

VII. ENVIRONMENTAL ASSESSMENT-AIRPARK ROAD EXTENDED (A-268)

An environmental assessment was prepared by MCPB staff for Airpark Road Extended (A-268). Two alternate alignments were studied. Alignments A and B are nearly identical, the only difference being the alignment between Tributary 'B' and Shady Grove Road Extended (see figures 23 and 24).

This Amendment supports Alternate A alignment for the following reasons:

1. The existing land is disturbed to a lesser extent with Alternate A than Alternate B;
2. Alternate A can be constructed with less fill area and can cross the stream at a lower elevation than Alternate B. The natural grade of Alternate B greatly exceeds the arterial road standards; considerable adjustment to the existing terrain, including both sides of Tributary 'B', would be necessary to construct along this alignment.
3. The near term roadway will be Shady Grove Road Extended, east of Airpark Road. Alternate A, with only minor adjustments, can make this roadway continuous. Alternate B would require a right angle turn.

From an environmental perspective, both alignments could have a severe impact on sensitive waters of Rock Creek and its tributaries during and after construction. If proper mitigation controls are employed, environmental impacts to tributaries and the mainstem of Rock Creek can be significantly reduced and may be kept short-term. If these controls are not employed or maintained, the possibility of long-term stream degradation could be high.

Principal impacts will include: additional increase in stormwater runoff; generation of large quantities of pollutants, particularly toxic metals; and the generation of large quantities of sediment. Of the two major Rock Creek subwatersheds affected by the proposed roadway, respectively referred to in this study as subwatersheds "a" and "b," subwatershed "b" is expected to be the most impacted. (See figure 25.) The reasons for this are directly related to the alignment's requiring the disturbance of the stream valley from ridge-to-ridge, a crossing of the tributary "b" stream channel, the amount and location of disturbed areas, and the number of linear feet of pavement. Impacts to tributary "a" will be considerably lessened by the large hydraulic distance and vegetative buffer which will remain between the roadway and the stream. Table 4 summarizes the general environmental impacts associated with the proposed roadway. The negative impact can be diminished, if the following recommendations are implemented:

A. RECOMMENDATIONS

- Mitigation measures outlined in this section should be incorporated in the planning, design, construction, and operation of the road.
- Since both alternate alignments represent a good compromise between maximizing hydraulic distance between receiving streams and traffic/topographic considerations, no new alignments should be considered.

- Mitigation measures should be developed for the ICC, Shady Grove Road Extended (M-42), and P-5 prior to planning; the measures should be incorporated into the design, construction, and operation of the roads.

TABLE 4
GENERAL ENVIRONMENTAL IMPACTS

Sub-watershed	Linear Ft. of Roadway	No. of Stream Crossings	Acres Disturbed	Acres of Woodland Lost	Two Year Road Runoff (CFS)*	Tons of Sediment Reaching Stream Per Year**	Pounds of Lead Generated Per Year**
"a"	4,200.0	0	9.6	2.3	8.4	24.0	99.2
"b"	4,800.0	1	11.0	0.75	11.5	55.0	119.8

* Cubic feet per second.

