park-and-Ride Lot along
southbound Relocated US 29



MATCH LINE STA. 26+00 PS07

11E



RAMP D

RANDOLPH ROAD

EMENT FOR FINE LANDSCAPING

Proposed Underpass to accommodate future ramp from Musgrove Road

RAMP 'E'

G WALL BARRIER FACE

RAMP 'D'

BARRIER CONSTRUCTION

SB US 29

US 29 C OF CONSTRUCTION

NB US 29

Proposed Bridge over US 29

BARRIER

NG WALL WITH CONCRETE BARRIER FACE

RAMP 'A'

H 27'E 509+00 CONSTRUCTION

PROPOSED RIGHT OF WAY

RANDOLPH RD. OF CONSTRUCTION

To Old Columbia Pike

Temporary Maintenance of Permanent Utility

PROPOSED WALL WITH BARRIER FACE

RAMP C OF CONSTRUCTION

24' R.C.C.

24' R.C.C.

CHEEK WALL

18

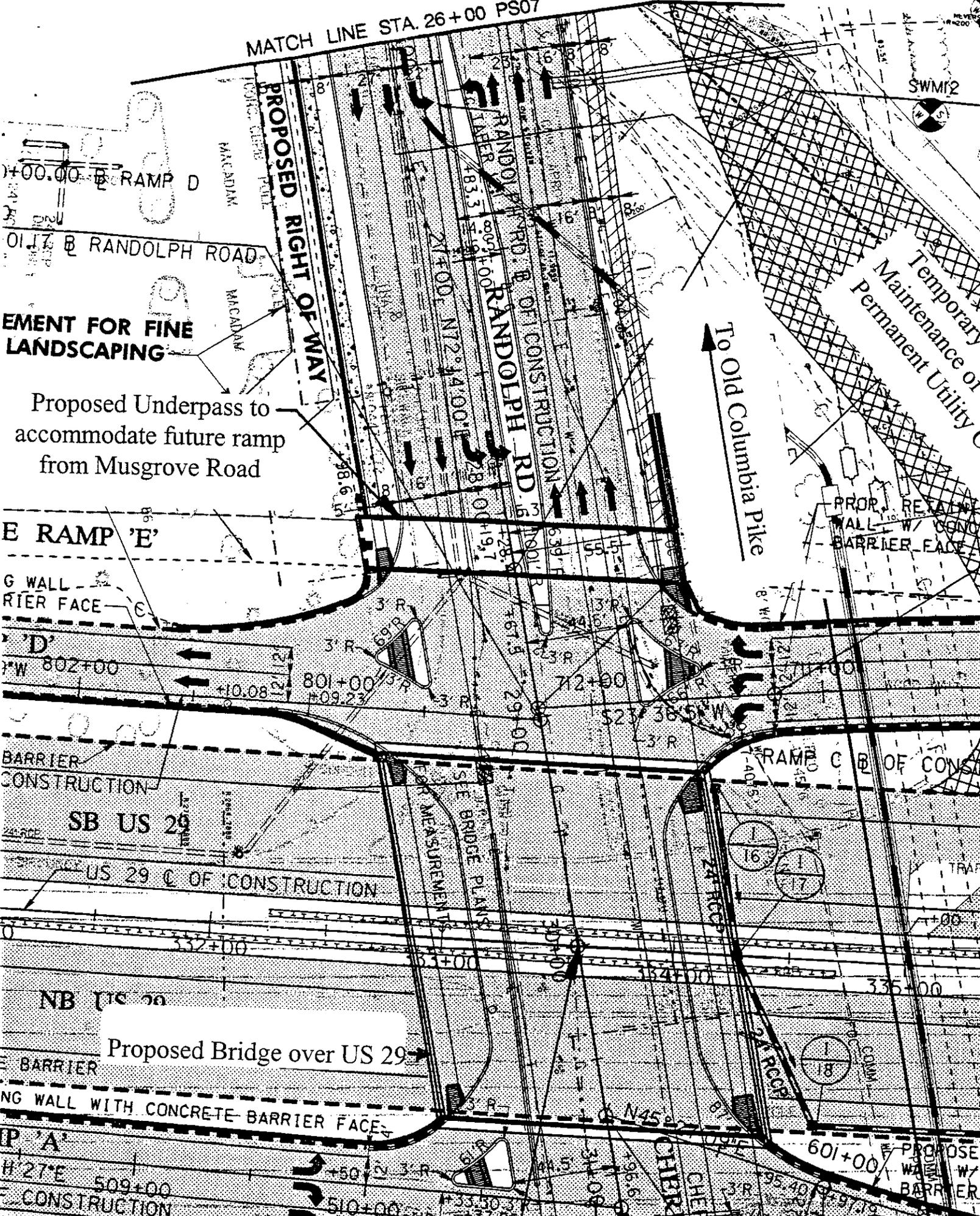
16

17

18

18

PROPOSED WALL WITH BARRIER



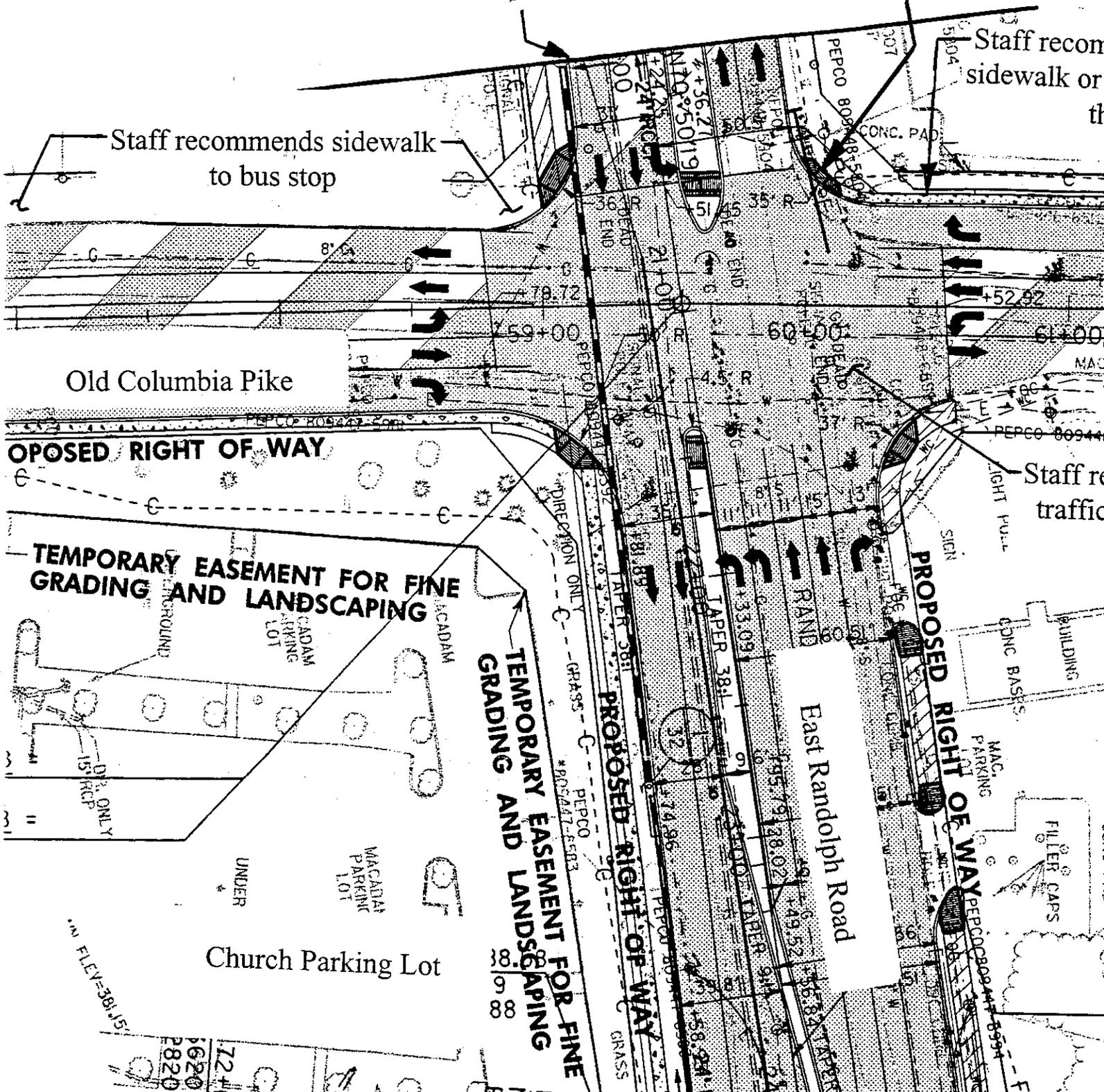
Staff recommends moving the sidewalk behind the handicap ramp where possible

