


*City of Alexandria, Virginia***MEMORANDUM**

DATE: NOVEMBER 4, 2009

TO: THE HONORABLE MAYOR AND MEMBERS OF CITY COUNCIL

FROM: JAMES K. HARTMANN, CITY MANAGER 

SUBJECT: CONSIDERATION OF AUTHORIZING THE CITY MANAGER TO APPROVE CONSTRUCTION PERMITS ALLOWING BRAC-133 RELATED LOCAL ROAD IMPROVEMENTS TO SEMINARY ROAD AND BEAUREGARD STREET

ISSUE: Are the proposed improvements to Seminary Road and Beauregard Street adjacent to the Mark Center needed to accommodate projected traffic?

RECOMMENDATION: That City Council authorize the City Manager to direct City staff to undertake reviews of the proposed improvements to Seminary Road and Beauregard Street adjacent to the Mark Center, and to authorize, subject to the approval of the Director of the Department of Transportation and Environmental Services, the issuance of related construction permits as long as those improvements are consistent with the recommendations detailed in the Vanasse Hangen Brustlin, Inc (VHB) report:

BACKGROUND: In 2004, the City approved an amendment to the Development Special Use Permit (DSUP) for the Mark Center site which authorized the final phase of development of the Mark Center Coordinated Development District (CDD). Included within the 2004 approval (in order to accommodate additional traffic that the Mark Center development site would generate) were requirements for the developer to provide and fund additional left turn lanes on Seminary Road and on Beauregard Street. In 2008, a portion of the Mark Center site was selected and purchased by the Department of Defense (DoD) to accommodate the administrative offices for units, agencies, and activities categorized under BRAC-133 as part of the Fort Belvoir BRAC initiative. Under this plan, Mark Center will serve as a workplace for 6,400 DoD employees. Construction of the 1.75 million gross square foot office complex (which equates to the square foot size of the City 2004 authorization) with parking to accommodate 3,900 cars is now underway with occupancy planned to meet the September 15, 2011 BRAC law deadline (Attachment I). The developer of the BRAC-133 office buildings, Duke Realty, is requesting approval of these local improvements by Council at this time in order to allow sufficient time for these improvements to be constructed prior to the opening of the DoD Mark Center office buildings in 2011.

In February, Council created a BRAC-133 Advisory Group which is comprised of representatives from the neighboring civic associations, the City's Transportation Commission, Duke Realty, DoD, as well as other stakeholders. This Advisory Group has met monthly to discuss, and to make recommendations concerning the various issues related to site and building design, transportation and other issues.

On June 23, 2009, in order to determine if building the improvements to Seminary Road and Beauregard Street were warranted (i.e., the triple left on westbound Seminary to southbound Beauregard, and the double left from southbound Beauregard onto Mark Center Drive depicted on Attachment II), Council directed the City Manager to undertake a transportation analysis of: (1) the potential impact of the provision of a direct access ramp from I-395 onto the Mark Center site; and, (2) the impact of not building and completing the Seminary and Beauregard local road improvements by September 2011.

As part of this June action, Council also directed the City Manager to defer issuing any City construction permits which would authorize the previously contemplated local road improvements on Seminary Road and Beauregard Street until after the requested transportation analysis was completed, and the study results presented to Council.

The City contracted with the transportation consulting firm of VHB in July 2009 to perform the BRAC-133 traffic analysis under the City's direction. DoD agreed to reimburse the City the \$80,000 cost of this study. While the VHB study is summarized (Attachment III) and excerpted in part in this docket memorandum, the full 120-page study is available on the City website at: alexandriava.gov/BRAC.

