



May 19, 2005

**MEMORANDUM**

**TO:** Montgomery County Planning Board

**VIA:** Jeffrey Zyontz, Chief  
Countywide Planning Division

Richard Hawthorne, Chief  
Transportation Planning

**FROM:** Alex Hekimian: 301-495-4525, for the Department of Park and Planning

**SUBJECT:** Mandatory Referral No. 04818-WMATA-1: Shady Grove Metro Service and Inspection Yard Improvements, 15903 Somerville Drive, Shady Grove Sector Plan

**STAFF RECOMMENDATIONS**

*Staff recommends approval of the Mandatory Referral with the following recommendations to the Washington Metropolitan Area Transit Authority (WMATA):*

1. Limit the expansion of WMATA's Metro service and inspection yard to the projected increase of 75 employees for a total of 190 employees on the site.
2. Limit the increase in employee parking to 56 spaces for a total of 112 spaces on the site.
3. Participate in the future Greater Shady Grove Transportation Management District (TMD) at such time that it is established by enabling legislation.
4. Increase the budget for the project to allow for the following additional improvements:
  - a. Retrofit any existing lights that may cast glare onto future mixed-use development surrounding the Metro station. Provide Maryland-National Capital Park and Planning Commission (M-NCPPC) staff a photometric lighting plan that illustrates all existing and new lighting fixtures. Lights should be full cut-offs with back shields.

- b. Provide a landscape plan, working with M-NCPPC staff, that effectively screens, where feasible, the facility from future mixed-use development surrounding the Metro station.
5. WMATA should be aware that land use changes being proposed by the Shady Grove Sector Plan would be affected by WMATA's activities at this location. Staff recognizes WMATA's successful efforts to address such situations in the past (e.g. Glenmont Maintenance Yard) and encourages WMATA to use a similar "best management" approach for its Shady Grove shop expansion.

## DISCUSSION

The project description is shown on Exhibit 1, and a map showing the general location of the project on Exhibit 2. A photo showing the proposed improvements on the existing site is shown on Exhibit 3, and a rendering of the expanded shop and yard on Exhibit 4. A map from the draft Shady Grove Master Plan, showing the various Metro area neighborhoods near the site, is shown on Exhibit 5. All proposed improvements for the Shady Grove Metro Service and Inspection Yard would occur within the existing right-of-way of the WMATA in the existing Yard property, which is located in the general vicinity of the intersection of Frederick Road (MD 355) and Redland Road. The site is zoned as I-1, Light Industrial.

Staff recognizes that this project is critical to improving Metrorail capacity in the I-270 corridor, a key County transportation objective. Expansion of the Yard's capacity would allow additional maintenance needed for longer eight-car Metro trains. The proposed improvements include an expansion of the existing shop building space by 50,410 square feet, an increase of 16 maintenance bays, an increase of 56 employee parking spaces, and reconfigurations of internal track lines and circulating roadways. Completion of construction is expected by 2007.

### Transportation

**Overall, the site has good roadway access, and the number of peak hour trips is small, due to the employees at the site being on four shifts. A Local Area Transportation Review analysis submitted with the application shows that no intersection standards would be violated by this expansion.**

Vehicular Access: A driveway off the northwestern side of the oval-shaped, one-way ring road encircling the Shady Grove Metrorail Station's western park and ride lot provides access to the site. Access to the ring road is via King Farm Boulevard Extended east of Frederick Road and Somerville Drive Extended north of Redland Road.

