County of Fairfax, Virginia

To protect and enrich the quality of life for the people, neighborhoods and diverse communities of Fairfax County

June 14, 2010

Mr. Richard Baier
Director, Transportation & Environmental Services
City of Alexandria
301 King St., Room 4100
Alexandria, VA 22314

Reference: Transportation Management Plan for BRAC 133 at Mark Center

Dear Mr. Baier:

Fairfax County Staff has received the Draft Transportation Management Plan for BRAC 133 at Mark Center and offers the following comments:

- Throughout the Transportation Management Plan (TMP), dates are identified for some activities to occur, but no consolidated schedule that would track implementation of the plan is provided. It would be helpful that a consolidated schedule for all time sensitive activities be included as a separate attachment.

- A number of activities identified in the TMP address coordination with the City of Alexandria. Due to the proximity of this site to Fairfax County and the potential impacts not only to the local transportation network in the County along with the I-395 corridor and associated interchanges, Fairfax County should be included in all coordination activities during the planning, implementation, and monitoring of the TMP.

- Coordination with the WMATA study should be included in the TMP. This would include recommendation on public transportation modifications.

- With the highest density of employees going to the MARC Center site living in Fairfax County (south), the plan should include maximizing the potential utilization of the Franconia Springfield Transportation Center.

- The plan should also include potential projects that would qualify for funding through the Defense Access Road program.

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- The TDM program includes most of the usual elements used by large employers in the region; these coupled with the transit subsidies available to most BRAC 133 staff will be helpful in increasing non-SOV share. However, in a location this far from rail transit, it will be a challenge to meet the 40% non-SOV goal. Other measures should be considered to support this goal. Parking pricing could help, but it is understand that pricing is not allowed as a matter of regulation or law. (It may be worth inquiring if the administrative cost of issuing permits could be recouped. This would provide further incentive to other modes.)

- Individualized marketing and personal travel planning should be considered to increase the share on non-SOV commuters. Individualized marketing (aka IndiMark or TravelSmart) involves identifying and targeting marketing to transportation users who have access to modes other than driving alone and are willing to try these options. Personal travel planning is offered on a one-on-one consultation basis to encourage and plan alternative transportation travel. These outreach methods can be supportive of any alternative mode or TDM mitigation. Most IM demonstration projects have been conducted at the community level (public agency outreach to residents). The data indicates increase in non-SOV ridership of 5 to 10 percent. Here are two of the studies:
  http://www.fta.dot.gov/index_4402.html
  http://www.socialdata.de/info/IndiMark.pdf

- Although it is a new concept, there has been some success in workplace-based individual marketing:
  Stanford University (http://transportation.stanford.edu/)
  and Portland's SmartTrips Downtown program
  (http://www.portlandonline.com/TRANSPORTATION/index.cfm?c=43820) are two notable examples.

- In Table 2-2, USACE TMP Study, the AM/PM SOV peak hour trips and number of visitors represented for WHS and IDA are not consistent with the AM/PM SOV peak hour trips and number of visitors in Tables 4-2, 4-3 and 4-4.

- Page 14: Although based on the survey results, would the anticipated mode choice percentage be realistic considering the changes in accessibility to the transit stations adjacent to the Mark Center site when compared to the existing employment center location? According to Table 2-3, it would result in over 115 bikers and 123 people walking. In case the mode choice percentage for transit and carpool/vanpool can't be met due to various reasons, what would be the alternative plan? Are there any incentive programs planned for employees not using SOV for their commute?

- There is no guarantee that carpools and vanpools would be formed as anticipated although the zip code of employee origin may be identical. Also there are limitations in number of potential sluggers since no direct HOV access is provided to the site where the

majority of the employee would be coming from during the peak direction (from I-395 NB to the site during AM and to I-395 SB from the site during PM).

- In Table 2-4, the source or methodology used for the applied rideshare vehicle occupancies of carpool (2.3), vanpool (7.0) and slugging (3.0) should be provided.

- Traffic numbers in the "60% SOV Trips – Visitors" column, "11% Rideshare Trips – Employees" column in Tables 4-2 and 4-3 are incorrect. The corresponding AM/PM Rideshare numbers corresponding to their respective hourly trip distributions seem miscalculated and need to be updated. Also, the hourly trip distributions in both the AM and PM peak periods only add up to 99% where 1% of the trips have not been represented (37 SOV trips and 7 Rideshare trips).

