




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


MCPB
ITEM NOS. 617
2-15-07


February 2, 2007



MEMORANDUM

TO: Montgomery County Planning Board

VIA: Gwen Wright, Acting Chief 
Countywide Planning Division

Richard C. Hawthorne, Chief 
Transportation Planning

Sue Edwards, Team Leader for the I-270 Corridor 
Community-Based Planning

FROM: Michael Zamore: 301-495-2106, Environmental Planning and 
Larry Cole: 301-495-4528, Transportation Planning 

PROJECT: Woodfield Road (MD124) Widening (Phase I)
From South of Airpark Road to Rosewood Manor Lane
Contract No. MO 6325171

REVIEW TYPE: 1. Preliminary Water Quality Plan
2. Mandatory Referral No. 06815-SHA-1

APPLICANT: Maryland State Highway Administration

APPLYING FOR: Plan Approval

COMMUNITY-BASED PLANNING TEAM AREAS: Georgia Avenue and I-270 Corridor

This combined staff report provides recommendations on the Water Quality Plan and Mandatory Referral for Phase I of the Woodfield Road (MD124) Widening Project (see Attachment 1: Location Map). This is an important project that is consistent with the area Master Plans, will improve mobility, and will accommodate approved and planned development.

RECOMMENDATIONS:

Preliminary Water Quality Plan

Staff recommends that the Board approve the Preliminary Water Quality Plan for the proposed project with the following conditions:

1. Provide sufficient information for staff to perform a Final Water Quality Plan review before the start of construction.
2. Conform to the conditions stated in the Montgomery County Department of Permitting Services (DPS) letter dated December 9, 2005 approving the elements of the SPA Preliminary Water Quality Plan under its purview (see Attachment 2).
3. Plant street trees and other landscaping materials between the roadway and sidewalk/shared use path and in the median wherever possible, to allow for better shading of the roadway and to reduce the warming of storm water runoff. Use native species of plant materials wherever possible.

Mandatory Referral No. 06815-SHA-1

Staff recommends that the Board approve the Mandatory Referral of the proposed project with the following comments to SHA:

1. Provide median pedestrian refuges wherever possible at the intersections along Woodfield Road.
2. Confirm that the design using two crosswalks at the right turn in the northeast corner of MD124 at Airpark Road is safe for pedestrians. Reorient the crosswalk on the west leg of Airpark Road to be at more of a right angle to the southern curb of Airpark. Widen the sidewalks adjacent to the curb on Airpark Road by two feet to meet American Association of State Highway and Transportation Officials(AASHTO) recommendations.
3. Provide a greater offset of the proposed shared use path from the roadway just north of Cypress Hill Drive and reduce the jog in the alignment.
4. Provide an ADA-accessible crossing at Pompano Terrace or provide signage to prohibit the crossing and direct pedestrians to the nearest safe crossing.
5. Provide a handicap ramp and a short section of sidewalk at the southeast corner of Rosewood Lane and provide dual handicap ramps at the southwest corner to provide shorter, safer pedestrian crossings.

6. Provide lighting at the unsignalized intersections on this project to improve safety, particularly pedestrian safety.
7. No storage of material and equipment will be allowed on Park property without prior consent from the Park Manager or Park Inspector.
8. Safeguard the health of large trees to remain in the public right-of-way, with particular attention to those between Stations 1156 and 1161.

PREVIOUS BOARD ACTION AND SUBSEQUENT MASTER PLAN GUIDANCE: The Planning Board reviewed the Project Planning Study on December 7, 2000, which included two build alternatives: a four-lane section and a six-lane section. The Board concurred with staff that both alternatives were consistent with the 1985 Gaithersburg Vicinity Master Plan and the 1985 Upper Rock Creek Master Plan, and that the four-lane alternative was preferred. The County Council and DPWT preferred a six-lane section and SHA chose to pursue a widening to six lanes.

The Upper Rock Creek Plan was subsequently amended in April 2004 and recommends that Woodfield Road be constructed as six lanes. The project is consistent with the latest Master Plan guidance.

PROJECT DESCRIPTION

Woodfield Road forms the border between the Gaithersburg Vicinity and Upper Rock Creek Master Plans and is the boundary of the County's Priority Funding Area (PFA) in this area. The west side of Woodfield Road (in the Gaithersburg Vicinity Master Plan area) is in the PFA. The east side (in the Upper Rock Creek Master Plan) is not.

This project would:

- Widen a 1.7-mile-long segment of Woodfield Road (MD124) between 900 feet south of Airpark Road to Rosewood Manor Lane, to six lanes. Fifteen-foot wide curb lanes would be provided to accommodate on-road bicyclists.
- Replace the existing sidewalk along the west side of Woodfield Road from the southern project limit to Fieldcrest Road with an eight-foot-wide shared-use path and extend it to the northern project limit at Rosewood Manor Lane, an additional 1,600 feet.
- Replace the existing sidewalk along the east side of Woodfield Road from the southern project limit to just north of Cypress Hill Drive with a five-foot-wide sidewalk and extend it to Fieldcrest Road, an additional 4,100 feet.
- Construct 4,154 linear feet of eight-foot-high noise walls.

STAFF ANALYSIS

Roadway

The existing roadway varies from four through lanes at the southern project limit to two through lanes at the northern end. This project would widen the roadway to a consistent six-lane section. The wider roadway would improve conditions for current traffic, as well as accommodate future growth. The 2005 average daily traffic (ADT) on MD124 was 32,250; the forecast ADT for 2025 is 56,250, reflecting traffic growth of 74% in that time frame.