Site-Generated Traffic: The traffic generated by the project was determined by increasing the number of existing peak-hour vehicular trips proportionally by the ratio of the projected 190 employees to the existing 115 employees. The employees are scheduled to work during four different work shifts. The number of existing employees, projected increase of new employees, and projected future total employees working on the site are given below by their scheduled work shifts in the table:

	Scheduled Work Shifts				Total Employees
	Day	Evening	Midnight	Overnight	
	6:30 a.m. to 3:00 p.m.	2:30 p.m. to 11:00 p.m.	10:30 p.m. to 7:00 a.m.	8:00 p.m. to 4:30 a.m.	
Existing	51	27	22	15	115
New	27	17	21	10	75
Total	78	44	43	25	190

According to WMATA, of the 75 new employees working on the site, only 21 employees would be commuting within the weekday morning peak period (6:30 to 9:30 a.m.) and none within the evening peak period (4:00 to 7:00 p.m.). Other site trips (such as visitor trips or mid-shift travel by employees) were also assumed to increase proportionally, accounting for a small additional increase in forecasted traffic during both morning and evening peak periods.

Local Area Transportation Review: WMATA submitted a traffic study to satisfy Local Area Transportation Review because the existing and expanded land uses on the site would generate a total of 30 or more peak-hour trips during either the weekday morning and evening peak periods. Staff provided copies of the traffic study to both the Maryland State Highway Administration and the Montgomery County Department of Public Works and Transportation.

The resulting critical lane volume (CLV) values determined in the traffic study are shown below:

Analyzed Nearby Intersections	Weekday Peak Hour	Congestion Standard	Traffic Conditions		
			Existing	Background	Total
Frederick Road & King Farm Boulevard	Morning	Shady Grove 1,800	1,465	1,495	1,503
	Evening		1,500	1,528	1,539
King Farm Boulevard & Somerville Drive	Morning	Shady Grove 1,800	750	750	775
	Evening		613	613	629
Redland Road & Somerville Drive	Morning	Shady Grove 1,800	576	598	607
	Evening		711	742	745
Somerville Drive & Redland Road	Morning	Shady Grove 1,800	1,422	1,450	1,452
	Evening		1,351	1,397	1,398

No intersection improvements are required because the CLV values at all four intersections above are less than the congestion standard of 1,800.

Pedestrian Facilities: This proposed project would not result in adverse impacts on the pedestrian facilities. A six-foot sidewalk currently connects the pedestrian access area on the west side of the Shady Grove Metrorail Station, along the ring road and access driveway and into the site.

Greater Shady Grove Transportation Management District: The Planning Board Draft of the *Shady Grove Sector Plan (2004)* is currently being considered by the Montgomery County Council's Planning, Housing, and Economic Development (PHED) Committee. The Plan recommends establishment of a TMD for the Shady Grove Policy Area. The PHED Committee has tentatively endorsed the establishment of the TMD with the provision that any development approved between the time of Sector Plan amendment adoption and TMD establishment would also be required to participate in the TMD when established. ***Staff recommends that WMATA participate in the TMD at such time that it is established, irrespective of current or future development plans, to demonstrate its agency commitment as a transit service provider to transportation demand management.*** The PHED Committee has also proposed that any proposed development that would increase the number of peak hour site generated vehicle trips by 100 or more be required to enter into a Traffic Mitigation Agreement (TMAG). However, the subject project would not meet the trips threshold for the TMAG requirement as tentatively approved by the PHED Committee.

Given the anticipated development and traffic conditions in the Shady Grove area, staff prefers to see a limit to the ultimate usage of the site. Participation in the area's TMD would also contribute toward mitigating traffic in the area.

## Land Use

Shady Grove Sector Plan (2004): The proposed project is consistent with the Planning Board's (July 2004) Draft Shady Grove Sector Plan. The Plan recommends maintaining the light industrial (I-1) zoning for the WMATA maintenance yard and also recommends the following:

- Providing expansion for storage, track, and maintenance functions with the existing property.
- Encouraging noise mitigation measures on site and on adjacent sites.
- Permitting additional Metro parking within the maintenance yard.

The Sector Plan recommends the transformation of the existing light industrial area surrounding the Shady Grove Metro into a vibrant mixed-use residential community with supporting office, retail and commercial uses. Immediately north of WMATA's service and inspection yard, across the CSX/Metro rail tracks, the Plan identifies this area as Metro North, County Service Park, and properties to the southwest as Metro West.