- BRAC 133 & IDA site generated trips used to project traffic volumes at build-out including baseline trips, WHS & IDA generated SOV trips, rideshare and shuttle trips along the study area roadway network are incorrect (Table 4-4).

- Since the In/Out site generated trips for both AM and PM peak hours are incorrect, Figures 4-5 and 4-6 need to be revisited and updated. The LOS tables will need to be updated accordingly that reflect the revised site generated trips.

- The TMP should reference and be consistent/coordinated with the Washington Metropolitan Area Transit Authority's (WMATA) "Transit Service Impacts of the Base Realignment and Closure Recommendations in the Metropolitan Washington Region" Draft Report dated June 2010. The draft report outlines existing and proposed transit services including local bus, express bus and shuttle proposals servicing the Mark Center area. A copy of the "BRAC 133 (Mark Center)" section in the draft report is attached to this letter.

- Figure 3-3 (Page 25): Signals and roundabouts usually don't mix well especially when placed right adjacent to one another. Has any analysis been performed to consider roundabout instead of the signal at Mark Center Dr and IDA Dr intersection since a roundabout is being proposed immediately to the south?

- Page 35: Has the need for modifying the transit routes been considered for Fairfax Connector? How would the new routes be funded and how will buses get to the transit center?

- Page 37: Would the proposed five bus bays be sufficient to handle all the local Mark Center express shuttle and DoD shuttles during the peak conditions? How many shuttles or buses will be needed considering the anticipated ridership? Have detail plans and the funding sources been identified for running the shuttle operations? Are adequate bus bays available at the transit hubs and Metro stations for the DoD shuttle service?

- Figure 3-8 (Page 41): Preliminary shuttle routes have limitation of capturing much of the employees coming from the south. Shuttle to and from the King Street Station would be critical in capturing Metrorail and VRE commuters from the south. Also depending on the origin of the employees, the shuttle serving the VRE Crystal City station would also need to be considered. One challenge in providing the shuttle service is avoiding the congested routes along with being on schedule for trips that are transferring from different modes.

- On Page 57, Figure 4-3, the callout for the signal at the intersection of Seminary Road westbound and the ramp from I-395 southbound shows a right-turn-only lane from Seminary Road to the ramp in the wrong direction. Also, the callout for the signal at the intersection of Seminary Road eastbound and the ramp to I-395 southbound shows a right-turn-only lane from the rotary to Seminary Road in the wrong direction. The lane configuration at the intersection of I-395 Northbound and Seminary Road eastbound shows I-395 northbound off ramp having one through and one shared through-right turn lane (as described in Page 56 of the report as delineation of the existing island within the rotary and restriping). The current configuration has the off ramp lane only having one through and one exclusive right turn lane. Since this requires reconfiguration and retiming at the four ramp intersections, this needs to be identified as proposed improvement and noted in figure 4-3 as well. Also, the intersection configuration at North Beauregard St and Seminary Road does not depict the channelized right turn movements. In addition, the lane configurations at the two internal intersections seem is different from the existing conditions. The difference in these assumptions would be critical in interpreting the results from the simulation analysis.

- On Page 65, first paragraph, the final clause should read as follows: "... to travel along I-395 <u>southbound</u> GP lanes to Mark Center."

- Page 68: How many multiple simulation runs were performed for CORSIM in summarizing and averaging the MOEs? Are the electronic files for Synchro and CORSIM available? Would the scenario analyzed with interim improvements include the addition of proposed lanes and signalization as shown in Figure 4-3, or would there be any additional improvement assumed? It is not clear as to what improvements are being proposed versus what is existing since some of the configurations depicted as existing don't coincide with the existing condition. This assumption would be critical in interpreting the results from Table 4-10.

- Page 73: Data source is noted as 2010 HCM. Is this source correct since the 2010 HCM has not been released yet?

- Table 4-10 & 4-11 (Page 75, 76): Model throughput shows majority of the demand volume being accommodated for 2011 baseline condition without improvement conditions, showing LOS D or better for AM and LOS E or better or PM peak conditions.

Would this be realistic considering the current level of congestion that is occurring along the corridor?