Congestion at two major intersections within the project limits, Airpark Road and Fieldcrest Road, would be reduced. A 2005 traffic count showed that the Fieldcrest Drive intersection had a CLV of 1620, compared to the area standard of 1450. The 2002 count for the Airpark Road intersection showed that it was operating near capacity, but no new data is available to reflect increased traffic demand.

A new traffic signal would be installed at the Hadley Farms Drive (South)/Barcellona Drive intersection, where the Judith A. Resnik Elementary School is in the northwest quadrant.

Lane Width

Left-turn lanes on Woodfield Road would be twelve-feet-wide. Fifteen-foot-wide curb lanes would be provided to accommodate on-road bicyclists.

All other through lanes would be eleven feet wide. Staff notes that the State's decision to construct eleven-foot-wide through lanes on a major highway with a 45 mph design speed in a relatively unconstrained right-of-way is in line with the proposed County Road Code change for "urban" Major Highways.

Bicyclist Accommodation

Both on-road and off-road bicyclists would be well accommodated via the wide curb lanes and shared-use trail.

Pedestrian Accommodation

Pedestrians would be well accommodated along Woodfield Road via the sidewalk and shared-use path, but staff has concerns about some of the intersections. In general, median refuges would not be provided at major intersections and the intersection designs accommodate wider-than-necessary turns, making it more likely that vehicles will travel faster through the intersections, but giving pedestrians no refuge from this traffic. Staff recommends that median refuges be provided wherever possible.

At Airpark Road

The crosswalk treatment at the north leg of MD124 at Airpark Road is unusual since the crosswalk across MD124 does not lead to the traffic island but instead presents two crosswalks

for right-turning drivers to look out for (see Attachment 3). Staff recommends that SHA confirm that this is a safe design.

The crosswalk on the west leg of Airpark Road should be brought to more of a right angle to the south curb of Airpark so that the crossing distance is as short as it can reasonably be. The median should be extended to provide a pedestrian refuge.

The sidewalks on Airpark Road west of the MD124 intersection that are proposed immediately adjacent to the curb should be widened by two feet to meet AASHTO recommendations.

At Cypress Hill Drive

Staff believes that the proposed shared use path just north of Cypress Hill Drive is unnecessarily close to the curb and has an unnecessary jog in the alignment (see Attachment 4). We recommend that the offset should be increased and the jog eliminated.

At Hadley Farms Drive (South)/Barcellona Drive

The new traffic signal would improve pedestrian safety and accommodation at this intersection next to the elementary school.

At Pompano Terrace

The design of this intersection is called a Maryland "T" and is intended to improve the safety of drivers making left turns to and from Pompano Terrace (see Attachment 5). The problem is that this design does not accommodate pedestrians well and does not accommodate handicapped pedestrians at all. If the legal pedestrian crossing of MD124 at Pompano Terrace is not going to be made ADA-accessible and/or SHA believes that it would be unsafe for pedestrians to cross at this location, the crossing should be prohibited by means of signage that directs pedestrians to a safe crossing.

At Rosewood Lane

A handicap ramp and a short section of sidewalk is needed at the southeast corner of the Rosewood Lane intersection to provide an ADA-accessible crossing of MD124; dual handicap ramps are needed at the southwest corner (see Attachment 6).

Noise walls

Four segments of eight-foot-high noise walls would be constructed along each side of Woodfield Road between Cypress Hill Drive and Fieldcrest Road, for a total length of 3,962 linear feet, and along the south side of Fieldcrest Road east of Woodfield Road (a length of 192 feet). The walls would be constructed two to three feet behind the proposed sidewalks/shared use paths. These walls are not intended to mitigate all of the noise in excess of the standard but would provide at least a 5 dB reduction. The noise walls would be constructed of wood or concrete, but the exact details will be determined by the design-build contractor. This information was presented to

residents prior to their vote on the walls. The vote required 75% concurrence from abutting homeowners on each wall; all of the walls were approved.

Landscaping

The landscape concept for Woodfield Road would generally be as follows:

- Shade trees planted between the sidewalk/shared use path and the roadway
- Shade trees and a mix of flowering trees and shrubs planted in the median
- Shade trees, evergreen trees, and a mix of flowering trees and shrubs between the sidewalk/shared use path and abutting properties

Staff recommends that native species be used where possible.

Lighting

Pedestrian lighting will be designed to light the sidewalk and shared use path to Illuminating Engineering Society (IES) standards, partly funded by Montgomery County.

SHA's policy is not to provide continuous lighting along roadways; they generally provide lighting only at signalized intersections. On this project, the signalized intersections are Airpark Road, Rickenbacker Drive/Cypress Hill Drive, Fieldcrest Road, and at Hadley Farms Drive (South)/Barcellona Drive.

As noted during the Board's review of the MD355/Montrose Parkway interchange, SHA's lighting policy is insufficient to meet the safety needs of the general public in urban areas. Most of the Montgomery County's pedestrian fatalities occur on State highways. A significant percentage of those fatalities have occurred during the early morning and evening hours in areas when the low level of lighting was indicated as a factor.

