

SITE SELECTION REPORT

MID-EAST COUNTY MAINTENANCE DEPOT & GAITHERSBURG CCT FACILITY

MONTGOMERY COUNTY, MARYLAND

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TABLE OF CONTENTS

TABLE OF CONTENTS.....	1
I. INTRODUCTION	2
II. MID-EAST COUNTY MAINTENANCE DEPOT	2
A. Project Background	2
B. Site Selection Approach and Evaluation Criteria.....	6
C. Selected Site - Site 34	8
D. Test Fit Evaluation.....	11
E. Potential Issues and Concerns	15
F. Costs	16
G. Conclusions & Recommendations.....	17
III. GAITHERSBURG CCT FACILITY	19

I. INTRODUCTION

The Montgomery County Department of Transportation is currently in the planning stages of a 170-mile Rapid Transit Vehicle (RTV) system. This County Executive's strategic initiative has joint sponsorship from both the County Council and the County's Planning Board. In support of this initiative, Montgomery County is currently investigating potential sites that could accommodate depots that will provide storage, service and maintenance functions for the required RTV vehicles.

The Montgomery County Department of General Services (DGS), along with the input and coordination of a multi-discipline committee, has performed an extensive site selection evaluation to explore potential sites that could accommodate the vehicle requirements of the RTV system. As RTV depot requirements relate to and must take into account current and planned Ride On vehicle depots, this report identifies all existing and potential Ride On depots and potential expansion capacity of the possible Corridor Cities Transit vehicle depot.

This report provides an overview of the site selection process and the test fit analyses performed in support of the Mid-East County Maintenance Depot and the Gaithersburg CCT Facility evaluations. Due to the sensitive nature of potential property acquisitions, the actual locations of the properties under consideration for these facilities are not disclosed within this report.

II. MID-EAST COUNTY MAINTENANCE DEPOT

A. Project Background

The County's Rapid Transit Vehicle (RTV) System study assesses the feasibility of rail-like rubber tired transit. An integral part of any RTV system is facilities to store, service and deploy vehicles to operate. Because rubberized tire RTV vehicles can operate on public roads, the location of a RTV depot allows greater flexibility than LRT yard and shop siting. While a LRT yard and shop has to be physically connected to the rail line, a RTV facility can be further from the transit routes being serviced compared to LRT. However, cost of operation and system reliability are critical factors in locating transit vehicle depots. The further from transit routes being serviced, the greater the deadheading cost and less the service reliability. Both of these factors translate into more vehicles and drivers to operate poorly located bus depots. Additional travel time and distance cost more and involve traffic delays associated with the increased distance transit vehicles travel.

The decision to build a depot is inseparable from that of building a RTV system. Without an affective and feasible site(s) to support RTV vehicles, a cost effective, well run RTV system is

not possible. Depot location involves both technical issues and broader policy issues, all such factors involve trade-offs and varying complexities. Policy issues relate to matters of need, benefit, impacts, and fiscal capacity and timing. On the technical side, bus depot location relates to the area of service and existing depot locations, the size of the facility required, access to roadway arterials, environmental impacts, and cost. As a feasibility study, this test fit element of the study addresses the technical issues. As a supporting function to the RTV system, the broader policy issues cannot be separated from the whole of the proposed system.

The audience for this report is technical managers, elected officials and the interested public. First, it provides to technical managers answers as to project feasibility: Can a suitable site be found in the target area? Does it meet operational needs? Can environmental and community impacts be adequately mitigated? These assessments are first made by high and middle level County managers and consultants. Secondly, the broader audience involves vetting with public and elected officials.

Under the Division of Transit Services, Montgomery County currently operates some 360 buses on some 76 routes, providing a finer-grained transit network focusing on community feeders to Metrorail Stations compared to Metrobus, which provides 42 trunk-line routes. The only WMATA depot in Montgomery County is just east of the White Flint Metrorail Station. This facility can support up to 240 buses. Currently, 203 buses are assigned to this depot. Ride On serves up to 28 million riders a year. On a daily basis that translates to some 90,000 riders. To support existing bus operations, Ride On has three facilities: Brookville Depot less than a mile west of downtown Silver Spring, the Nicholson Court leased depot about a half mile east of the White Flint Metro Station and the Shady Grove Equipment and Maintenance Operation Center (EMOC) adjacent to the Shady Grove Metro Station. The Brookville Depot was recently expanded and has no additional expansion capacity. The Nicholson Court Depot is a leased facility that will be discontinued after the EMOC facility is relocated with expanded capacity. The Shady Grove EMOC facility is being relocated less than a mile to the north at what is known as the Casey 6 and 7 sites. The County has been pursuing a new North County bus depot near Clarksburg. The map below shows the location of the three existing Ride On depots, the replacement EMOC and the potential North County Depot.