Proposed right-turn lane will be added by SHA

TO ROCKVILLE

Staff recom
sidewalk or
th

Staff recommends sidewalk to bus stop



Old Columbia Pike

PROPOSED RIGHT OF WAY

TEMPORARY EASEMENT FOR FINE GRADING AND LANDSCAPING

TEMPORARY EASEMENT FOR FINE GRADING AND LANDSCAPING

PROPOSED RIGHT OF WAY

East Randolph Road

Church Parking Lot

Staff re
traffic

FLY=38.15'

72.46
620
2820

PROPOSED RIGHT OF WAY
THROUGH HIGHWAY

PROPOSED RIGHT OF WAY

Proposed US 29 Commuter
Bikeway

Staff recommends n
the pedestrian refuge
for better protect

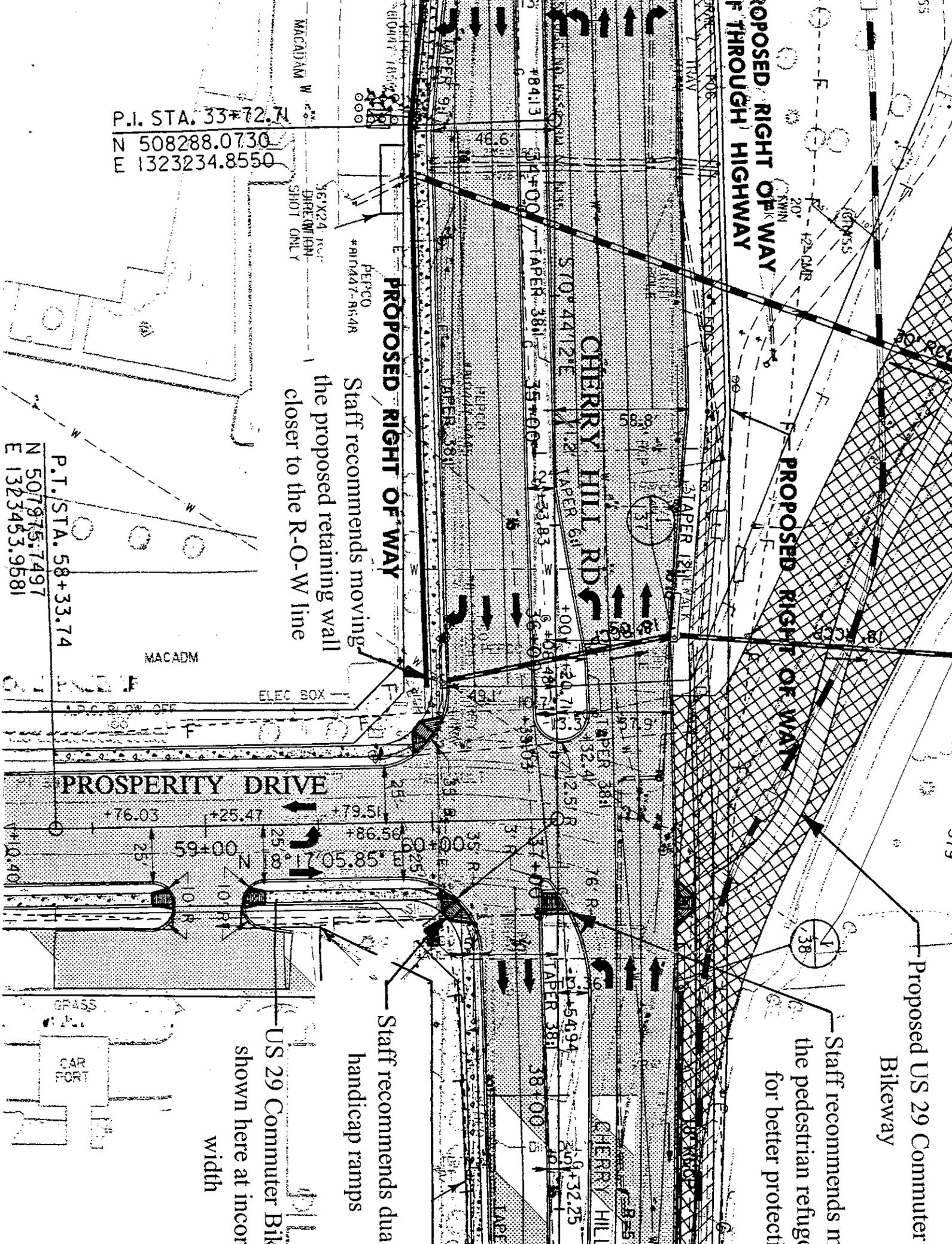
PROPOSED RIGHT OF WAY

Staff recommends moving
the proposed retaining wall
closer to the R-O-W line

Staff recommends dua
handicap ramps
US 29 Commuter Bik
shown here at incor
width

P.I. STA. 33+72.74
N 508288.0730
E 1323234.8550

P.I. STA. 58+33.74
N 507975.7497
E 1323453.9581





THE MARYLAND-NATIONAL CAPITAL PARK AND PLANNING COMMISSION

8787 Georgia Avenue • Silver Spring, Maryland 20910-3760

(301) 495-4605

Montgomery County Planning Board
Office of the Chairman

May 3, 2001

Mr. Neil J. Pedersen
Deputy Administrator for Planning and Engineering
State Highway Administration
P.O. Box 717
Baltimore, MD 21203-0717

Dear Mr. Pedersen:

At its meeting on April 12, 2001, the Montgomery County Planning Board discussed SHA's updated plans for the US 29 interchanges at Randolph Road and at MD 198. We want to thank your staff for providing us with the latest information on SHA's proposals and for participating in the discussion. Based on our review, the Planning Board, by unanimous vote, has endorsed the attached recommendations and requests that the designs of the interchanges be modified to accommodate these recommendations.

We want to make special mention of the Planning Board's strong support for the commuter bikeway and the Board's request that segments of the bikeway be built by SHA in conjunction with these interchange projects. The Board agreed that the bikeway would need to be off-road, continuous, and community-friendly. Although a primary function of this bikeway is for commuting purposes, it would also need to accommodate all types and ages of users and tie together existing communities and connect with other bikeways crossing US 29 in the area.