While staff believes that SHA should change its policy to conform to current AASHTO recommendations for continuous lighting, we recommend that at a minimum all of the intersections on this project be lighted, not just the signalized ones. Pedestrians have the right-of-way at unsignalized intersections but their safety is endangered if they cannot be seen by drivers while crossing at night. The intersections that are not currently proposed to be lighted are Cliff Pine Drive/Brenish Drive (North), Pompano Terrace, and Rosewood Manor Lane

Park Impact

The project will have a minor impact on Rock Creek Stream Valley Park, located at the southeast corner of the intersection of MD 124 at Airpark Road, as follows:

- 3171 sq. ft or 0.073 acres to be acquired in fee simple for roadway and sidewalk construction
- 799 sq ft or 0.018 acres for a perpetual easement for an existing drainage outfall
- 3699 sq. ft. or 0.0849 for a revertible easement for the roadway supporting slope, and

- 1254 sq ft or 0.0288 acres for a temporary easement to provide room for the contractor to work, put in necessary erosion and sediment control devices, etc.

A Park permit will also be required for work on park property.

Forest Conservation Law Compliance

The project has an exemption (No. 42007153E issued on January 11, 2007) from forest conservation. The exemption was granted under Section 22A-5(e) of Forest Conservation Law: a State or County highway construction activity that is subject to Section 5-103 of the Natural Resources Article of the Maryland Code, or Section 22A-9. Our review of the 30% design plans for the roadway shows that forest and woodland impacts will be under one acre. This requires SHA to obtain only a Roadside Tree Care Permit from the State Department of Natural Resources (DNR). The plans show that some large trees along the alignment will be affected. We encourage SHA to take all necessary precautions, without compromising safety, to preserve large trees in the road ROW especially between Stations 1156 and 1161.

Water Quality Plan Requirements

The project area forms part of the western boundary of the Upper Rock Creek Special Protection Area. Section 8 of the Water Quality Inventory of Montgomery County Executive Regulation 29-95 – *Water Quality Review for Development in Designated Special Protection Areas*, requires the preparation of water quality plans. Under the SPA law, Montgomery County Department of Permitting Services (DPS) and the Planning Board have different responsibilities in the review of the water quality plan. DPS reviews and conditionally approves the elements of the final water quality plan under its purview (e.g. storm water quality and quantity control, sediment and erosion control), while the Planning Board determines whether the site imperviousness, environmental guidelines for special protection areas, and forest conservation requirements, have been satisfied.

Standard practice would be to review both the preliminary and final Water Quality Plans immediately prior to Mandatory Referral. Since this is a design-build project, the selected contractor will provide the final design of the project based on the current 30% design and the contract specifications. All of the information necessary to review the final Water Quality Plan is therefore not yet available and the project will need to be reviewed in two stages.

DPS gave preliminary approval of the project's initial design drawings on December 9, 2005 because the plans appeared to meet the intent of the SPA requirements. DPS has reviewed the current 30% design drawings and believes that the project continues to meet the intent of the SPA requirements. DPS has withheld approval of a Final Water Quality Plan pending the receipt of final design drawings closer to the start of road construction.

The following items are needed for our staff to be able to recommend approval of the final Water Quality Plan:

- A copy of the Roadside Tree Care Permit, to be issued by DNR, to ensure that the permit conforms to County requirements for forest conservation.
- Final plans to ensure that the final roadway design will not significantly increase imperviousness, park impacts, or affect storm water management.
- Approval by DPS of the Final Water Quality Plan.

Environmental Planning Staff reviewed the project with a view to ensuring that it reasonably addressed imperviousness, forest conservation, and compliance with the environmental guidelines (*Guidelines for Environmental Management of Development in Montgomery County*). **We believe that the applicant has made reasonable efforts to comply with relevant water quality plan requirements. We recommend approval of the Preliminary Water Quality Plan with a condition that SHA provide us the information necessary to perform a Final Water Quality Plan review before the start of construction.**

Site Imperviousness

Initial design drawings for the proposed road improvements showed 12.09 acres of new imperviousness. M-NCPPC staff and SHA explored opportunities to reduce imperviousness including discussing SHA's VE study that considered eliminating turn lanes and reducing lane and sidewalk width. The following SHA initiatives reduced the impervious surface area by 2.09 acres (to 10 acres):

- reducing the width of some travel lanes from 12 feet to 11 feet;
- limiting the sidewalk on the East side (within SPA) of the roadway to 5 feet, and the shared use path on the West side (outside SPA) to 8 feet;
- eliminating a northbound turn lane between Pompano Terrace and Fieldcrest Road, as recommended by the value engineering study, as discussed below.

We urge that SHA continue to seek opportunities to modify its roadway design where practicable, to further reduce imperviousness and help improve water quality.

Wetlands/Stream Impacts

A small wetland (study point 7) and an Upper Rock Creek tributary, on parkland at the intersection of MD 124 and Airpark Road, will now get less runoff as a result of SHA diverting all or most of the currently untreated storm water to the SWM facility on the west side of Airpark Road. That facility will be enlarged to accommodate the increased volume. While this may adversely impact the wetland at study point 7, the quality of the wetland should eventually improve as it will no longer be receiving sediments and silt from road runoff. The wetland hydrology may be altered from reduced surface runoff, however, the groundwater table appears high enough to sustain existing wetland conditions.

The Airpark Road Branch tributary of the Upper Rock Creek Watershed originates in the northeastern quadrant of the MD124/Airpark Road intersection. The *Countywide Stream Protection Strategy* (CSPS, 2003 Update) lists stream quality conditions and current habitat status in the tributary as 'fair', and habitat stability as 'unstable' based on data collected between 1994 and 2001. There are ongoing impacts to riparian areas, and problems with bank stability and sediment deposition in the upper reaches of the stream caused in part, by untreated storm flow from the MD124/Airpark Road area. Airpark Road Branch will receive about the same amount of water it has been receiving previously, but since virtually all of it will now be treated and controlled, the flow in the stream will be somewhat less flashy, and the water quality should improve.