- Table 4-14 (Page 79): The table shows that the analysis results from the TMP study for 2011 would operate better when compared to that for the existing condition at majority of the intersections, especially at the intersection of I-395 NB off-ramp with Seminary Rd. It appears that the analysis assumed delineation of the existing island within the rotary and restriping at the rotary of I-395 ramp and Seminary Rd for this TMP analysis. Difference in the assumption of the lane configuration needs to be clearly stated for the purpose of a fair comparison.

- If the year 2011 was defined as baseline condition, how was the CORSIM model calibrated in order for the simulation model to replicate the existing conditions (in terms of volume, speed, and queue etc) to give better representation of the future scenarios evaluated? What was the basis for adjusting different parameters in preparing for the future simulation model?

- Table 4-16 (Page 82): The TMP states that the operations at the I-395 NB ramps to Seminary Road Exit ramp show an improvement. This contradicts the results in Table 4-11.

- Table 4-19 (Page 86) shows intersections serving as major access points still operating at LOS E with the project added trips and for some cases LOS improving (at the southeast intersection at the rotary). Would this be a reasonable result accounting the addition of project trips? The table clearly shows that although the LOS may be E, all the demand would not be met with close to 700 trips and 400 trips not being serviced at certain intersections during AM and PM peak hour conditions respectively.

- Table 4-20 (Page 88) although the results show acceptable LOS, the trips being served are not all of the anticipated project demand trips.

- On Page 90, Section 4.4.9 offers several roadway and intersection improvements to address impacts of the baseline and projected volumes. There is no discussion, however, of how to fund these improvements and what would happen if most or all could not be implemented.

- The TMP only provides an analysis for 2011 conditions (baseline + projected Mark Center/IDA) and lacks a longer term planning analysis. Assessing only opening year conditions seems short-sighted and does not account for significant future traffic issues post-BRAC 133.

- In Section 5.4, Parking Management, the total number of parking permits will be set by the total number of parking spaces. This will cause under-utilization of the parking resource when staff is absent.

- Parking permits will not be issued to staff who receives the mass transit benefit. Making limited parking available is important because one of the reasons staff may not accept the transit benefit is fear of where they will park on days when they must drive due to missing their bus, attending personal appointments, etc. Some allowance should be made so they can access parking a few times per month. Smart card garage access should be programmable for limited use, if electronic access is not used, punch cards or tear-off permits can be issued.

- An explanation of why BRAC 133 cannot guarantee parking for flex time employees arriving after 9:00 AM needs to be provided in the TMP.

- What proportion of the BRAC 133 employees will be civilians versus military personnel and how effective could the TMP be enforced and implemented?

- Based on the expected task the TMP coordinator will need to carry out, senior staff along with supporting staffs with transportation management expertise would be needed. Also, it is not mentioned anywhere in the TMP as to when the TMP coordinator is planned to be hired.

- On Page 98, what is the basis of allotting 5% parking for carpools and vanpools? Mode splits add up to be 8% for carpools and vanpools whereas description in Page 48 mentions the mode split to be 8.5%. What happens if a permit has been issued for a carpool vehicle and the carpool requirement is not fulfilled on certain days? How will this permit be monitored and enforced?

- In Sec. 6, Monitoring and Evaluation, the City of Alexandria should have a consultation or approval role in accepting the annual report and/or amending the TMP.

- The TMP should stress the need for conducting employee survey and monitoring more frequently than the proposed biannual basis, during the initial year of the relocation to address any deficiencies and issues that may arise during this time.

Thank you for the opportunity to comment on the Transportation Management Plan for BRAC 133 at Mark Center. If you have any questions or require additional information, please contact me at 703-877-5688.

Sincerely,

Mark Canale
Fairfax County BRAC Coordinator

Enclosure: Transit Service Impacts of the Base Realignment and Closure Recommendations in the Metropolitan Washington Region, Draft Report, June 2010 ("Mark Center" section)

cc: Katharine D. Ichter, Director, Fairfax County Department of Transportation
Tom Fahrney, VDOT BRAC Coordinator

ATTACHMENT

BRAC 133 (Mark Center)

City of Alexandria, Virginia

Table 5: Key characteristics of BRAC 133

	Now	By 2015	Growth
Personnel	0	6,400	n/a
Living Units	0	0	None
Parking	0	3,990	n/a