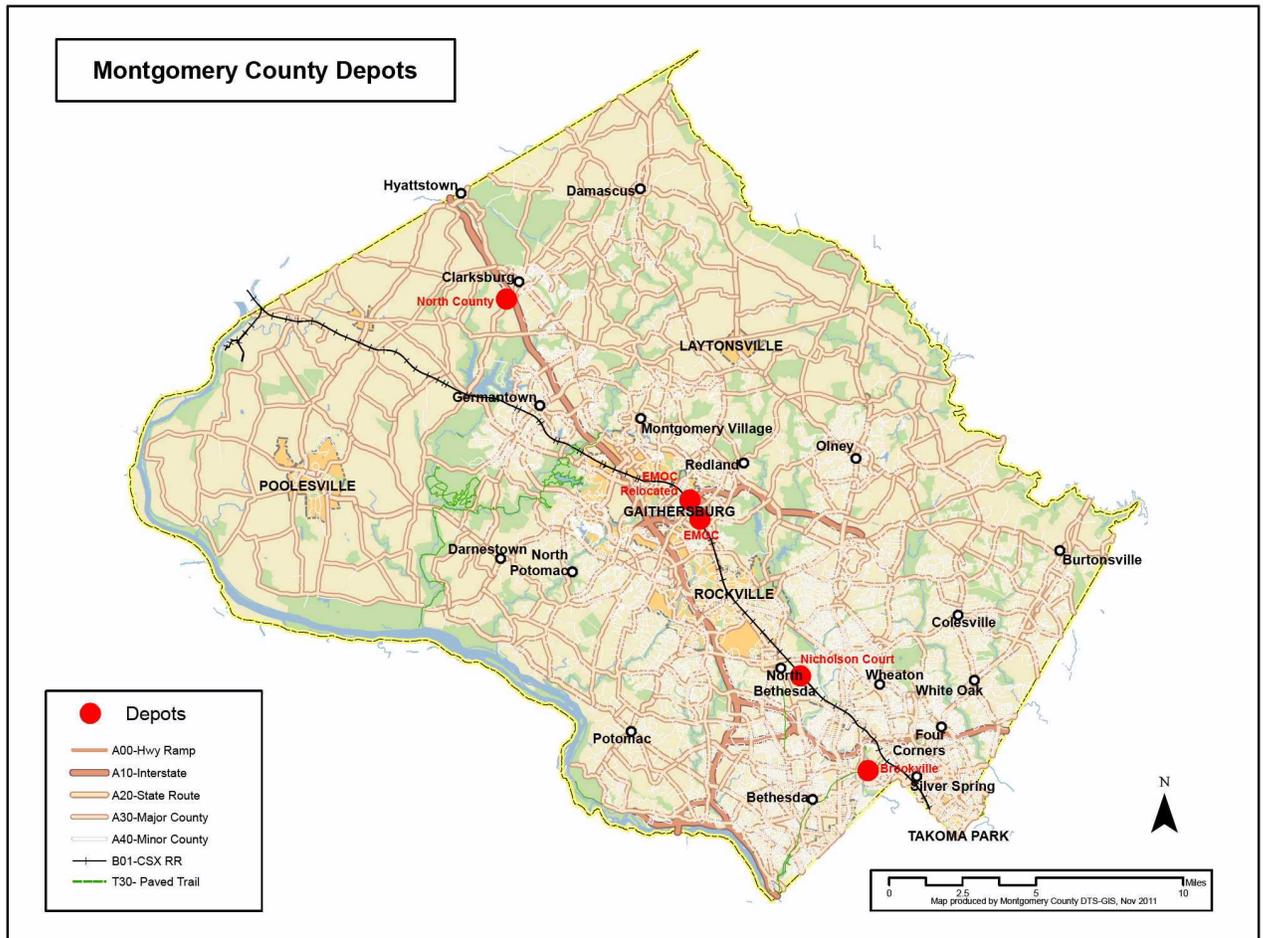


Figure 1. Montgomery County Depot Locations

The 2008 Ride On Transit Strategic Plan Update reported a 50% increase in ridership between 2000 and 2008. In this same report, transit ridership is projected to double by 2020. These projections are in line with Maryland Department of Transportation projections for transit ridership growth statewide. Looking at just Ride On service, overall bus depot capacity needs to expand from 360 buses to 600 buses to accommodate this growth. This bus vehicle expansion does not include depot capacity for either the Corridor Cities Transitway (CCT), which if built as a RTV line will require a depot with a 174 ultimate vehicle capacity nor a countywide RTV system. To meet this demand for regular Ride On Service, a new and expanded EMOC depot as well as new North County depot will be required.