Environmental Guidelines

The project has complied with the Environmental Guidelines. The project's plans to divert untreated storm flow from the intersection of Airpark Road and MD 124 into a storm water pond will improve conditions in a small, forested wetland at the intersection. Large trees along the alignment, which do not pose a safety risk are being protected per a Roadside Tree Care Permit granted by DNR.

Stormwater Management

Stormwater runoff from MD124 between Rosewood Manor Lane and Fieldcrest Road flows into Seneca Creek, which is a Class I stream (water contact recreation and protection of aquatic life). The remainder of the project site drains mostly to Upper Rock Creek, a Class III stream (natural trout waters).

The project will control the increased runoff associated with the construction of the improvements by expanding and upgrading the existing pond at the Airpark Road/MD124 intersection, constructing four new stormwater management facilities, and improving infiltration trenches on private property along the roadway alignment. The project will improve the area's stormwater management by treating runoff from all new impervious surfaces, as well as retrofitting existing facilities, and treating runoff from developed areas that are currently untreated.

VALUE ENGINEERING

All large State projects are required to go through a value engineering process that is similar to a design charrette to ensure that the best design of the project is achieved. The value engineering exercise for this project was a weeklong effort in September 2005 that included participants from SHA, the design consultants, outside consultants, DPWT staff, and Planning staff. The proposed design incorporates changes resulting from that process.

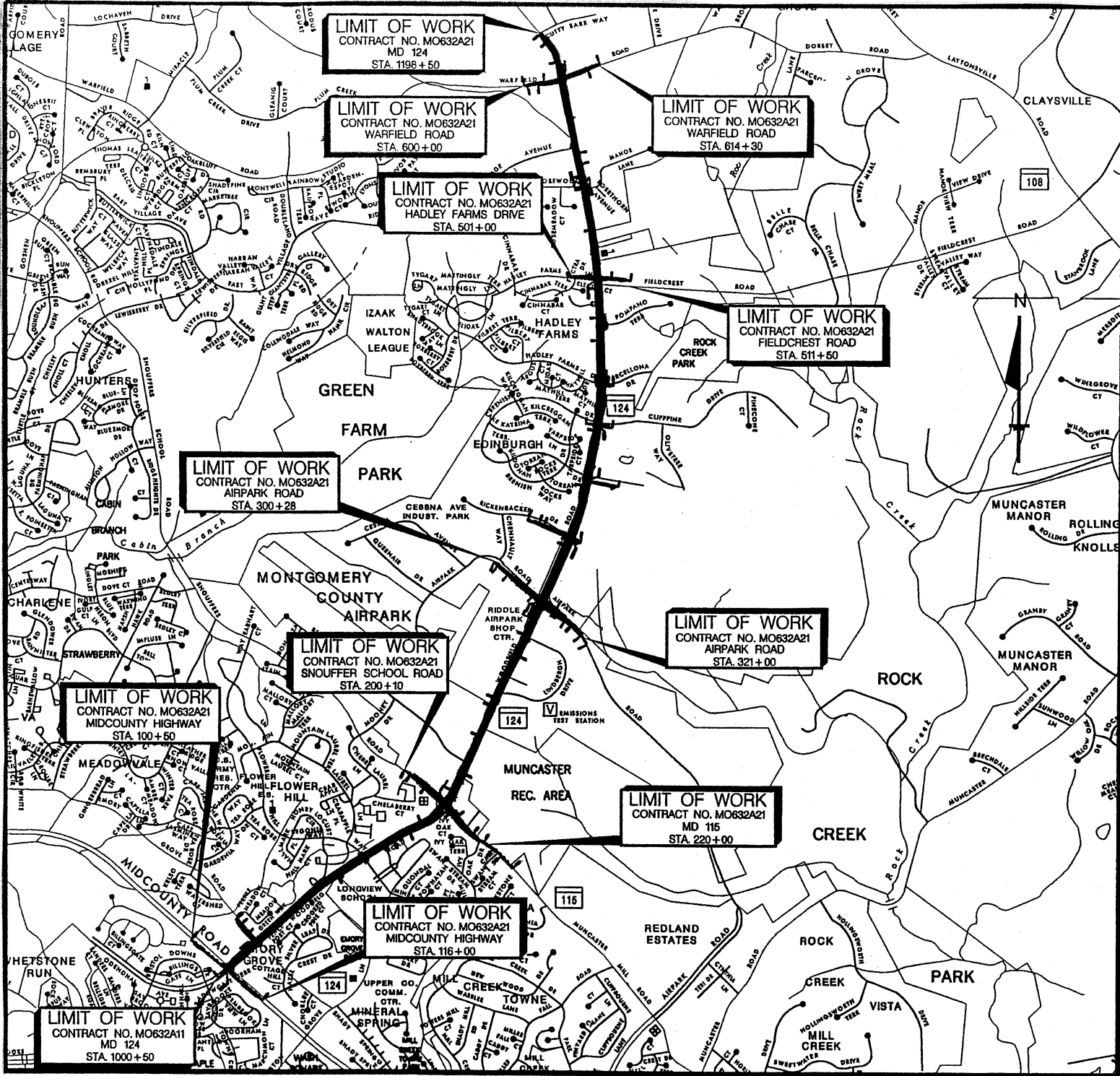
PUBLIC OUTREACH

A public workshop was held in February 2000 and the location/design public hearing was held in October 2000. There have also been numerous informational meetings including a presentation to the Montgomery Village Foundation meeting in September 2005, and two recent public meetings to discuss the noise walls, in August and October 2006. In addition, a public notice of the Board's review was sent to citizens associations in the area of the project.