Background

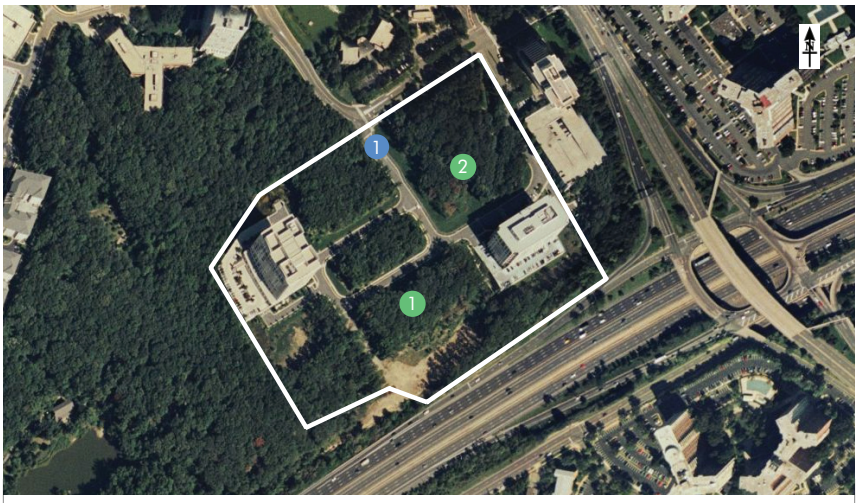
The BRAC 133 project is being built in the Mark Center area of Alexandria, Virginia, west of the I-395 and Seminary Road interchange. BRAC 133 will result in consolidated administrative space for the Washington Headquarters Services (WHS), an organization within the Department of Defense (DoD). Originally intended for Fort Belvoir, DoD decided to consolidate WHS employees elsewhere to minimize effects on underdeveloped transportation infrastructure near the base. Figure 10 shows that parcels on which the headquarters are being built were previously unoccupied. Construction is under way

Growth

The BRAC process will result in a realignment of 6,400 WHS employees from throughout the region to the Mark Center. These employees will be consolidated into two buildings. The development will provide 3,840 total employee parking spaces in garage structures, per DoD regulations requiring 1.67 employees per space. The primary parking garage will include a transit center as well, which is detailed later in the discussion of transit facilities. The development does not include housing.

Access

Once complete, access to the WHS buildings will likely be limited to one secure entry and exit point that will employ a 100 percent ID check policy. The general location of the access point can be found in Figure 10. Its schedule is presently unknown.



BRAC construction	Other construction
1 Washington Headquarters Service buildings	None
2 Parking facility with transit center	

Access points	Days	Hours
1 Main Gate	Unknown	Unknown

Figure 10: Access points and new and renovated facilities for BRAC 133

Transportation Services

Existing

BRAC 133 will be located adjacent to I-395 with immediate highway access via Seminary Road, also adjacent to the site. Subsequently, the site has excellent highway access, though I-395 and Seminary Road are currently congested. For example, the sections of I-395 and Seminary Road closest to the site are traveled by 173,000 and 50,000 vehicles per day on average, respectively.

The closest Metrorail station is Van Dorn Street station on the Blue Line (2.4 miles). King Street station (also a VRE commuter rail station), Pentagon station, and the Shirlington transit center are all relatively close as well, and each offer several connections to nearby bus routes. About 16 park-and-ride lots are within a six-mile radius of the Mark Center, with the heaviest concentration near the I-395/I-495 intersection (the Mixing Bowl), many of which are free of charge.

Many bus routes operate along Seminary Road, but only one route, the Metrobus 7 line, in particular 7A and 7F, operates within the Mark Center site along Nottingham Drive. Other routes in the immediate area include Metrobus 7B, D, E, W, and X; 16L; 25B; 28A, F, and G; and Alexandria Transit DASH routes AT1 and 2.

The Institute of Defense Analysis offices, already located at Mark Center, currently operate a Pentagon shuttle with 15-minute headways from 7:20 a.m. to 6:20 p.m. Duke Realty, developers of the Mark Center site, also provides two shuttles, the Metro Express to the Pentagon City Metrorail station and Lunchtime Express to restaurants and retail in immediate Mark Center area. Metro Express operates during peak periods only with 15-minute headways, while Lunchtime Express only runs for several hours during midday with 10-minute headways.

The Mark Center area is relatively dense but is still auto-centric. Sidewalks, when available, are generally narrow and inconsistently placed, sometimes requiring pedestrians to cross where sidewalks abruptly end.

Existing transportation services are summarized in Figure 13 on the following page.