Several measures are taken in the Plan to achieve compatibility with WMATA's service and inspection yard and the CSX/Metro rail line. The Plan recommends placing parking garages adjacent to the rail tracks and to avoid locating residential units directly adjacent to the rail line to minimize noise impacts.

The Sector Plan also recommends the redevelopment of the existing WMATA kiss-n-ride, Metro bus and commuter parking lot, immediately south and southeast of the service and inspection yard, into a mixed-use development.

Shady Grove Master Plan (1990): The Approved and Adopted (1990) Shady Grove Study Area Master Plan recommended one million square feet of commercial development and 1, 250 residential units for the area between MD 355, Redland Road and King Farm Boulevard, immediately south of the proposed WMATA's rail yard expansion. However, this area has remained light industrial in character with automobile sales and strip commercial uses, instead of mixed-use commercial and residential development.

**Compatibility:** To help make the proposed project more compatible with anticipated development in the area, *staff recommends that WMATA retrofit the site's existing lights with devices that would reduce glare into nearby communities.* Staff is also willing to work with WMATA in preparing a landscaping plan to supplement existing trees on the site to screen the site from adjacent land uses. The project's budget should be increased to allow for these lighting and landscaping recommendations.

## Environment

Forest Conservation Law Compliance: **The project has an approved Natural Resource Inventory/Forest Stand Delineation and a 'Modification of Existing Developed Property' exemption (#4-05167E) from forest conservation plan requirements.** This exemption from Forest Conservation Plan applies only to the 6.14-acre area where WMATA expansion will occur and not to the entirety of Parcel No. 837. There are no forests, streams, or sensitive environmental features on the project area but there are wetlands, an intermittent stream and a small Crabbs Branch tributary immediately outside of the project area.

Noise: WMATA has conducted a noise analysis to assess the potential for future noise impacts in the vicinity of the yard, as part of the proposed improvements at the site. The noise assessment was conducted in accordance with the Federal Transit Administration's *Transit Noise and Vibration Impact Assessment* guidelines. The study listed the nearest residential land use (noise receptors) as the King Farm. However, the Shady Grove Sector Plan, which is currently being updated, has proposed land use changes that will be affected by WMATA's activities at this location. **WMATA has made successful efforts to address such situations in the past and Staff encourages WMATA to use a similar "best management" approach for its Shady Grove Shop expansion.**

In looking at the proposed Sector Plan changes however, the major noise impact to the proposed residential use will be the CSX rail line that parallels the western boundary of the proposed rezoning. CSX, AMTRAK and MARC use this line. Most passenger traffic is during the daytime hours when ambient noise levels are higher. Because of the daytime traffic, most freight moves during the nighttime/early morning hours when the ambient background is much lower. In addition, freight trains are generally longer and generate more noise than passenger trains. The volume and frequency of this rail traffic would conceivably result in unacceptable noise levels for residential communities. Likewise, if WMATA elected to construct a barrier to shield its yard, the barrier would reflect even more noise back to the residential use. A solution to this problem is to make it incumbent on any future developer to provide noise protection along the eastern property line in the form of passive structures such as parking garages or engineered barriers such as those on highways. This strategy would also shield the WMATA yard.

Water Quality: The project is in the Crabbs Branch sub-watershed of Upper Rock Creek Watershed. Upper Rock Creek is classified as a Use 1V watershed. The nearest perennial stream is a tributary to Crabbs Branch that originates near Sam Eig Highway (I-370) and flows immediately south of the project area, to the Crabbs Branch stormwater facility. That tributary is piped for part of its length through the Solid Waste Transfer Station property. The *Countywide Stream Protection Strategy* lists watershed habitat and stream conditions in Rock Creek as 'good'. The Crabbs Branch stormwater facility mitigates impacts from upstream imperviousness so that in-stream habitat is generally good below the pond. **WMATA indicates that it will take steps to ensure that the project does not impact water quality.**

AH:gw  
Attachments

memo to PB re Shady Grove Metro Yard Improvements.doc