The overall findings of the VHB traffic analysis can be summarized as follows:

1. Providing three left turn lanes from westbound Seminary Road onto Beauregard Street and two left turn lanes from southbound Beauregard Street onto Mark Center Drive are necessary to help accommodate future traffic demand. These improvements alone will not accommodate all of the future traffic. The Seminary Road and Beauregard Street intersection will fail with just the projected future background traffic alone if these left-turn improvements are not made.
2. Lengthening the proposed triple and double (as described above) left turn lanes from what is proposed on the current site plan for the westbound Seminary Road left turn onto Beauregard Street and the southbound Beauregard Street left turn onto Mark Center Drive (in accord with the 2009 VHB Traffic Study) is recommended in order to provide additional vehicle storage capacity in order to prevent spillback into the roadway through lanes.
3. Providing direct access to the full Mark Center site from I-395 is needed to accommodate the future site generated traffic even with the addition of the above left turn lane improvements. The local roadway network will not operate to a satisfactory urban level of service "D" without this additional interstate access improvement.

4. Providing direct access to the South DoD Garage only does not accommodate enough traffic for the existing local roadway network to operate satisfactorily as an urban level of service “D”.

Based on the findings of the VHB analysis, the proposed Seminary Road and Beauregard Street local roadway improvements were determined as necessary, and are recommended to be constructed.

VHB did numerous presentations to the BRAC-133 Advisory Group before, during and after VHB’s transportation analysis was completed. The Advisory Group Chair will be completing and issuing a letter to Council later this week (Attachment IV). In its October 21 meeting, the Advisory Group recognized that the triple and double lefts were needed, but they were not a panacea to reduce traffic congestion.

In addition to the proposed changes to the Seminary Road and Beauregard Street roads, there is a high degree of interest expressed by the Advisory Group and various stakeholders in having a direct access to the Mark Center site from I-395. Council endorsed the concept of direct access from I-395 last June. While in 2004 the City was told by the Federal Highway Administration (FHWA) that under federal policy such a direct access was not possible, FHWA has now modified its prior position to indicate that such an access from I-395 to the Mark Center site could be possible due to the large federal interest that is now planned for Mark Center. Any access would have to be both technically feasible, funded and be acceptable from a number of policy perspectives. The Virginia Department of Transportation (VDOT) has started such a study, and presented its seven options under study to the Advisory Group at its last meeting.

Because of the nature and potential impact (transportation, environmental, etc.) of some of these options, there is a high degree of community interest and concern. As a result, a preliminary Council public hearing is planned for Council’s November 21 public hearing meeting where VDOT will be requested to present its options, and the public will have an opportunity to present their preliminary views to Council. A subsequent final public hearing and Council action would be scheduled at a later date. A schedule for meetings, hearings and actions beyond the November 21 public hearing will be completed and presented to Council on November 10 when this docket item on Seminary Road and Beauregard Street road changes is presented to Council.

Finally, concerns about pedestrian safety, tree loss and landscaping in relation to the creation of the additional left turn lanes has been expressed by some members of the Advisory Group. City staff plans on discussing these issues further with the Advisory Group.

ATTACHMENTS:

Attachment I: Area Orientation Map

Attachment II: Proposed Seminary Road and Beauregard Street Roadway Changes

Attachment III: Summary of Conceptual Alternatives, Findings, Recommendations

Attachment IV: Letter from BRAC-133, Ad Hoc Advisory Group (forthcoming)