SCHEDULE

The design of this project is at the 30% stage. This project is funded for construction and a bid date has been set for February 20, 2007, with construction anticipated to start this year.

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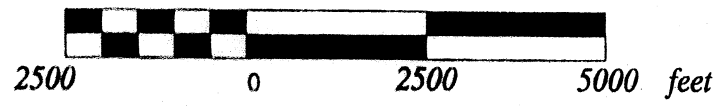


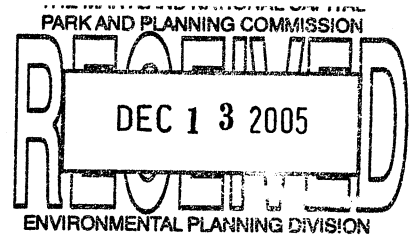
MILEAGE: MD 124-3.7 MILES

LOCATION MAP

MONTGOMERY COUNTY

SCALE: 1" = 2500'





DEPARTMENT OF PERMITTING SERVICES

Douglas M. Duncan
County Executive

Robert C. Hubbard
Director

December 9, 2005

Ms. Karuna Pujara
Highway Hydraulics Division
Maryland State Highway Administration
707 North Calvert Street, C-201
Baltimore, Maryland 21202-3601

Re: **Preliminary Water Quality Plan for MD**
Route 124 Improvements
SM File #: 219605
Watershed: Upper Rock Creek

SPECIAL PROTECTION AREA

Dear Ms. Pujara:

Based on a review by the Department of Permitting Services Staff, the Preliminary Water Quality Plan for the above mentioned site appears to meet the intent of the Special Protection Area (SPA) requirements. This review is for the elements of the Preliminary Water Quality Plan of which DPS has lead agency responsibility. It does not include limits on imperviousness or stream buffer encroachments.

Site Description: The focus of this review is for the first phase of the proposed improvements within the Upper Rock Creek SPA, which includes vehicular and pedestrian improvements from Airpark Road north to Rosewood Manor Lane.

Stormwater Management: Since it isn't possible to treat the new impervious area separately, quality and quantity control will be provided for the entire roadway at select study points without treatment at other smaller study points. Although stormwater management compensation/banking is not typically acceptable in SPA's, it appears that it is appropriate in this case due to existing developments and the limited available right-of-way. It is not clear from the current report what types of structures/treatment trains will be provided. Also, the report notes a 6.22 acre treatment credit (excess treatment) "to the bank" for the entire project. However, it's unclear how much of this would be in the SPA. These items should be addressed as part of a Final Water Quality Plan (as the design plan becomes finalized). Additionally, as stated in the pre-application meeting the following items are typical design standards in SPA's:

1. In use III waters, Cpv is to be designed for 12 hour extended detention. Wet or wetland structures are not permitted.
2. Redundant water quality treatment is required (treatment train approach).
3. Areas intended for vehicular use are to provide water quality pre-treatment.



Attachment 2

4. Recharge areas are to be spread throughout the site as evenly as possible and recharge volumes are not to be subtracted from water quality volumes in the SPA.
5. Infiltration or filtration (sand filters or biofilters) are the preferred methods of water quality treatment. There is a three acre drainage area limitation on surface sand filters and a one acre drainage area limitation on infiltration structures, structural filters and biofilters. All structures are to be built to Montgomery County Standards.
6. Open section roadways are to be used. When this is not feasible additional (offsetting) water quality controls and recharge is to be provided.

Sediment Control: A sediment control concept plan is typically required as part of the Water Quality Plan submittal. The following are typical requirements for sediment control design plans in SPA's:

1. The earth dikes that feed the sediment traps are to be used when feasible for sediment control. The traps are to be constructed with forebays to provide redundant control with 125% to 150% of the normal storage volume. All sediment trapping structures are to be equipped with dewatering devices and the earth dikes are to be constructed using trapezoidal channels to reduce flow rates.
2. The site grading shall be phased whenever possible to limit disturbance and immediate stabilization is to be emphasized.
3. Silt fence alone will not be allowed as a perimeter control. The use of super silt fence will be acceptable for small areas of disturbance. However, in consideration of public safety concerns a double row of silt fence may be substituted for super silt fence next to active roadways.

Performance Goals: The performance goals that were established at the pre-application meeting should be taken into consideration when finalizing the stormwater management and sediment control plans. They are as follows:

1. Minimize storm flow run off increases.
2. Minimize increases to ambient water temperatures.
3. Protect springs, seeps and wetlands
4. Minimize sediment loading.
5. Provide groundwater recharge to maintain base flow.

Monitoring: Monitoring is a typical component of a Water Quality Plan. Since the site is mostly developed pre-development monitoring is not required. The "during construction" monitoring should consist of monitoring the inflow and out flow points of a linked sediment control system (e.g. into a forebay, out of the forebay and into the main cell and out of the main cell) throughout the duration of construction. Post construction monitoring should consist of monitoring a redundant water quality system to determine pollutant removal rates. Post

Ms. Karuna Pujara
December 9, 2005
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construction monitoring typically last for three to five years after construction is complete. Monitoring was not discussed in detail at the pre-application meeting since the type and location of stormwater and sediment control BMP's was not finalized. Monitoring should be included as part of the Final Water Quality Plan per the Montgomery County BMP monitoring protocols.

Payment of the stream monitoring fee is not required. Any divergence from the information provided to this office; or additional information received during the development process; or a change in an applicable Executive Regulation may constitute grounds to rescind or amend any approval actions taken, and to reevaluate the site for additional or amended stormwater management requirements.