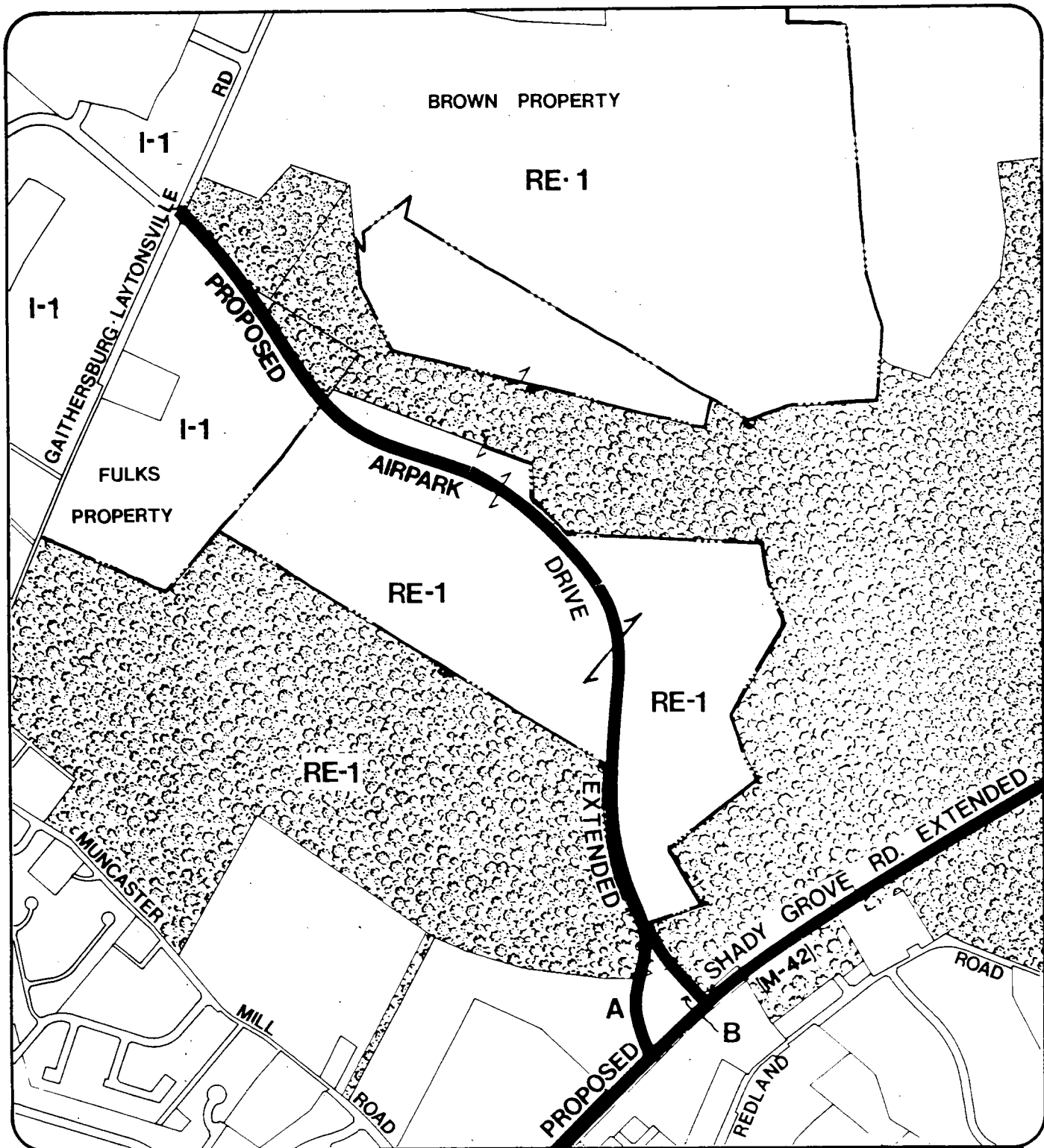
** No mitigation measures assumed.



MCPB Environmental Planning Division, 1983.

B. MITIGATION MEASURES


In order to protect the sensitive waters of the Upper Rock Creek and its tributaries from long-term stream quality degradation, it is recommended that the following mitigation measures be incorporated in the planning, design, construction, and operation of the road. Some of these measures may add additional cost to the construction and maintenance of the roadway.

- If at all possible, the direct discharge of concentrated highway runoff to the receiving streams, especially via long pipes, concrete conduits, or over non-vegetated surfaces is to be avoided. For both water quantity and quality reasons, it is recommended that runoff be conveyed through grass swales 200 feet or more in length leading to a safe outfall. Curb and gutter drainage should be completely avoided to reduce the volume of concentrated pollutant-laden runoff.
- Because of the negative water quality impacts associated with "first flush" runoff, water quality measures such as stone-filled infiltration trenches should be incorporated into roadway design. This is especially critical in the subwatershed "b" portion of the alignment.
- All runoff from the road is to be safely conveyed and outfalled. Outfall structures should be designed to dissipate runoff to non-erosive levels. Where appropriate, velocity reduction-dissipating devices such as "plunge pools" and level spreaders should be incorporated into drainage system design.



 PROPOSED ROAD ALIGNMENT
 PARKLAND (Existing and Proposed)
 A/B ALTERNATE INTERSECTION ALIGNMENTS