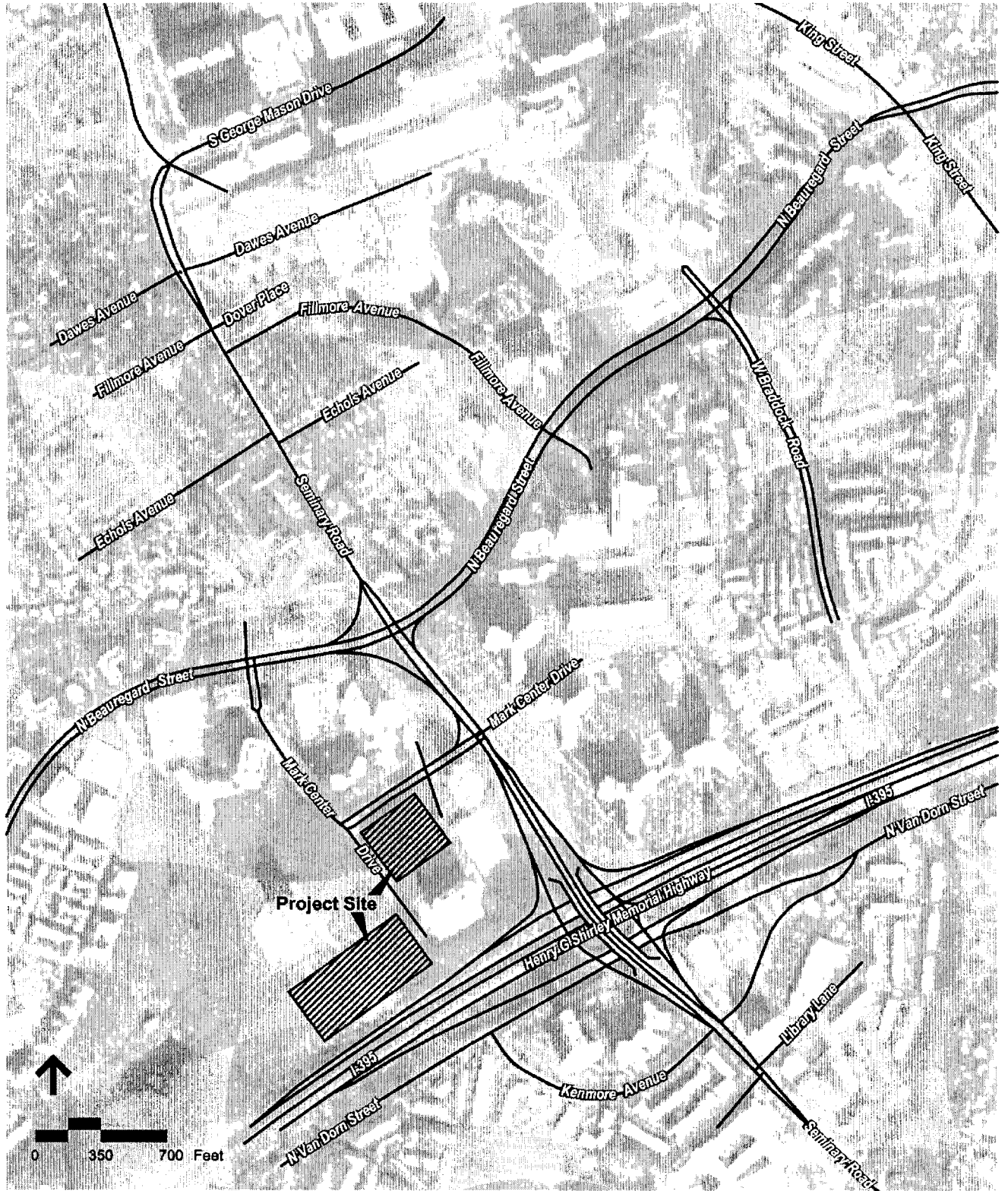
STAFF:

Mark Jinks, Deputy City Manager

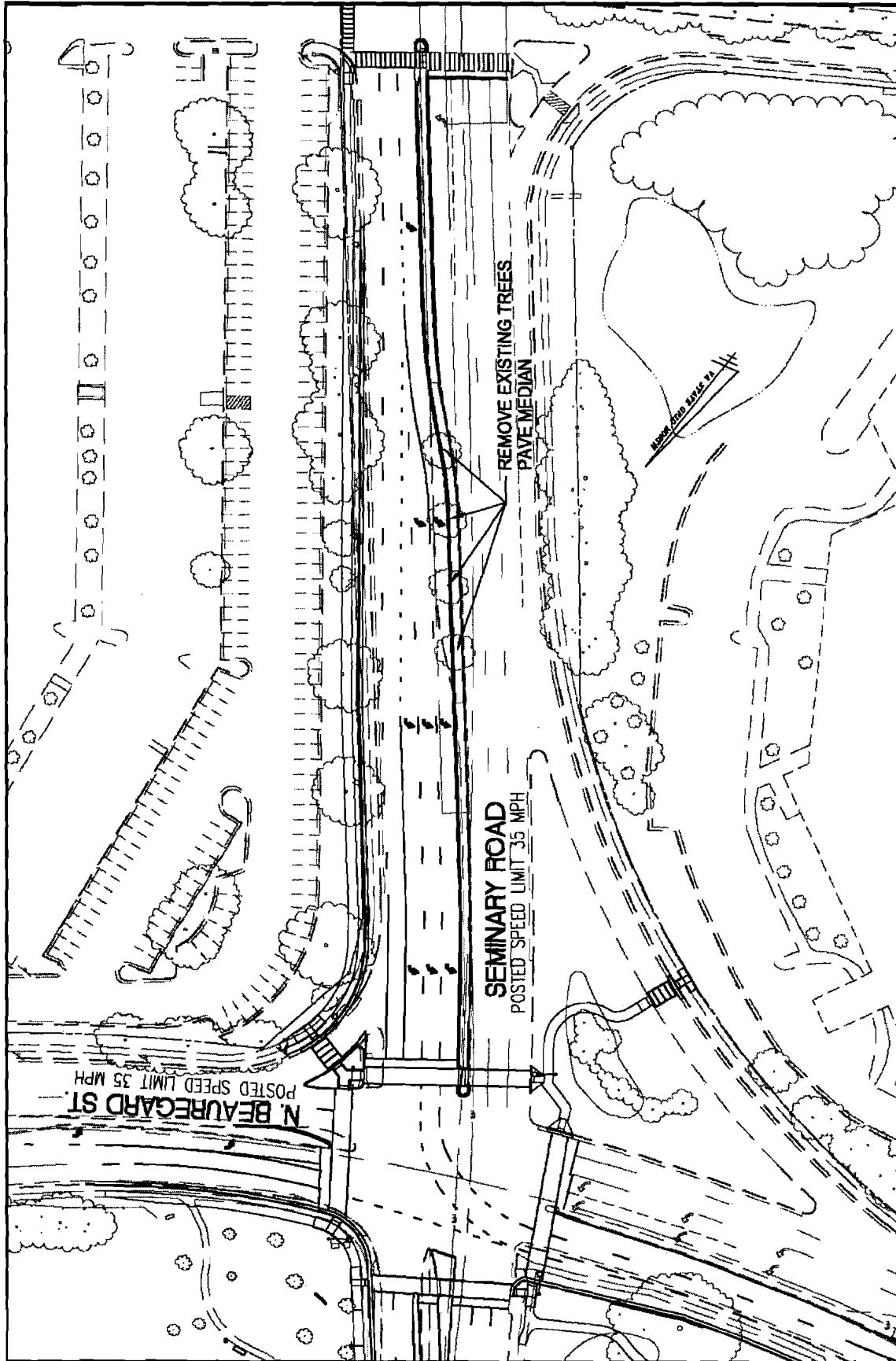
Richard J. Baier, P.E., LEED AP, Director, Transportation and Environmental Services