If you have any questions regarding these actions, please feel free to contact Leo Galanko at (240) 777-6242.

Sincerely,



Richard R. Brush, Manager
Water Resources Section
Division of Land Development Services

RRB:dm:CN219605

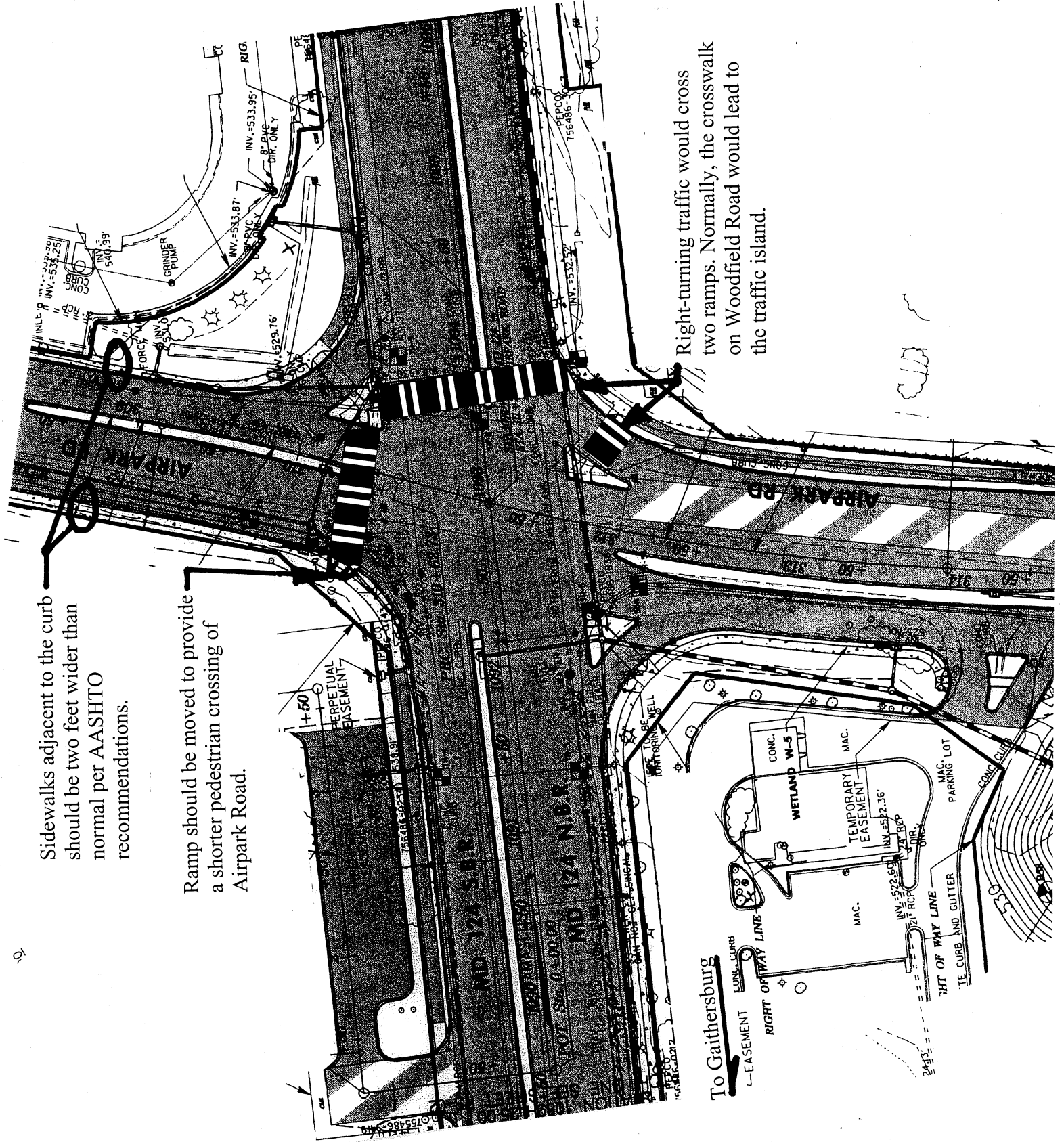
cc: M. Pfefferle (MNCPPC-ED)
D. Marshall (DEP)
L. Galanko
SM File # 219605
Qn on-site; 50 acres
Ql on-site; 50 acres
Recharge provided on-site