Planned

Planned transportation services for BRAC 133 can be found in the *Virginia Six-Year Improvement Plan*. Notable projects with direct relevance to BRAC 133 include a potential direct HOV access ramp from I-395, additional DASH bus purchases, and other city-wide improvements such as ITS implementation and traffic light synchronization. Projects and studies beyond 2020 that may affect travel to and from BRAC 133 are discussed further in the *Constrained Long-Range Transportation Plan*, which is prepared by the Transportation Planning Board (TPB).

Demand

An official transit mode share goal for this site has not been defined, though the BRAC 133 EA uses a transit mode share of 20 percent in calculating total work trips. However, 30 percent of incoming employees currently take public transit to work, likely because many of these employees work in Crystal City and other locations well served by transit.

This study estimates a 13 to 26 percent transit mode share range by 2011, based on an understanding of proximity to transit and carpool facilities, residence of incoming personnel, and future parking availability. Table 6 summarizes this range and what it means for total transit trips.

Beyond 2011, the WHS headquarters is not expected to undergo another period of significant expansion. The opening of the planned HOV off-ramp to Seminary Road, which is currently under construction, may increase the carpool and vanpool usage, possibly at the expense of transit use. On the other hand, the new ramp also creates the possibility of express bus that could serve the site. In spite of these possibilities, this study assumes transit mode share will remain consistent and within the estimated range..

Transit Service and Facility Proposals

Figure 11 summarizes the current residential distribution of WHS employees awaiting reassignment to the Mark Center. The table reveals that a majority of these employees currently reside in northern Virginia, particularly Fairfax County. Transit service proposals for BRAC 133 are tailored to reflect this distribution, with an understanding that as time passes employees will likely further consolidate into northern Fairfax County much in the same pattern as employees already working in the Mark Center area.

The WHS buildings are being built in a semi-urban setting, where providing transit service directly to the Main Gate is desirable and feasible. Its relatively compact footprint in Mark Center eliminates the need for any internal circulation, thus transit service proposals will focus on

Table 6: Estimated transit trips for BRAC 133 in 2011

Scenario	Transit Share	Personnel	Transit Round Trips
Low	13%	6,400	830
High	26%	6,400	1,670