Staff described several options for a bikeway alignment in the Randolph Road area. We would like SHA to preserve these options in its interchange design and to allow the Board to follow up with a final recommendation on a preferred alignment after we receive SHA's environmental study for the interchange projects and after we receive information on bikeway alignments in the Briggs Chaney Road area. The Board requests that an alignment for the entire bikeway, from Industrial Boulevard to MD 198, be part of an upcoming briefing on the proposed Briggs Chaney Road interchange.

The Board discussed the importance of the Federal Transportation Equity Act for the 21st Century and the Federal Highway Administration Guidance, noting that states are urged to construct bikeways in conjunction with highway projects that receive federal aid. Assuming that the US 29 interchange projects will be using federal funds, the Board expects that it would be SHA's responsibility to build an accompanying commuter bikeway, as recommended in the Fairland Master Plan.

The Master Plan's criterion of "minimizing conflicts between bicyclists and vehicles at interchanges" is especially important and carries considerable weight in choosing the preferred alignment for the commuter bikeway. Considering that we can justify the eventual expenditure of close to \$50,000,000 to create an interchange at Randolph Road for motorists, I would think that you would agree that it is fiscally prudent to use a modest 1% - 2% of that amount to accommodate as safely as possible the needs of bicyclists at that busy location.

With regard to other aspects of SHA's plans, the Board is very pleased that SHA was able to propose a more compact interchange at MD 198. The previously proposed configuration of the interchange and its compatibility with the surrounding area was a major issue for the community. SHA deserves a lot of credit for working with our staff and the area's citizens to create a more acceptable design.

Finally, the Board agreed that SHA's proposed construction of wider approaches on Old Columbia Pike at its intersection with Randolph Road should not be deferred. Although the widening is not an immediate need based on near term traffic volumes, it appears that the intersection would experience over-capacity conditions within the next 5-10 years. The Board considered that this time frame is soon enough to warrant the widening in conjunction with the Randolph Road interchange project.