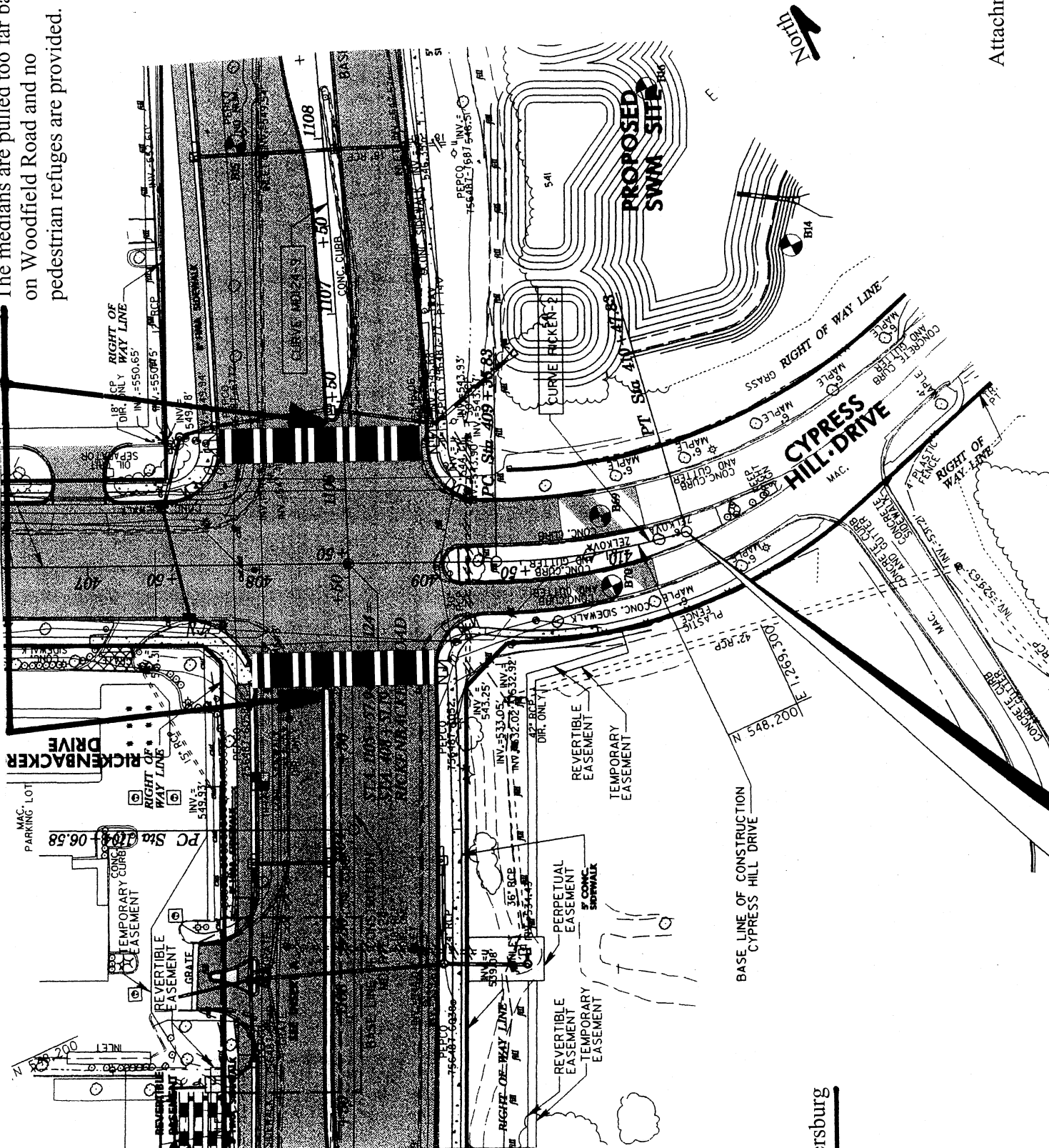
Sidewalks adjacent to the curb should be two feet wider than normal per AASHTO recommendations.

Ramp should be moved to provide a shorter pedestrian crossing of Airpark Road.

Right-turning traffic would cross two ramps. Normally, the crosswalk on Woodfield Road would lead to the traffic island.



The medians are pulled too far back on Woodfield Road and no pedestrian refuges are provided.