The chart below shows existing and future bus depot assumptions for meeting regular Ride On operational needs:

Depot Name	Current Capacity	Future Capacity
1. Brookville	150	150
2. Nicholson Court	80	0
3. EMOC	130	0
4. EMOC Relocated (Casey 6 & 7)	0	200
5. North County	0	250
Total	360	600

Upon the coming completion of Metrorail, in the 1990's the County began considering RTV (bus ways) as a realistic approach to meeting the demand for high quality transit. This consideration addressed RTV as isolated corridors. None of those studies resulted in a project. The current RTV initiatives by the Metropolitan Washington Council of Governments, Montgomery County Councilmember Marc Elrich, and the County's Department of Transportation (DOT) have taken a comprehensive approach to high quality rubber tire transit. Each of these RTV system concepts requires new vehicle depot capacity. Similarly, the Corridor Cities Transitway (CCT) requires either a depot capacity or if constructed as light rail line, a rail yard and shop.

Based upon route characteristics in the County DOT Bus Rapid Transit Study, DOT estimates a 250-vehicle capacity depot will be required. Additional analysis will refine this estimate. That analysis will assess the RTV affect on the Ride On system, as new RTV routes will result in a decreased demand for Ride On service. RTV routes are proposed for corridors with existing Ride On service. Thus, many Ride On riders will shift to the rail-like RTV service, decreasing the demand for Ride On vehicles. Projecting the level of such ridership shifting and vehicle need requires analysis. The study will also estimate fleet mix between 40 and 60 foot vehicles. Standard 40-foot vehicles can be assigned to routes with lower passenger counts, while the more cost-effective 60-foot long vehicles can be used on the routes with heavy passenger ridership. Finally, the study will assess likely deployment of Ride On and RTV vehicles among all County depots. As both Ride On and RTV services will be Countywide, deployment across County depots will reduce deadheading and increasing efficiency. However, this allocation analysis would not likely change the projected total need.

B. Site Selection Approach and Evaluation Criteria

The County’s Department of General Services leads the site selection process for buildings. While a RTV depot is a transportation project, the depot site selection falls under Department of General Services (DGS) responsibility. DGS site selection efforts came through the coordination and oversight of the County Executive’s Transit Task Force's Working Group on Ancillary Facilities, which consisted of the Directors and staff of DGS, DOT, Department of Technology Services (DTS), and County Executive Offices.

Since Ride On depots are so unevenly distributed, DOT identified three areas in the eastern portion of the County to search for RTV depot sites (Reference Figure 2 below). These areas took into consideration the location of existing and planned depots, as well as the County wide distribution of proposed RTV routes, access speed of County roadways, and deadheading.