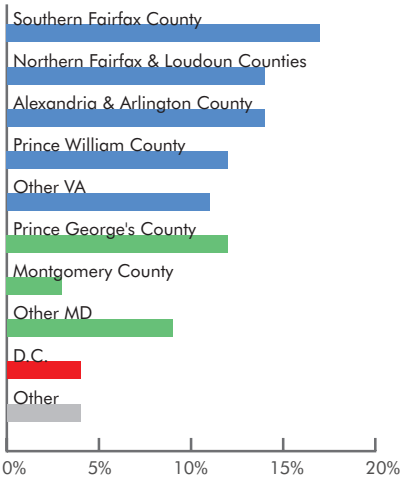


Figure 11: Residence of existing WHS employees, 2006

Source: flickr/Belvoir Army Engineers

Figure 12: WHS buildings under construction

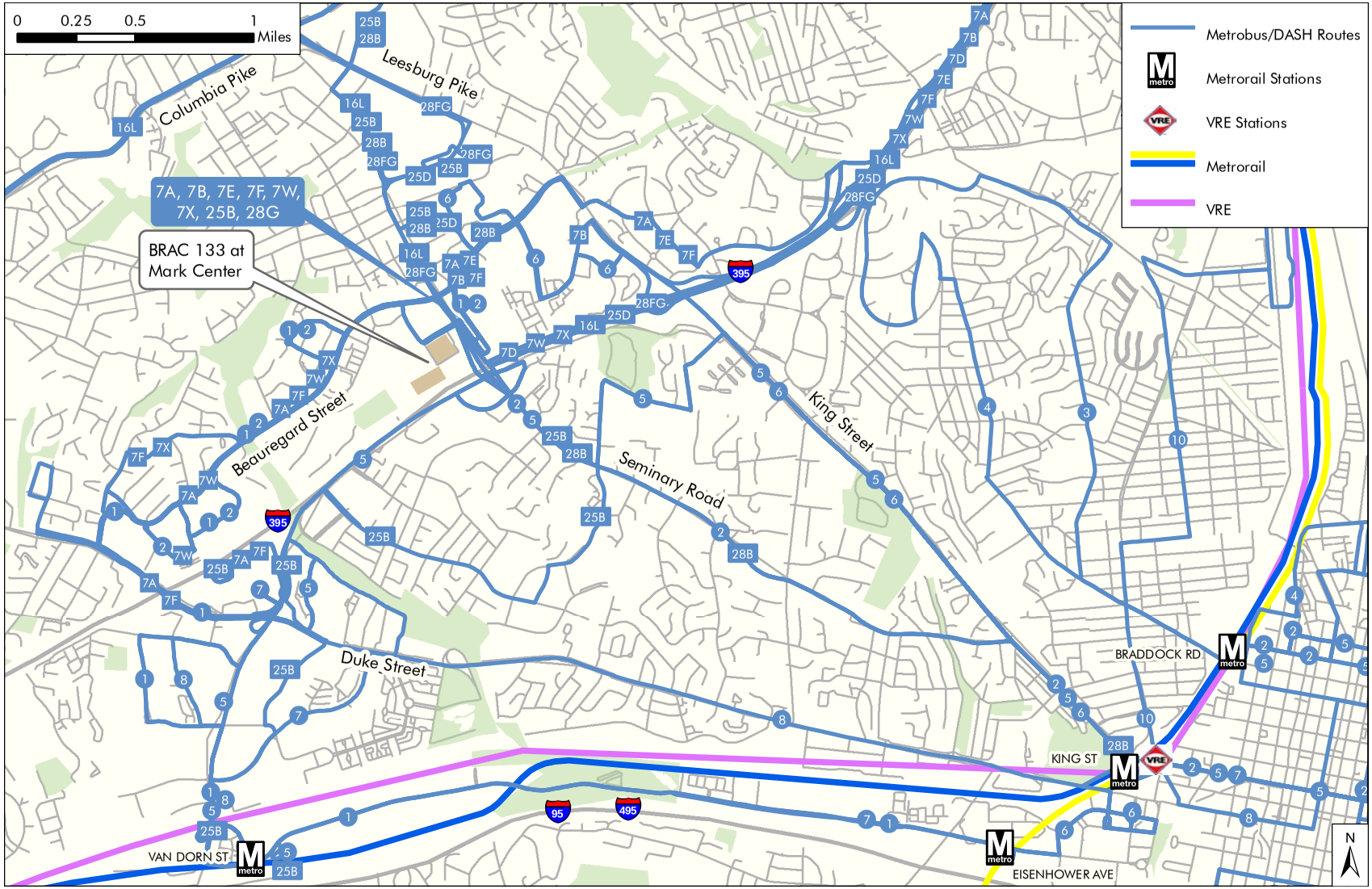


Figure 13: Existing transit service near BRAC 133

Source: MWCOG, Navteq, and ESRI

transporting employees from nearby transit hubs and modifying and creating regional and local bus routes. All service proposals are summarized in Table 7 and displayed in Figure 15.

Local Bus Proposals

Several Metrobus and Alexandria Transit (DASH) bus routes operate in and around the Mark Center area and offer a significant opportunity for greater and more frequent connections to the planned WHS transit center, located within the north parking garage along Nottingham Drive and adjacent to the main entry and exit point.

This study proposes the modification of Metrobus routes 7 (B, D, and E), 28F, and 25 (A, B, and D), as well as DASH routes AT1 and AT2 to serve the planned WHS transit center. These routes already serve a variety of Mark Center locations and should be extended or modified to serve the upcoming transit center. In many cases, route modifications involve adding a WHS transit center stop for routes that already serve Southern Towers, one of Alexandria's highest ridership locations.

This study also proposes strengthening connections to nearby Metrorail stations, including Pentagon and King Street stations as well as Orange Line stations, through increased frequency.

Metro should increase frequencies of Metrobus route 7 (B, D, and E) and 25D. In particular, the frequency of route 7D, an express route to Pentagon Metrorail station in the reverse commute direction, can be increased by converting deadhead trips from routes 7B, D, and E into revenue trips. Afternoon peak-period frequency should be increased for route 25D towards Pentagon Metrorail station, provided it stops at the WHS transit center.