Thank you for considering the Planning Board's enclosed recommendations and for sharing our vision for US 29 -- a multi-modal transportation artery that serves as a unifying element for the area and is built at a scale that is compatible with the surrounding communities. The Board appreciates your continuing coordination with our staff, particularly with regard to our recommendations for the commuter bikeway, and looks forward to discussing with you proposals for the Briggs Chaney interchange in a few months.

Sincerely,



William H. Hussmann
Chairman

WHH:AH:cmd
Encl:

April 12, 2001

**MONTGOMERY COUNTY PLANNING BOARD RECOMMENDATIONS TO
SHA FOR INTERCHANGES AT RANDOLPH ROAD AND AT MD 198**

A. Randolph Road interchange

- 1. Commuter bikeway. In conjunction with the Randolph Road interchange project, construct a portion of the proposed US 29 commuter bikeway in the vicinity of the interchange. The bikeway needs to be off-road, continuous, and community-friendly. While a primary function of this bikeway is for commuting purposes, it also needs to be suitable for all types and ages of users. It should also connect with the proposed bikeway along Randolph Road/Cherry Hill Road and, if feasible, should tie together existing communities.**

Continue to include in the design process for the interchange several options for constructing a grade-separation between the bikeway and Randolph Road/Cherry Hill Road. A grade-separation meets the criterion of "minimizing conflicts between bicyclists and vehicles at interchanges," which is stated in the Fairland Master Plan.

Coordinate with staffs of M-NCPPC and DPWT to determine a preferred bikeway alignment at Briggs Chaney Road and also at Randolph Road, consistent with the above objectives.

2. Priority bus lanes. In the "Maintenance of Traffic" plans, show how buses would continue to have priority over cars. Formulate such plans in consultation with staffs of M-NCPPC, DPWT, and bus operators.
3. Visual aspects. Continue to coordinate with M-NCPPC staff on reducing the visual impact of the interchange through aesthetic treatments, landscaping, and other means. Prepare a tree conservation plan for the northeast quadrant of the interchange.
4. Old Columbia Pike/Randolph Road intersection. Proceed with SHA's proposed widening of all approaches to the intersection.

B. MD 198/Dustin Road interchange

1. Roadway features. Proceed with the latest SHA proposal for the interchange, but make the following adjustments to the road elements:

- a. Control by a traffic signal the right turns at the northbound exit ramp at MD 198.
 - b. At the revised at-grade intersection of MD 198 and current US 29, reduce the total number of travel lanes on the southbound approach from six down to five, including two signal-controlled right turn lanes.
 - c. Provide a landscaped median with street trees on MD198 east of existing US29 to the greatest extent possible.
 - d. On the north leg of the existing US29/MD 198 intersection, provide a wider median to allow street trees to just north of the access road to the Burtonsville Park and Ride Lot. Along the current US 29, between MD 198 and Dustin Road, provide a curb, allowance for an off-road bikeway as specified in the Master Plan, enhanced landscaping, stop-controlled right turns, and 6-foot wide pedestrian refuges in the median.
2. Commuter bikeway. Proceed with the latest SHA proposal to construct a portion of the proposed US 29 commuter bikeway as an off-road facility on the west side of US 29 between MD 198 and Blackburn Road and generally parallel to the southbound ramp

from MD 198. Continue to coordinate with staffs of M-NCPPC and DPWT on the design of the bikeway.

3. Park-and-ride lot and bus priority lanes. Proceed with the latest SHA proposal to expand the Burtonsville Park-and-Ride Lot by approximately 200 spaces and to construct ramps between relocated US 29 and the Lot. In the "Maintenance of Traffic" plans, show how buses would continue to have priority over cars. Formulate such plans in consultation with staffs of M-NCPPC, DPWT, and bus operators.

4. Patuxent Trail. At the crossing of relocated US 29 and the proposed Patuxent Trail, provide grade separated-access, with an opening at the face of the tunnel or underpass of 12' x 12'. Coordinate with staffs of M-NCPPC and DPWT on the design of the grade-separated access.

C. Blackburn Road intersection

Proceed with the latest SHA proposal to signalize the existing Blackburn Road intersection. Continue to work with staffs of M-NCPPC and DPWT to determine the best configuration for a future interchange at this location.