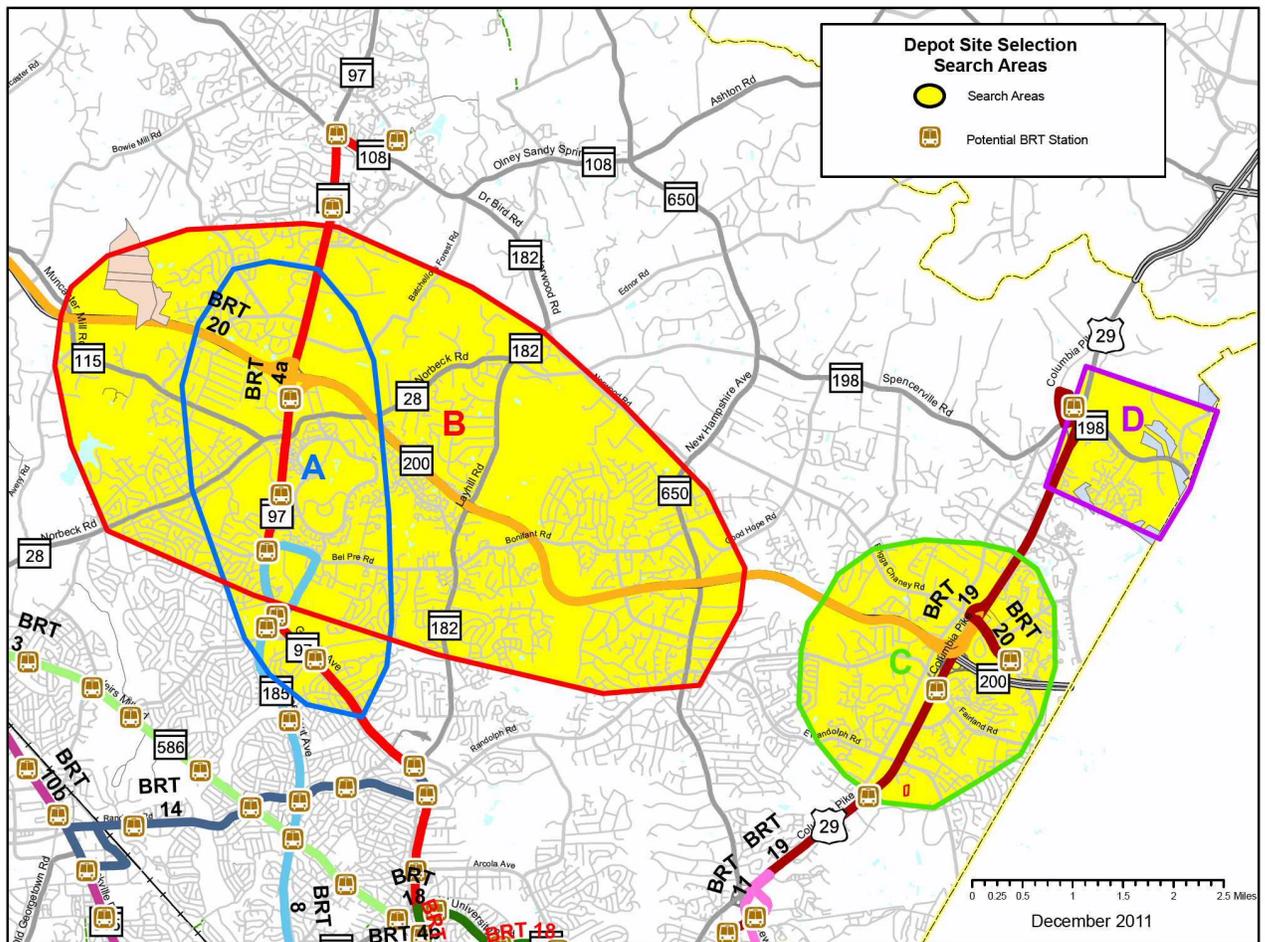


Figure 2. Depot Site Selection Search Areas

The first priority area (A) is an oval shape stretching north-south along MD 97 (Georgia Avenue) with the InterCounty Connector bisecting the oval through the northern portion. The second priority area (B) is a wider oval that encompasses most of the first oval, but stretching east-west along a portion of the InterCounty Connector. The third priority area (C) is a circular area further east, centered around US 29 and the InterCounty Connector. As area C lies on the eastern edge of the proposed RTV service, DOT considered it as a potential for an additional and smaller depot. A facility here would require another depot in either area A or B.

Map 2 also shows an area along MD 198, east of US 29 (D). This area was added because of its availability of low intensity use sites in the area and because of a lack of viable sites in the three study areas recommended by DOT. Not shown on this map, the Working Group also assessed sites in Howard County along US 29 and Prince George's County adjacent to the InterCounty Connector (ICC).

The Working Group used the following criteria to evaluate each site:

- a. Size meets minimum, including all buffers, offsets, etc. (16 acre site minimum, sufficient for 250 vehicles)
- b. Location within the defined study area (lack of existing east county depot; access to ICC, access to arterial, and not within residential neighborhood)
- c. Roadway access (two access points – one at a signalized intersection or can be made a signalized intersection)
- d. Public transportation access (simply locate nearest bus stop)
- e. Land use and zoning – compatibility with surrounding area
- f. Physical shape – site proportions and topography
- g. Utility availability (nearest utilities)
- h. Ease of acquisition
- i. Cost of land acquisition
- j. Cost of construction
- k. Operating impacts
- l. Environmental impacts
- m. Project specific criteria
- n. Maximum buildable acres/maximum vehicle capacity

Essentially, the location, parcel size, site improvements, compatibility with adjacent land uses, and environmental constraints were the tools of the Working Group for rejecting or keeping sites. An iterative process followed involving multiple computer runs to identify potential parcels. Parcels were originally rejected that had site improvements in excess of \$200,000. That threshold was raised to \$1 million and parcel combinations were searched for as well. Additionally, the Work Group searched in wider areas: both sides of US 29 up to MD 32 in Howard County and over to the proposed Kontarra Project in Prince George's County.

Forty-six sites were identified through this process. All but one was rejected by the Working Group. Study area A had 9 candidate sites; Study area B had 26 candidate sites; Study area C had 5 and study area D had 5. For each candidate site, the Working Group reviewed parcel maps with slope, environmental characteristics, roadway access, and adjacent property maps. Sites tended to be rejected for multiple reasons, although a single factor could be grounds for rejections. Principal reasons for sites to be rejected were roadway access to key arterial highways and environmental constraints. Other reasons for rejection included incompatibility with adjacent land use, unacceptable parcel shape, existing land use and in the case of the MD 198 parcels - unacceptable search area. After this process, only one site remained. Vetting outside the Working Group came up with two additional sites, the MD 198 Park and Ride Lot and the East County/Cherry Road Park & Ride Lot surfaced, but were rejected due to size and existing development on the sites.

The Working Group assessment left a single parcel as a potential East County Depot site for the County's RTV System. Given development pressure in Montgomery County, the shortage of viable sites was expected. In a robust local economy, large undeveloped sites with good access and no major environmental challenges do not linger on the real estate market.

Once a viable candidate site was identified, the County contracted with the engineering firm of Whitman, Requardt & Associates, LLP to conduct the test fit study to assess the feasibility of constructing a depot on this site.