Table 7: Summary of BRAC 133 service proposals

Purpose	Proposal
Direct local service	Reroute Metrobus bus routes 7 (B, D, and E), 28F, 25 (A, B, and D)
	Reroute DASH routes AT1 and AT2
	Implement circulator service to WHS transit center via Seminary Road and Beauregard Street
	Reroute planned cross-town DASH service between Landmark Mall and Potomac Yard Shopping Center to serve WHS transit center
Direct express service	Implement new Omniride route that would serve Seminary Road from Lake Ridge
	Implement express route between Franconia-Springfield and Pentagon Metrorail stations via Beauregard Street
Connections to major transit centers	Improve connection to Pentagon with Metrobus 7D and 25D
	Improve connection to Orange Line stations with Metrobus 25B
	Improve connection to King Street VRE and Metrorail station with DASH AT2
	Improve connection to Braddock Road Metrorail station with a DASH AT2 variant
	Implement shuttle service connection to a major transit center

Figure 14: Metrobus not in service

WHS employees would benefit from better regional connectivity by increasing the frequency of Metrobus route 25B in addition to DASH route AT2. These routes stop at several Metrorail stations in northern Virginia and should be routed to directly serve the WHS transit center.

Route 25B operates between Van Dorn Street and Ballston-MU stations. This study proposes adding a variant to route 25B with three morning and afternoon peak trips offering limited-stop service.

The headway of DASH route AT2, which operates between King Street station and Southern Towers, should be reduced to 20 minutes. Alexandria Transit should also implement limited-stop service on some peak-period trips to better coordinate with VRE commuter trains. Route AT2 will provide an essential connection to the planned Potomac Yard transit corridor via the Braddock Road Metrorail station. This connection may be time consuming, though, as AT2 also connects to King Street station before serving the Mark Center area. This study proposes a quicker route via West Braddock Road and King Street to provide an more efficient connection.