Bob Garbacz, P.E., Division Chief, Transportation and Environmental Services

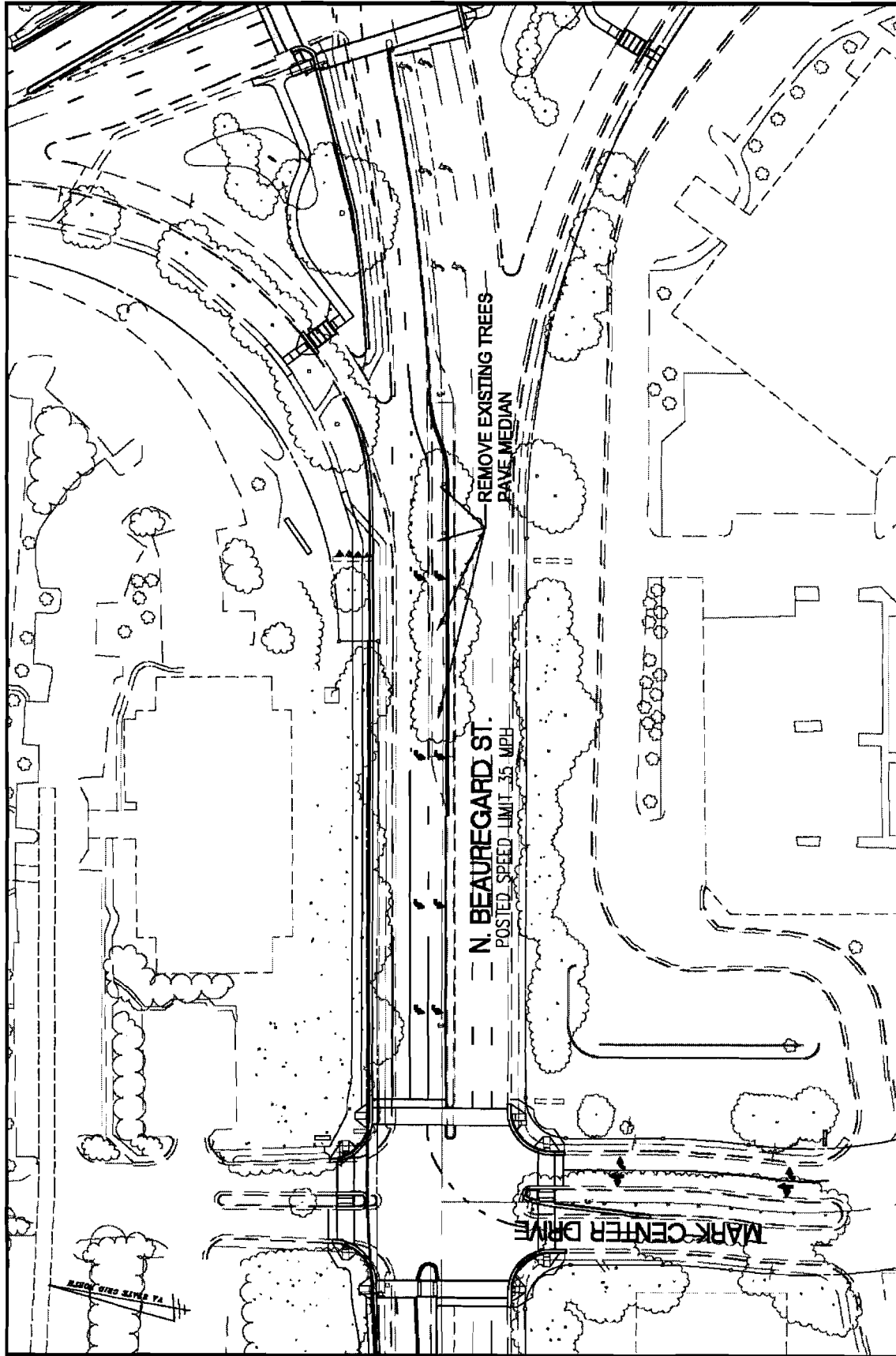
Patricia Escher, Principal Planner, Planning and Zoning



Area Orientation Map



SEMINARY ROAD
LEFT TURN LANE EXHIBIT



NORTH BEAUREGARD STREET LEFT TURN LANE EXHIBIT

Summary of the Conceptual Alternatives

This Mark Center (BRAC 133) Transportation Study has documented an evaluation of potential transportation improvements to the study area intersections and roadways. The corridors examined include Seminary Rd, bounded by George Mason Dr to the west and Library Ln to the east and N. Beauregard St bounded by Mark Center Dr to the south and W. Braddock Rd to the north. Also fifteen study intersections within the study area were analyzed. The analysis was completed in a two-tier approach. First, all concepts were evaluated using the traffic analysis software Synchro, and the results were then presented forward. Second, selected concepts were analyzed in depth using the micro-simulation traffic analysis software VISSIM. Initially, existing and 2013 baseline conditions were analyzed. Under the 2013 baseline condition, several potential conceptual improvement alternatives were evaluated which includes the following:

- Concept 1 : 2013 Project volumes with direct access ramp to the South parking garage
- Concept 2 : 2013 Project volumes with direct access ramp to Mark Center
- Concept 3 : 2013 Project volumes with direct access ramps to the South parking garage and Mark Center
- Concept 4 : 2013 Project volumes with added left turn lanes at Seminary Rd / N. Beauregard St intersection along westbound Seminary Rd (triple left) approach and at N. Beauregard St / Mark Center Dr intersection for southbound N. Beauregard St (dual left) approach without direct access ramps
- Interim Solution for the period between 2011 and 2013: Interim solutions identified in order to accommodate the project trips for the periods from BRAC occupancy anticipated by 2011 and the anticipated construction of the new ramp by 2013.

Findings

Capacity analyses for the four conceptual alternatives were conducted in an effort to evaluate and identify the benefits and disadvantages of each of the conceptual alternatives in terms of improving accessibility to and from the Mark Center site with the addition of BRAC 133 and future project trips.

The capacity analyses indicate that all of the evaluated alternatives would be expected to provide operational benefits. However, depending on the concept, the expected benefit and disadvantages would vary. Among the four concepts tested, Conceptual Alternatives 2 and 3 would be the most effective in terms of reducing overall delay while improving intersection operations at the critical

intersections for both AM and PM peak hour conditions. Conceptual Alternative 1 and 4 would be the next most effective concept while Conceptual Alternative 4 would have constraint of mainly improving operations during AM peak hour conditions only. However, although Conceptual Alternatives 2 and 3 would be most beneficial in terms of improving the operations at the critical intersections by providing additional access points and thus diverting the project trips, the benefits obtainable under these concepts would require extensive improvements.

Based on the findings from Synchro capacity analysis, the micro-simulation was performed for the selected alternatives. Even though there are cases with some difference in MOEs based on the results from Synchro and VISSIM analysis due to the inherent differences between the two models, the overall findings from both analyses can be summarized as below:

- Although there are operational benefits, Concept 4 (additional left turn lane improvements) would still need new direct access, since some of the critical intersections serving the Mark Center site would operate over capacity without any additional direct access and would not be able to accommodate significant number of the additional project trip demand during AM and PM peak hour conditions. Concept 4 also has limitations in terms of improving the operations for the project trips egressing from the project site during PM peak hour conditions.
- Safety and roadway functioning operational issues would also be of a concern when having only Concept 4 to accommodate all the project trips. Therefore, additional improvement measures would need to be considered such as providing direct access ramps in combination with adding the additional left turn lanes, lengthening of the storage bays especially for the left turns at the critical intersections, lane widening for the left turn receiving lanes and improving the signage and pavement markings for these critical left turn movements.
- Although Concept 1 (direct access to the South Parking Garage) without additional left turn lanes would serve higher number of project trips than under Concept 4, additional left turn lanes at the critical intersections would still be needed since the intersection is at capacity and would not serve all the project

demand.

- Concept 2 can serve most of the demand without an additional left turn lane along the Seminary Rd westbound approach at the intersection of Seminary Rd / N. Beauregard St. Concepts 2 and 3 would maximize operational benefits in terms of traffic operations, but at the same time would be most difficult to implement from a construction standpoint. Although an additional left turn lanes may not be needed in the immediate foreseeable future, it would be beneficial to provide additional left turn lanes at the critical intersections in the long term to accommodate the additional trips generated from the potential future developments that may occur in the vicinity of the project site.
- To ensure the full operational benefits of implementing Concepts 1 or 2, it is important to take proper measures to prevent any spillback onto the I-395 southbound on ramp from the new direct access ramps. For Concept 1, as an example, measures would need to be taken at the security screening point to process the entering vehicles efficiently by providing multiple inspection gates and/or installing electronic screen vehicle tags as well as providing a sufficient storage length. For Concept 2, traffic circulation within the internal roadways would need to be maintained in an acceptable manner as well as providing a sufficient storage length for vehicles accessing the site.