C. Selected Site – Site 34

- 1. Site Location and Existing Conditions:** The selected site is situated between MD Route 29 and MD Route 97, Georgia Avenue. Woodlands wrap along the edges of the property.

A dry stormwater detention facility is located near the edge of the property. The detention facility has an outfall structure that serves as the source headwaters for a stream that originates on Site 34 and continues offsite. Additional stormwater treatment facilities are located at the edge of the property.

The two roadways that are adjacent to the site shall be referenced as Roadway 1 and Roadway 2 within this report.

2. Site Constraints:

- a. **Zoning and Setbacks:** The property is currently zoned for a single-family residential designation. For the purposes of this study, limitations due to this current zoning were not assessed per DGS instruction.

Montgomery County GIS CADD files were utilized to reference property / ROW lines and site topography. Setbacks were applied to these property lines for the site constraints evaluation, and were based on the applicable requirements associated with the assigned zoning.

- b. **Master Planned Encumbrances:** To achieve the minimum continuous ROW width, assigned to Roadway 1 in the applicable master plan, a segment of the property boundary will have to shift to the east.
- c. **Environmental Features and Constraints:** The following summarizes the environmental features on and immediately adjacent to the property as based on research performed using available online resources, and a cursory site observation.
- i. **Montgomery County Special Protection Area (SPA):** The site is not located within a designated SPA.
 - ii. **Chesapeake Bay Critical Area:** The selected site is not within the Chesapeake Bay Critical Area.
 - iii. **FEMA 100-Year Floodplain:** According to the FEMA Flood Insurance Rate Map for the area of interest, the proposed project area does not contain any regulated 100-year floodplain areas.
 - iv. **Non-Tidal Wetlands and Waterways:** There are several hydrologic features onsite and in the immediate vicinity including stormwater management ponds, two streams, two wetland areas, and one rip-rap lined drainage swale. M-NCPPC stream buffers are Use and slope dependant. Given that the slopes for this project has yet to be calculated a buffer of 175 was used for graphical purposes (with a range of buffers from 125- 200 feet)
 - v. **Forest Conservation:** There are existing Forest Conservation Easements on the Site 34 property. In some areas of the Forest Conservation Easements that are not densely wooded, there are scattered individual and clustered trees with little to no understory vegetation as the grass is actively

maintained. M-NCPPC staff was contacted to gain an understanding of the implications of disturbing Forest Conservation Easement areas. They advised that removing an area from an existing conservation easement is a minimum 2:1 ratio of planted forest. To elaborate, for every one (1) acre of easement removed, two (2) acres of new forest must be created and permanently protected. That is the minimum requirement and the Planning Board has requested greater mitigation in some cases. There will need to be strong justification for the need to remove easement.

Montgomery County also requires an extra level of consideration for the protection of any significant trees (trees over 24" dbh). The County requires the identification of the significant trees on the Natural Resource Inventory (NRI) Plan. There are a large number of significant trees in the forested areas in the project area. Proposal to remove these trees will require justification.

- vi. **Permitting:** There are several environmental constraints for this project area. The most significant are the forest conservation easements associated with Site 34 and the stream flowing from the edge of the property. It is recommended that a full wetland delineation be performed at the site in accordance with the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Eastern Mountains and Piedmont Region. Permitting and approvals will be necessary from the U.S. Army Corps of Engineers (USACE) and Maryland Department of the Environment (MDE) to perform work which will result in impacts to non-tidal wetlands, wetland buffers, intermittent and perennial waterways. The proposed project will also require forest conservation approval from Montgomery County (M-NCPPC) or Maryland Department of Natural Resources (MDNR). Coordination with Maryland Historical Trust, MDNR, and the U.S. Fish and Wildlife Service (USFWS) would also be necessary to verify that no state or federal rare, threatened or endangered species, cultural resources or historic properties are present within the proposed project area. M-NCPPC also requires justification for the approval of any impacts to stream buffers.

D. Test Fit Evaluation

1. **Project Program:** The proposed depot will house the facilities required by the Departments of Transit Services and Fleet Management to serve the Roadway 1 RTV fleet. The general project program used in performing this evaluation is based on the North County Maintenance Depot program, which accommodated a total of 250 standard buses. For the purposes of the test fit of the program on the selected site, a 50/50 split of standard and articulated vehicles was used. The following summarizes the major elements of the project program:

- Transit:
- RTV Parking – 50% Standard, 50% Articulated
 - Fare pull stations
 - Administration Building: 21,540 s.f.
 - Staff parking: 306 spaces (min.)