NO SCALE



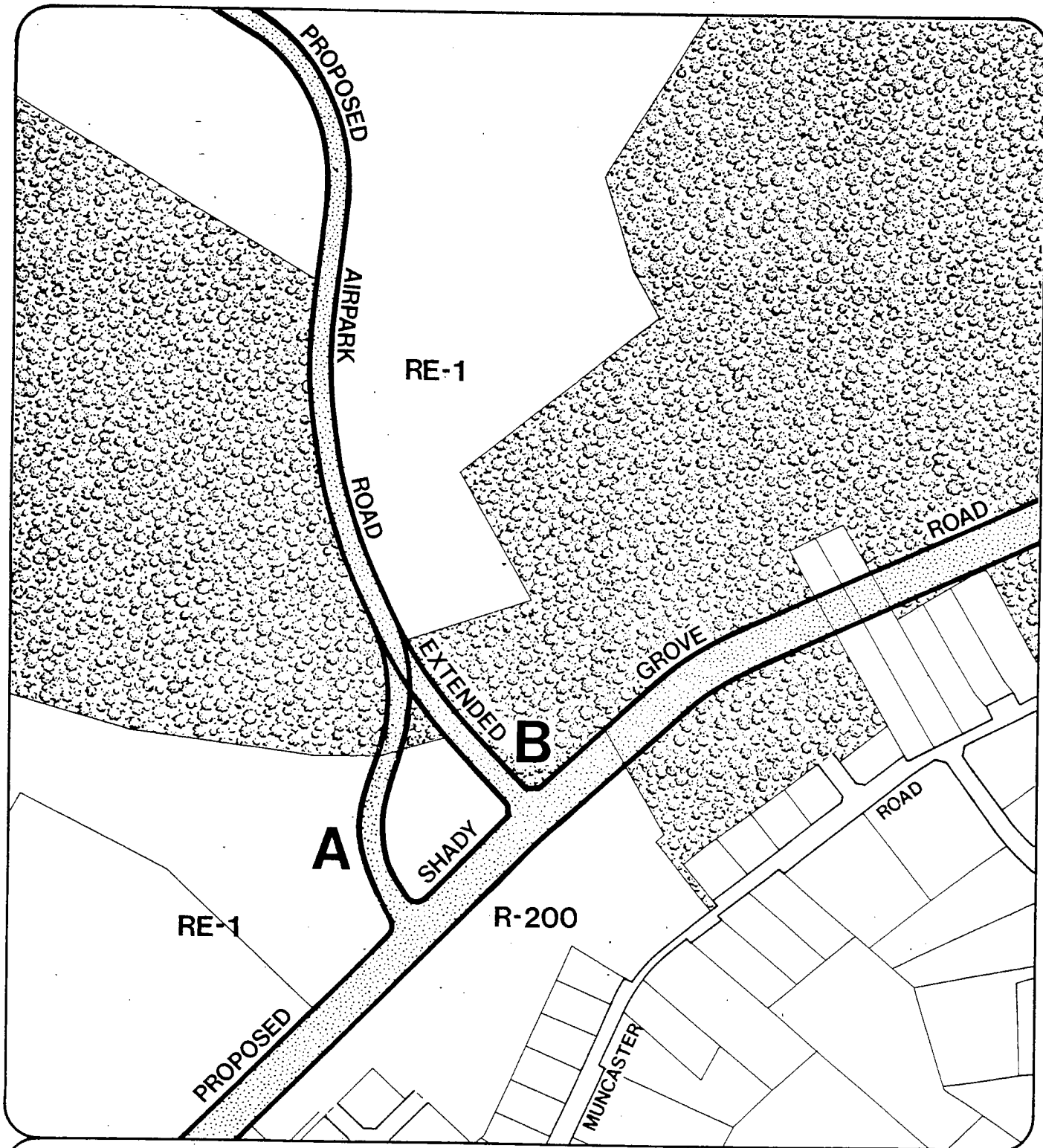
NORTH

MASTER PLAN AMENDMENT FOR
ROCK CREEK
 MONTGOMERY COUNTY, MARYLAND

PROPOSED AIRPARK ROAD
 ALIGNMENT EXISTING ZONING

23
 FIGURE





 PROPOSED ROADS

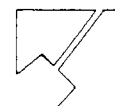
 PARKLAND

A/B ALTERNATE INTERSECTION ALIGNMENTS



24

FIGURE

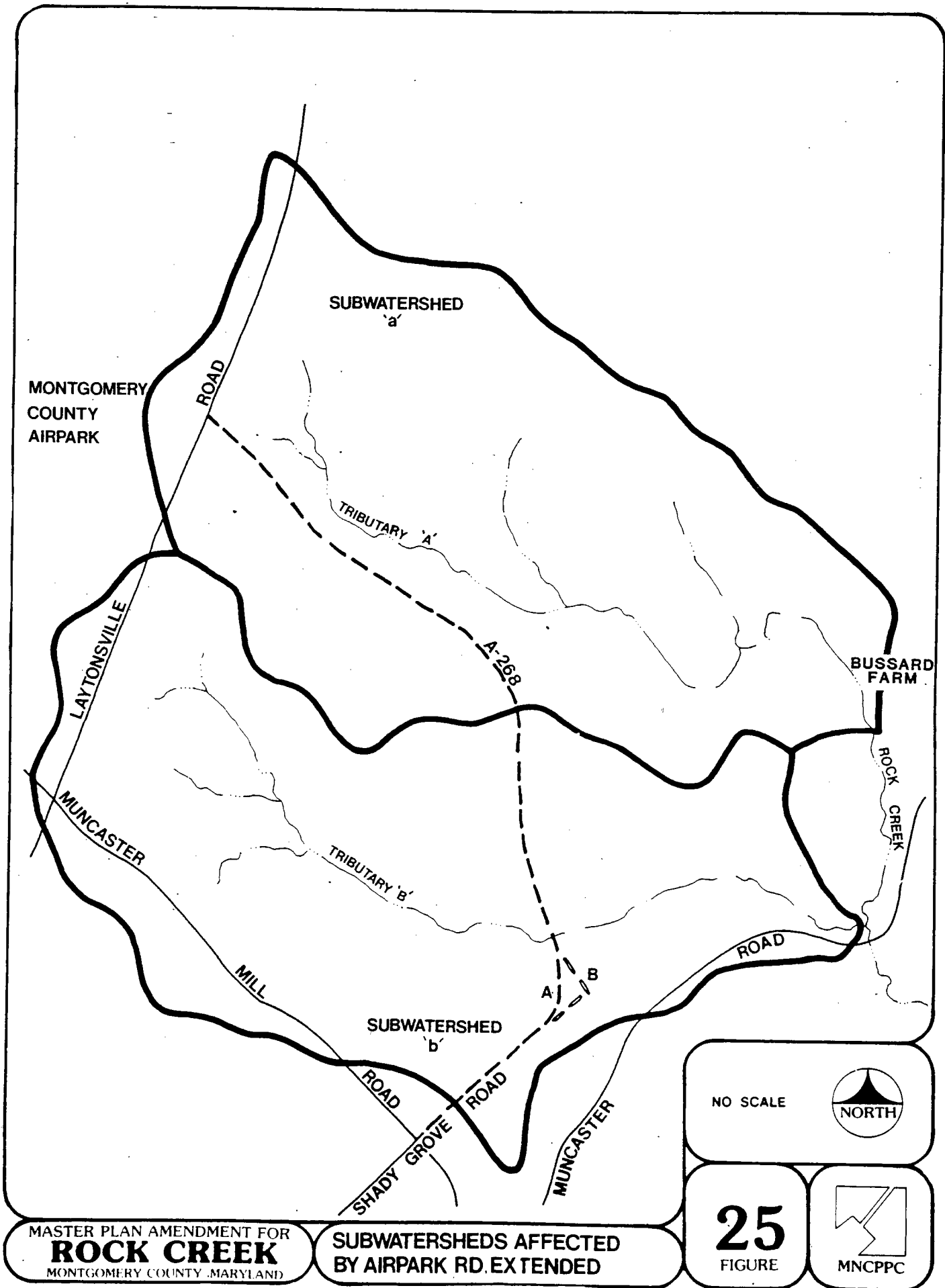


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**PROPOSED AIRPARK ROAD
 ALIGNMENTS A & B**
 EXISTING ZONING


- All clearing and grading activities shall strictly adhere to the U.S. Soil Conservation Service (SCS) guidelines pertaining to erosion and sediment control. Phased clearing and grading is strongly recommended. Furthermore, all sediment traps should be designed to maximize trapping efficiency. The use of so-called "super traps," sediment traps which have storage capacities far exceeding those required by the SCS, is strongly recommended. The use of sediment basins, which are more costly but have a much higher trapping efficiency than sediment traps or "super traps," should be seriously considered. All erosion and sediment control measures are to be properly and expeditiously employed and maintained. Disturbed areas which will be left exposed to erosive forces for more than 30 days should be seeded and mulched in accordance with SCS guidelines.
- In accordance with Maryland Water Resources Administration regulations for Class III streams, all work conducted within the floodplain of any Class III stream having an upstream drainage area of greater than 100 acres will require a "waterway construction permit." Said permit will be required for the crossing of tributary "b." In order both to reduce the amount of instream work and to maintain the existing course, current, and geometry of the stream, it is recommended that consideration be given to spanning the stream. If a culvert is to be used, its invert should be placed a minimum of one foot below the invert of the stream. This should prevent the structure from becoming a barrier to aquatic life. No stream work shall be allowed between October 1 and May 1, inclusive. All work done within and near the stream shall be done in an expeditious manner.
- If possible, minimize the use of fine sands and road salts during winter operations, as these materials significantly increase the suspended and dissolved solids loads on receiving waters.
- All storm drainage and erosion/sediment control plans are to be reviewed and approved by the Planning Board's Environmental Planning Division as well as by the Parks Department.



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**SUBWATERSHEDS AFFECTED
 BY AIRPARK RD. EXTENDED**

NO SCALE



NORTH

25
 FIGURE