In a memorandum regarding FY2009 supplemental budget requests,

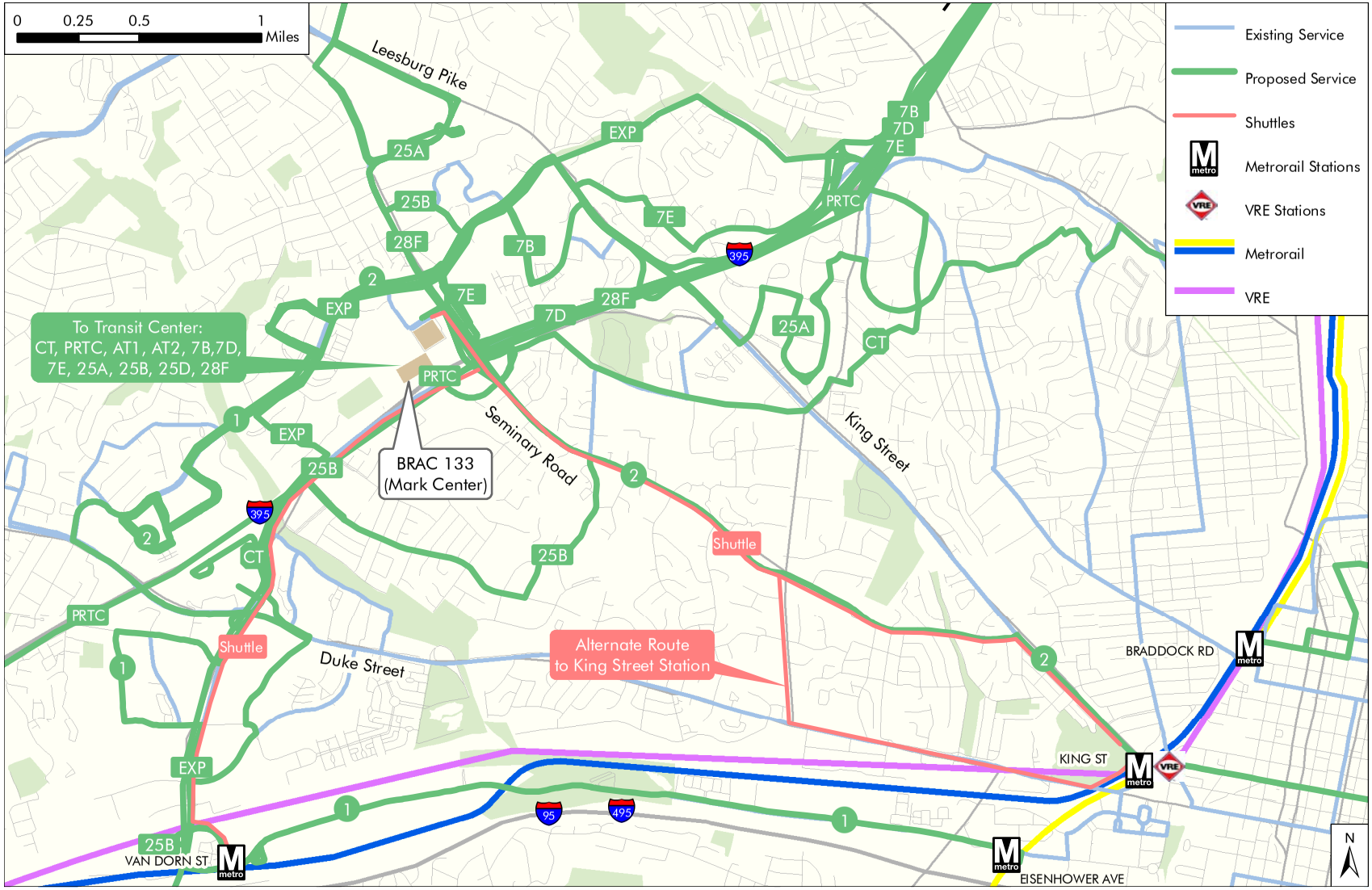


Figure 15: Existing transit service near BRAC 133

Source: MWCOG, Navteq, and ESRI

Alexandria proposed a cross-town route from Landmark Mall to Potomac Yard Shopping Center. The city could consider serving Mark Center on this proposed route or on a separate cross-town connection. This would offer better connectivity within the city and possibly attract transit ridership.

Finally, this study proposes a circulator service to serve Southern Towers, the WHS transit center, Northern Virginia Community College (Alexandria campus), Skyline City, and Bailey's Crossroads along Seminary Road and Beauregard Street. A circulator would complement local and express bus service in the area.

Express Bus Proposals
During the I-95/I-395 Transit/TDM Study, the Potomac and Rappahannock Transit Commission (PRTC) proposed a new Omniride route between Lake Ridge and Seminary Road that serves the Mark Center area. This route would operate eight hours per day with headways of 45 minutes, equaling four trips per peak period. If funded, this route could stop at the planned WHS transportation center.

The I-95/I-395 Transit/TDM Study also proposed express Meetrobus service along Kingstown-Van Dorn-Shirlington via Beauregard Street that continues to Pentagon via HOV lanes. This would operate on one of the three dedicated transit corridors proposed in the City of Alexandria Master Plan with 20-minute peak and 30-minute off-peak headways. This study proposes the extension of this express service to Franconia-Springfield Metrorail station in order to take advantage of intermodal connections and parking.

Table 8: Summary of planned customer facility improvements at BRAC 133

Location	Improvements	Reason
Parking structure @ Nottingham Drive	Transit center (climate-controlled interior waiting area, large canopy, seating, and five saw-toothed bus bays)	To serve existing and proposed bus routes

Source: U.S. Army Corps of Engineers

Figure 16: Rendering of planned garage and transit center along Nottingham Drive

Source: flickr/Belvoir Army Engineers

Figure 17: Location of transit center presently serving as construction staging area

Shuttle Proposals
Neither the Duke Realty (WHS building developer) Mark Center employee shuttle nor the Institute for Defense Analyses employee shuttle will offer service to WHS employees. However, the BRAC 133 environmental assessment indicates that DoD will operate a shuttle to a Metrorail/VRE station east of the site.

While there are several intermodal hubs east of the Mark Center that could provide many transit connections, this study proposes the use of either King Street or Van Dorn Street Metrorail stations. King Street station would be advantageous due to its VRE connection, but Van Dorn Street station would provide DoD with a less congested shuttle route.

Customer Facility Improvements
As part of the WHS development, Duke Realty is building a large transit center on the north end of the parking structure shown in Figure 16, eliminating the need to upgrade the existing Nottingham Drive bus stops specifically for the BRAC process.

The transit center will include a climate-controlled interior waiting area, large canopy, ample seating, compliance with the Americans with Disabilities Act, and five saw-tooth bus bays. Additionally, the city has asked DoD and Duke Realty to include real-time bus information, a commuter store or kiosk, and an area for maps and route information.

Additional bus stops will be built, if needed, on the opposite side of Nottingham Drive from the transit center. These plans are currently in the approval process by Alexandria.