- Fleet:
- Maintenance Bays (21)
 - Welding Bays (2)
 - Steam Bays (2)
 - Tire Bays (2)
 - Paint Booth Lane (1)
 - Fuel Lanes (4)
 - Vehicle Wash Lanes (2)
 - Vehicle Inspection Pits (2)
 - Administration Building: 12,670 s.f.
 - Staff parking: 112 spaces (min.)
 - Parts Storage
 - Fluids Storage & Supply

2. **Test Fit Layout:** Concept layouts have been developed to test how the project program can be accommodated within the constraints of the site. Progress meetings held to review and coordinate the conceptual site layouts were attended by representatives from the Department of General Services (DGS), Department of Transportation (DOT), and Whitman, Requardt & Associates, LLP (WR&A). The conceptual design was performed to maximize the number of transit vehicles that can be accommodated at the site. While two (2) conceptual layouts have been developed, there are many similarities between them. Thus, the following discussion generally applies to both layouts unless noted otherwise.

- a. **Site Access:** A key objective of the site design is to keep the traffic paths of the transit vehicles and privately-owned vehicles (POVs) entirely separate. Therefore, an independent designated access point should be provided for the transit vehicles and the POVs to prevent the mixing of these vehicles within the site circulation.

The concept layout provides an access point for the POVs at Roadway 1, and a separate RTV access point along Roadway 2. The current concept provides a “right in / right out” scenario for the POVs entering and exiting the site from Roadway 1. This arrangement does not require a signal or median break, and is therefore considered to be the scenario that will be most easily approved. RTVs will access the site via Roadway 2, which lends itself well to a signalized intersection where it meets Roadway 1.

Peak traffic volumes associated with the Depot related vehicles (RTVs and POVs) are anticipated to occur at hours that do not correspond with typical rush hour traffic. Due to the route schedules, transit vehicles likely depart the site before morning peak traffic volumes occur, and return to the site at various times throughout the day. While the Depot traffic is not expected to result in significant impacts to the surrounding road network, a traffic study is required to appropriately assess the impacts. The traffic study should also make recommendations on necessary improvements to Roadways 1 and 2, such as the addition of new turn lanes for vehicles turning into the site, or acceleration lanes for vehicles departing the site.

- b. **Parking Structure:** Consistent with the schematic design developed for the North County Maintenance Depot project, parking for transit vehicles is proposed to be provided in a parking structure. Enclosing the parked RTVs within a parking structure has several advantages: they are under cover from ice and snow - minimizing driver’s time for readying the vehicle; a climate-controlled parking garage eliminates the need for engine block heaters and idling warm-up time; and the vehicles are stored within a secure structure.

The test fit was performed to maximize the number of transit vehicles that can be accommodated on the site, using a 50/50 split between standard and articulated RTVs. The resulting layout provides parking on Level 1 for a mix of RTVs, while Level 2 has parking for all staff vehicles and additional standard sized transit vehicles. Some transit vehicle parking is provided outside of the parking structure for vehicles requiring service and maintenance. Staff vehicles access Level 2 via the on-grade driveway directly from Roadway 1, while the standard sized RTVs reach

the upper level by a set of structural ramps. Limitations on ramp length require the ramp slope to be 8%. At this grade, it is recommended that the ramps be enclosed, or heated, to ensure safe operations without the risks associated with ice in winter. The parking structure and ramps are designed to provide a traffic flow for buses in a counter-clockwise direction, providing better visibility and maneuvering to the drivers.

The two conceptual test fit layouts demonstrate that 250 transit vehicles can be accommodated with potential for an additional 30 RTVs. The required staff parking of 418 spaces fit on the second level of the parking structure, along with the additional standard sized RTVs. There is potential for a maximum of 282 RTVs and 497 staff vehicles to be accommodated, depending on the allowable transit vehicle to service bay ratio.

- c. **Fleet Maintenance Building:** The Maintenance Building is configured with double-stacked service bays that offer a drive-through capability. One side is sized to accommodate articulated RTVs, while the opposite side is designated for the standard sized transit vehicles. The rows of bays are separated by a service aisle to allow free access for staff and materials to the full length of the Maintenance Building.
- d. **Administration Building:** An Administration Building will be provided to house all management and operations functions, driver training and break space, locker rooms, meeting rooms, and other related space. Generally, the concept layouts have the Administration Building on the second floor above a portion of the Maintenance Building, resulting in a smaller building footprint and improving opportunities for daylighting.
- e. **Water and Sewer:** County GIS and WSSC utility mapping indicates that there is public water and sewer in the vicinity of the subject property to the south and to the west. Existing pipe sizes and proposed Depot flow requirements are needed in order to assess the adequacy of the nearby utility infrastructure and determine utility improvements and points of connection. Depending on final site elevations and existing public sewer depths, there is the potential that a sewer ejector pump station will be needed to transmit onsite sewer flows to the public sewer system.
- f. **Compressed Natural Gas (CNG) Fueling Facility:** There is future potential for a portion of the bus and RTV fleet to be fueled by CNG. This would require a CNG fueling facility to be located on the site – the approximate dimensions of such a

facility are 45' x 200'. There are opportunities to fit such a CNG facility within the site; however, there would be impacts to the site layout in the form of a loss of exterior bus parking spaces or screening requirements from the adjacent public road. Further assessment of the CNG fueling operations and its associated site circulation would be required.