Maryland Department of Transportation
State Highway Administration

Parris N. Glendening
Governor
John D. Porcari
Secretary
Parker F. Williams
Administrator

May 29, 2001

RECEIVED
010971
JUN 01 2001

Mr. William H. Hussmann
Chairman
Montgomery County Planning Board
8787 Georgia Avenue
Silver Spring MD 20910

OFFICE OF THE CHAIRMAN
THE MARYLAND NATIONAL CAPITAL
PARK AND PLANNING COMMISSION

Dear Mr. Hussmann: Bill

Thank you for your recent letter regarding the April 12, 2001, meeting of the Montgomery County Planning Board. We appreciate the effort that you and your staff have made in helping to work through the issues on these projects.

The environmental re-evaluation for the US 29 corridor has been submitted to Federal Highway Administration (FHWA). The environmental re-evaluation will include the first two projects, US 29 at Randolph Road and US 29 from Blackburn Road to Dustin Road. We will gladly provide your office with a copy of the report once it has been reviewed by FHWA. We anticipate a response from FHWA by the end of June.

The State Highway Administration has completed the requested studies on the commuter bikeway between MD 198 and Tech Road. We will be prepared to present this information to the Board at the June 28 meeting. We concur with the concept of providing a "continuous, and community friendly" facility. As will be presented to the Board in June, our current concepts propose connecting existing bicycle facilities on the east side of US 29. This would provide a facility that would connect the communities, schools and facilities as well as provide connections to the cross streets and a connection to Old Columbia Pike. The State Highway Administration feels that at-grade, signal controlled crossings will be a safe alternative.

Listed below are the staff recommendations along with our comments on these recommendations.

My telephone number is _____

Maryland Relay Service for Impaired Hearing or Speech
1-800-735-2258 Statewide Toll Free

Mailing Address: P.O. Box 717 • Baltimore, MD 21203-0717
Street Address: 707 North Calvert Street • Baltimore, Maryland 21202

A. Randolph Road Interchange

1. **Commuter Bikeway.** In conjunction with the Randolph Road interchange project, construct a portion of the proposed US 29 Commuter bikeway in the vicinity of the interchange. The bikeway needs to be off-road, continuous, and community friendly. While a primary function of this bikeway is for commuting purposes, it also needs to be suitable for all types and ages of users. It should also connect with the proposed bikeway along Randolph Road/Cherry Hill Road and if feasible, should tie together existing communities. Continue to coordinate with staffs of M-NCPPC and DPWT to determine a preferred bikeway alignment at Briggs Chaney Road and also at Randolph Road, consistent with the above objectives. **As discussed above, we have completed our studies on the bikeway for the corridor and will be prepare to present that information at the June 28th meeting. As discussed at the Board meeting, SHA has added a bikeway connection from Deer Park Road to Prosperity Drive. This would provide an at-grade crossing at Cherry Hill Road and connect the path to the existing path along Cherry Hill Road/Randolph Road.**
2. **Priority bus lanes.** In the "Maintenance of Traffic" plans, show how buses would continue to have priority over other vehicles. Formulate such plans in consultation with staffs of M-NCPPC, DPWT, and bus operators. **As discussed at the meeting, SHA will try to maintain the existing outside shoulders where feasible but during some phases of construction the outside shoulders may be eliminated. We have been and will continue to coordinate with the bus operators as well as MNCPPC staff and MCDPW&T.**
3. **Visual aspects.** Continue to coordinate with M-NCPPC staff on reducing the visual impact of the interchange through aesthetic treatments, landscaping, and other means. Prepare a tree conservation plan for the northeast quadrant of the interchange. **SHA is currently in the process of developing aesthetic guidelines for this corridor. We will continue to coordinate with MNCPPC staff on these guidelines. We understand the communities' concerns with regard to the trees in the northeast quadrant of the interchange. As is required by Department of Natural Resources, we will be developing plans that will minimize the forested areas impacted and provide additional landscaping when the project is complete.**
4. **Old Columbia Pike/Randolph Road intersection.** Proceed with SHA's proposed widening of all approaches to the intersection. **This work will be included in the project.**