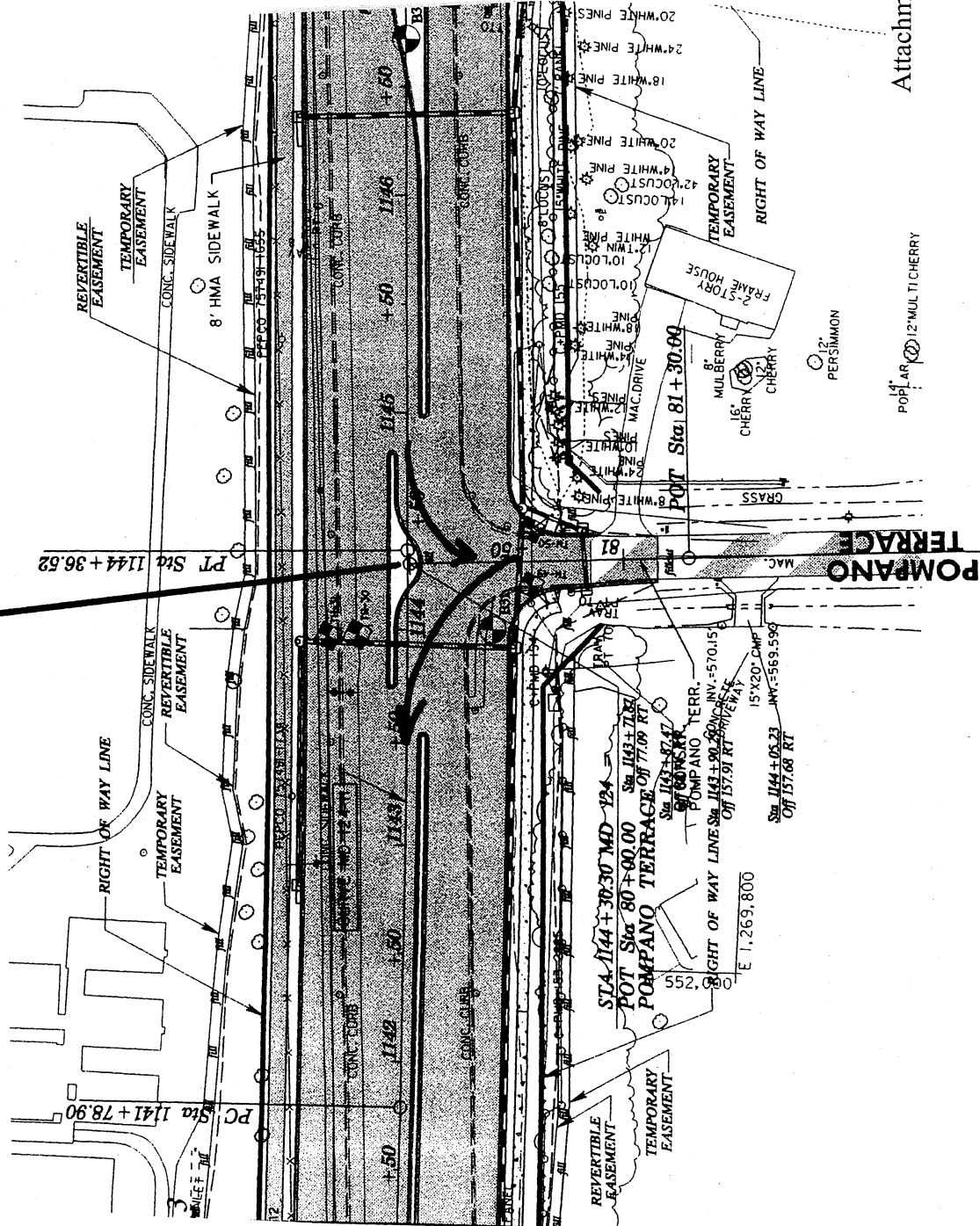
To Gaithersburg

North



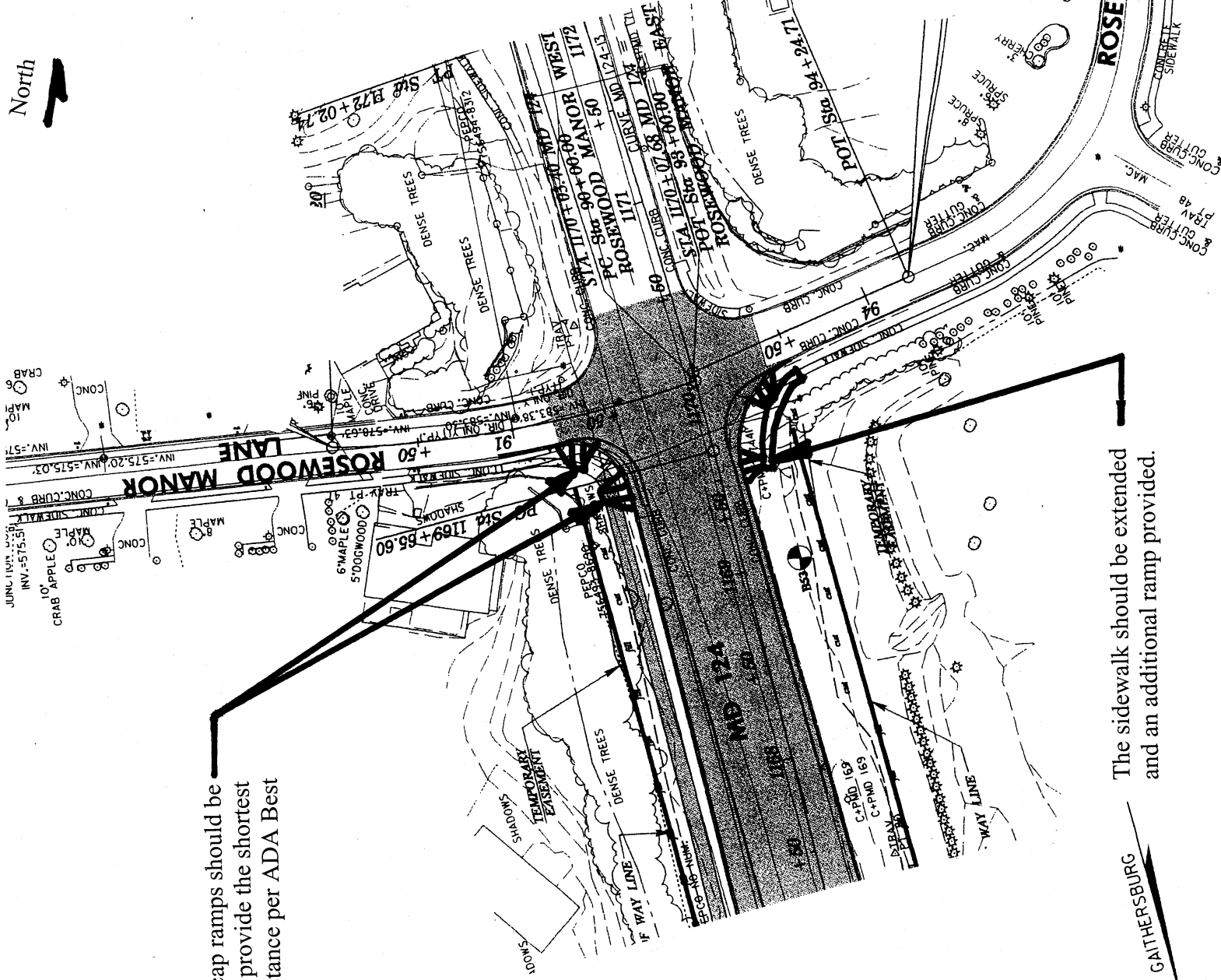
No safe or ADA-accessible
pedestrian crossing of Woodfield
Road is provided at this intersection.

TO GAITHERSBURG

North

Dual handicap ramps should be provided to provide the shortest crossing distance per ADA Best Practices.



The sidewalk should be extended and an additional ramp provided.

TO GAITHERSBURG

ROSEWOOD MANOR LANE