Washington Gas has advised that there are high-pressure gas mains in the general project vicinity. The County Fuel Program Manager has advised that an existing County CNG facility has a dedicated pipeline directly from the Washington Gas transfer station to deliver gas to that site at a minimum of 85 psi. Further coordination with Washington Gas is required to better understand how the Mid-East County Depot site could be served.

- g. Stormwater Management:** Current stormwater management regulations require the implementation of Environmental Site Design (ESD) principles to the maximum extent practicable. Due to the size of the parking structure and maintenance building (approx. 9.2 acres), green roofs at the buildings and a green roof canopy above the Level 2 parking are expected to be a necessity. Other ESD measures may include rainwater harvesting with the reuse of collected water at the bus wash facility, and micro-bioretenion facilities and/or gravel wetlands to treat onsite paved areas.

Stormwater quantity management may be required in addition to the ESD water quality measures. Due to the constraints of the site, quantity management will likely take place as underground detention. A stormwater discharge will need to maintain the existing flow quantities that feed the stream that flows offsite. The limits of grading and stable outfalls at stormwater discharge points along the edge of the site will have difficulty being accomplished within the limits of the subject property.

- h. Environmental Impacts:** The following summarizes the anticipated environmental impacts associated with the development of this site:
- **Forest Conservation Easements:** There will be unavoidable impacts to existing Forest Conservation Easements due to new driveway entrances and the construction of the parking structure. The impacts will consist of clearing of forest areas, as well as either abandonment of the existing easements, or redefining of the easement limits to fit the final site conditions.
 - **Wetlands:** The existing onsite pond must be filled in to construct the parking garage.

- **Stream Buffer:** The development of the site will result in impacts to the stream buffer at the edge of the site. While efforts can be made to minimize the impacts, avoidance of all impacts is not considered feasible.
 - **Stream Source Discharge:** There is an existing detention facility located near the boundary of the site. The discharge from the facility serves as the source for the headwaters of the previously discussed stream. While the surface detention facility will be removed as part of the project, a stormwater discharge equal to the existing flow rate must be maintained to ensure the continuance of the stream and associated wetlands.
- i. **Reforestation:** Using the site area, the proposed site layout, and the resulting impacts to the Forest Conservation Areas, a preliminary calculation for the reforestation / afforestation mitigation requirements for the project has been performed. The preliminary total forest mitigation area is less than 7 acres.

E. Potential Issues and Concerns

1. **Site Access:** If the issuing agency is not agreeable to the proposed staff vehicle access point along Roadway 1, it would result in significant complications to the site layout. To bring all transit and staff vehicles into and out of the site from Roadway 2 would be challenging and result in undesirable onsite vehicle circulation patterns.
2. **Community Impacts:** One nearby property would be significantly impacted. Other residential property owners are likely to object to the location of a Depot site for reasons related to traffic, visual / aesthetic, and noise impacts. A traffic study must be performed to assess the potential traffic impacts on the surrounding road network. The Depot facility should be screened from view along the public ROWs along the south and west sides through the use of grading and vegetative buffers. The conceptual grading of the site would have the west wall of the parking structure serve as a retaining wall for the full 20-foot depth between the Level 1 and 2 parking decks. This allows Level 1 to be below grade on the west side and out of view of adjacent roadways. Locating the transit vehicle parking partially below-grade and within an enclosed parking structure will help to reduce noise impacts associated with RTVs circulating the site.
3. **Environmental Impacts:** Of concern are the impacts to the Forest Conservation Easements around the site perimeter, the stream buffer at the east side of the site, and

potentially the uppermost reach of this stream. During environmental permitting for the project, a justification will have to be made to M-NCPPC to explain why these impacts could not be avoided. Additionally, the environmental permitting and approval process could be streamlined by having an approach that strives to not only minimize environmental impacts, but also improve the overall environmental conditions. The acquisition of an adjacent parcel of the selected site would allow for reforestation to take place along the entire stream buffer and placed within a Forest Conservation Easement to ensure protection of this waterway.

- 4. Site Size Limitations:** The site exceeds the required 16 acre minimum for a Depot. The proposed building (parking garage, maintenance and administration buildings) and paved vehicular areas account for a total of 13.2 acres. Existing easements account for a total 5.7 acres. The remaining area is not sufficient for forest conservation, site grading, retaining walls, perimeter vegetative buffers, stormwater management ESD facilities, and reforestation areas that must be accomplished. These site area concerns would be alleviated if the adjacent properties to create a larger project site. Additionally, this would undoubtedly allow the project to be viewed far more favorably from an environmental impact standpoint since there would be an opportunity to provide reforestation within the existing stream buffer. This would also assist with the SWM feasibility by allowing grading across the property boundary to occur and the placement of additional ESD facilities adjacent to pavement areas.