B. MD 198/Dustin Road Interchange

1. Roadway Features. Proceed with the latest SHA proposal for the interchange, but make the following adjustments to the road elements:
 - a. Control by a traffic signal the right-turns at the northbound exit ramp to MD 198. **This recommendation would lower the level of service that we are trying to achieve along MD 198. As we move forward with design we will continue to address ways to provide a safe crossing for pedestrians without making the right turn lane signal controlled.**
 - b. At the revised at-grade intersection of MD 198 and current US 29, reduce the total number of travel lanes on the southbound approach from six to five, which would include two signal-controlled right-turn lanes. **Changing the lane configuration at this intersection from a free right to a signal controlled double right will lower the level of service that we are trying to achieve along MD 198. We are proposing a five-lane section at this intersection, with a triple left, a through lane and a free right turn lane. As we move forward with design we will continue to address ways to provide a safe crossing for pedestrians without making the right turn lane signal controlled.**
 - c. Provide a landscaped median with street trees on MD 198 east of existing US 29 to the greatest extent possible. **From the existing intersection to the bridge for US 29 over MD 198 the median will not be wide enough to accommodate street trees. In order to make the median wide enough, additional right-of-way would be required on the outside along MD 198, more widening would be required along MD 198 and the bridge over MD 198 would need to be longer.**
 - d. On the north leg of the existing US 29/MD 198 intersection, provide wider landscaped median with street trees to just north of the access road to the Burtonsville Park-n-Ride lot. Along the existing US 29, between MD 198 and Dustin Road, provide a curb, space for an off-road bikeway as recommended in the Master Plan, enhanced landscaping, and a 6-foot wide (minimum)

pedestrian refuges in the median. Make construction of the off-road bikeway on existing US 29 part of the Burtonsville streetscaping project. **SHA is planning to construct the interchange and relocation of US 29 first, which will allow MCDPW&T to complete the study on the "Ring Road" that may tie into existing US 29. After the interchange construction is complete and the Ring Road studies are complete, any improvements along existing US 29 could be included in a future streetscape project that either could be part of or separate from the MD 198 Neighborhood Conservation project. There will be some work on the median at the intersection of existing US 29 and MD 198 to reconfigure the lanes. We will provide landscaping where feasible at this intersection.**

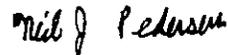
2. **Commuter Bikeway.** Proceed with the latest SHA proposal to construct a portion of the proposed US 29 commuter bikeway as an off-road facility on the west side of US 29 between MD 198 and Blackburn Road and generally parallel to the southbound ramp from MD 198. Continue to coordinate with staffs of M-NCPPC and DPWT on the design of the bikeway. **This has been added to the project.**
3. **Park-and-ride lot and bus priority lanes.** Proceed with the latest SHA proposal to expand the Burtonsville Park-and-Ride lot by approximately 200 spaces and to construct ramps between southbound relocated US 29 and the Lot. In the "Maintenance of Traffic" plans, show how buses would continue to have priority over other vehicles. Formulate such plans in consultation with staffs of M-NCPPC, DPWT, and bus operators. **The Park-n-ride ramps and expansion have been added to the project. SHA will continue to coordinate with bus operators. During construction, there should be minimal disruption to the buses since most of the construction is off of existing US 29 and the shoulder use today does not begin until after the MD 198 intersection.**
4. **Patuxent Trail.** At the crossing of relocated US 29 and the PEPCO transmission line right-of-way, provide grade separated access for the proposed Patuxent Trail, with an opening at the face of the tunnel or underpass of 12' x 12'. Coordinate with staffs of M-NCPPC and DPWT on the design of the grade separated access. **We are in the process of examining the alternatives for this underpass as well as current usage of this trail. We hope to be able to address this issue at the June 28 Planning Board meeting.**

Mr. William H. Hussmann
Page Five

- C. Blackburn Road Intersection. Proceed with the latest SHA proposal to signalize the existing Blackburn Road intersection. Continue to work with staffs of M-NCPPC and DPWT to determine the best configuration for a future interchange at this location. **We have added the signal at Blackburn Road to the MD 198 project along with the indirect left turn ramps. We will continue to study alternative for an interchange at this intersection and coordinate with staff.**

Thank you again for your input and coordination on these projects. If you have any questions, please feel free to contact Ms. Melinda Peters, Project Manager for the US 29 Interchange Projects, at 410-545-8772, 1-888-228-5003, or mpeters@sha.state.md.us. She will be happy to assist you. Of course, you should always feel free to contact me directly.

Sincerely,



Neil J. Pedersen
Deputy Administrator for
Planning and Engineering

cc: Ms. Melinda Peters, Project Manager, State Highway Administration