Potential interim solutions were also investigated in order to accommodate the project trips for the periods from BRAC occupancy anticipated by 2011 and the anticipated construction of the new ramp by 2013. The findings from the interim solutions are as follows:

- Although some operational benefits would be attainable by increasing the storage length for the critical left turn movements, the intersections would still operate over capacity at the critical intersections. Therefore, expediting the construction of placing additional left lanes by 2011 (Concept 4) as an interim year improvement measure and then constructing the direct access ramps by 2013 or earlier would be one interim option to consider in order to improve the operations during year 2011 and ultimately in year 2013.

- Potential developments in Beauregard Corridor Plan Area which may be developed in the vicinity of the Mark Center may generate approximately 1,000 additional trips during AM peak hour and 1,500 additional trips during PM peak hour conditions. Therefore, even after the year 2013, it would be beneficial to keep the interim improvements in place to accommodate the additional trips generated from the potential future developments that may occur in the vicinity of the project site.

Recommendations

The following improvement measures are recommended based on the findings from the analysis:

- Provide an additional westbound left turn lane at the Seminary Rd. / N. Beauregard St. intersection, which will result in a triple left turn lane configuration.
- Provide an additional southbound left turn lane at the N. Beauregard St. / Mark Center Dr. intersection, which will result in a dual left turn lane configuration.
- Widen the left turn receiving lanes and improve the signage and pavement markings at the Seminary Rd. / N. Beauregard St. intersection.
- Increase the westbound Seminary Road left turn lane storage length at the intersections of Seminary Rd. / N. Beauregard St. and southbound N. Beauregard Street left turn storage length at the intersection of N Beauregard St. / Mark Center Dr..

These improvements measures should be implemented as an interim solution to the 2011 occupancy of the BRAC 133 project. These improvements will also support future potential development within the Beauregard Street corridor area.


BRAC-133 Advisory Group Letter

(forthcoming)

#17
11-10-09

City of Alexandria, Virginia

MEMORANDUM

DATE: NOVEMBER 10, 2009
TO: HONORABLE MAYOR AND MEMBERS OF CITY COUNCIL
FROM: JAMES K. HARTMANN, CITY MANAGER 
SUBJECT: DIRECT ACCESS RAMP ALTERNATIVES FOR BRAC-133

To ensure that the City has adequate participation within the VDOT lead Federal Highway Interchange Justification Report (IJR) process and a reasonable timetable for access to the DoD BRAC-133 site, staff contacted Nick Nicholson, VDOT Mega-Projects Manager. Mr. Nicholson stated that the City-preferred alternatives are needed as soon as possible so that he could move forward with the IJR. Input from the public and direction from City Council is needed. VDOT would like the City's top two preferred candidates for environmental and operational analysis by the end of November, but a mid-December date is the earliest a City position could be reasonably provided. The seven VDOT IJR alternatives fall basically into two groupings. The first would be those alternatives that directly access only what is termed as the South Army Garage. The second group of alternatives contain those that offer access to the garage, as well as the Winkler site interior roadway system. Due to the analysis as required by the IJR, Mr. Nicholson made it clear as the analysis is already on-going. VDOT would prefer that the City stay within the seven alternatives already presented to the BRAC-133 Advisory Group or any hybrids thereof. Council has previously endorsed the concept of direct access, but no specific alternatives have been endorsed by Council.

The proposed schedule, based on the VDOT schedule, is as follows¹:

Nov. 21st - Preliminary Public Hearing and VDOT Consultant Presentation at City Council Meeting

Dec. 2nd - Public Hearing at the City Transportation Commission Meeting

Dec. 12th - Final City Council Public Hearing and Decision on Preferred Interchange Alternatives

¹ The City's BRAC-133 Advisory Group which supports the concept of direct access will meet on November 18 and might choose to meet again prior to the December 12 final City Council public hearing.

The recommended schedule will afford all parties (City Council, VDOT, City Staff and the public) some time to review, analyze and comment upon the alternatives. VDOT was clear that as the analytical process is moving along, that the earlier that they receive the City's input the more it can be included in the overall process.

Attachments

Staff: Rich Baier, Director, Transportation & Environmental Services