F. Costs

- 1. Property Acquisition Costs:** Montgomery County Real Estate staff has preliminarily estimated the cost of the selected site to be \$2.5 million. The adjacent properties, which should be considered for purchase as well, are estimated to cost less than \$2.6 million. The total estimated cost of all three parcels is \$5.1 million. It should be noted that the above property costs are based on available property assessment data with an additional contingency, and that accurate property appraisals should be performed to refine these estimated costs.
- 2. Project Construction Costs:** Based on the previously estimated costs for the North County Maintenance Depot, a rough order of magnitude cost estimate has been prepared for the conceptual layout of the Mid-East County Depot. The total projected construction cost is \$92 million, which includes an allowance of \$2 million in roadway widening and intersection signal improvements. Additional right-of-way costs and

engineering professional services fees are not included. It is assumed that utility connections can be made to existing infrastructure immediately adjacent to the site's road frontages, and major utility extensions are not required. Additionally, this cost is based on the full program being constructed in a single phase. It should be noted that constructing the parking structure on this site with size limitations does not lend itself well to a phased construction. Montgomery County DOT staff advised that it is unlikely that a CNG facility will be required in the future due to the operational complications presented by the use of CNG facilities, and therefore the cost of a CNG facility is not included in this estimate.

G. Conclusions & Recommendations

Montgomery County DGS has performed an extensive site selection evaluation to narrow the pool of potential sites for the Mid-East County Maintenance Depot down to a single site. This selected site is identified as Site 34.

An evaluation of this site was performed to assess the site conditions, its various constraints, and its feasibility to accommodate the project program for the proposed Rapid Transit Vehicle depot facility. Environmental constraints on the site include: Forest Conservation Easements around much of the site perimeter; a stream and associated buffer at the edge of the property; a wet pond and other stormwater management features.

Conceptual site layouts (2) have been developed as test fits for the project program within the constraints of the site. The test fits indicate that the property is of sufficient size to fit the program elements for the proposed Mid-East County Depot. However, there will be impacts to Forest Conservation Easements, stream buffers, and potentially the upper reach of the stream at the edge of the site. Additionally, it should be noted that the remaining site area outside of the Forest Conservation Easements and proposed building/pavement areas is not adequate to accommodate the necessary site grading, stormwater management; stormwater discharge stabilized outfalls, and required reforestation area.

Therefore, it is recommended that two adjacent parcels be acquired in addition to the Site 34 parcel to create a larger overall project site. Acquiring these two additional parcels will allow grading and the placement of SWM facilities to take place over the property boundary, and greatly improve the feasibility of all aspects of the project development. Lastly, the additional acreage will be greatly beneficial in displaying an environmental stewardship approach to the project, as extensive reforestation can take place along the stream buffer along with the creation

of Forest Conservation Easements. Demonstrating this environmental sensitivity early in the project planning stages will help alleviate future concerns of M-NCPPC and the general public community.

While the proposed project is anticipated to be met with some level of community resistance, there are opportunities for designing the site in a manner that will help alleviate the potential concerns related to visual and noise impacts.

III. GAITHERSBURG CCT FACILITY

In conjunction with the County mission for a Rapid Vehicle Transit system, the proposed Corridor Cities Transitway (CCT) is vital part of this broader initiative. The Maryland Transit Administration is conducting a study of the proposed Corridor Cities Transitway, a light rail or RTV line extending from the Shady Grove Metro Station in Rockville, through Gaithersburg and Germantown, to the COMSAT facility just south of Clarksburg. A preferred Operations and Maintenance facility site has been identified near the Metropolitan Grove MARC Station. The site currently houses the Montgomery County Police Impound facility and unimproved property owned by the City of Gaithersburg. If this site is selected for the O&M facility, the Police Impound facility would be relocated to another area and a portion of the Gaithersburg property would be cleared.

The MTA has prepared conceptual site plans for both LRT and RTV O&M facilities at this location. The site, as currently configured, can house approximately 174 buses, more than what is anticipated for CCT operations, thereby allowing for the storage of additional vehicles. In addition, extra space on the Gaithersburg property adjacent to the proposed site is available for possible expansion.

A preliminary cost estimate was developed for the CCT, including the O&M facility. This estimate is not directly based on a specific RTV layout but, instead, on a typical facility of this size. The onsite construction cost is estimated at \$33.3 million, and includes an allowance of \$2 million for offsite roadway improvements. This cost does not include right-of-way, engineering (professional services), or the purchase of vehicles.

The MTA and Montgomery County have worked cooperatively to advance both the CCT and the Countywide RTV study. If the Gaithersburg site is needed for use by County buses associated with the countywide study, it is anticipated that an agreement can be worked out to share the site and its related facilities. While MTA continues to manage the CCT study, no decision has been made regarding who would ultimately operate it. It may prove most efficient for Montgomery County to operate both the CCT (as RTV) and the countywide RTV system as one system.