

# STAFF RECOMMENDATION



M. Weil

NCPC File No. 7096

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## FORT BELVOIR – NORTH POST POST EXCHANGE SHOPPING CENTER

Fairfax County, Virginia

Submitted by the United States Department of Defense, Department of the Army

March 31, 2011

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### Abstract

The Department of the Army has submitted a proposal for the construction of a new Post Exchange shopping center located on the North Post of Fort Belvoir in Fairfax County, Virginia. The project will replace three existing retail buildings, including a 69,000 square-foot garden center, a 10,500 square-foot military clothing store, and a 142,000 square-foot Post Exchange building, with a single-story, 263,438 square-foot shopping center. The proposed development will contain an Army & Air Force Exchange Service shopping facility, a food court, military clothing store, and approximately 20 other concessionaire/service uses. Parking will be provided in two separate surface lots with a total of 958 spaces. One hundred and fifty (150) of these spaces will be dedicated to employee parking which is consistent with the applicable Comprehensive Plan parking ratio.

### Commission Action Requested by Applicant

Approval of preliminary and final site and building plans pursuant to 40 U.S.C. § 8722(b)(1).

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### Executive Director's Recommendation

The Commission:

**Approves** the preliminary and final site and building plans for a new Post Exchange Shopping Center at Fort Belvoir, as shown on NCPC Map File No. 2204.10(38.00)43257.

**Requires** the applicant to submit an updated master plan in accordance with the National Capital Planning Act that includes a reforestation plan addressing replacement of trees lost due to construction projects on the Post.

**Notes** that the Fort Belvoir master plan was last approved in 1993 and that the Commission has issued multiple unfulfilled requests for an updated master plan that reflects the current and future growth at Fort Belvoir; and therefore, due to a lack of sufficient information necessary to

properly analyze projects the Commission will not approve any future proposals until such time as an updated master plan is submitted.

\* \* \*

**PROJECT DESCRIPTION**

Site



Figure 1: Map of Fort Belvoir in relation to Washington, DC

Fort Belvoir is located approximately 12 miles south of Washington, DC, in southeastern Fairfax County, Virginia (Figure 1).

Fort Belvoir is divided into two geographically separate areas; the “North Area” (formerly known as the Engineering Proving Ground) is located on the west-side of I-95, while the larger “Main Post” section is located on the east-side of the Interstate. Route 1 divides the Main Post into the “North Post” and “South Post” sections. The proposed project is located on North Post.

The project site is located in the north-central section of a parcel of land bounded by John J Kingman Road on the north; Gunston Road on the west; Gorgas Road on the south; and Woodlawn Road (Route 618) on the east (Figure 2). The undeveloped, heavily wooded, 27.4-acre project site is located just north of the existing Fort Belvoir Post Exchange and Commissary, and is designated as a “Community” zone in the 1993 Fort Belvoir Mast Plan.



Figure 2: Map showing project site and surrounding roadways

Background

At its July 2010 meeting, the Commission reviewed and commented on a concept design for

the proposed Post Exchange. The Commission's comments are summarized below:

- New parking should be structured or provided in surface lots that are constructed with pervious paving material(s) to minimize the amount of impervious surface on-site. In addition, all new surface parking should maximize the amount of landscaping through the use of landscaped islands and perimeter landscaping, and utilize appropriate low impact development (LID) storm water practices;
- The 1,085 parking spaces proposed for this project should be utilized for the entire North Post Town Center that is currently being planned;
- The new Post Exchange shopping center should be constructed as a multi-level building rather than a single-level building, or as a single-level building with a green roof, to minimize the amount of impervious surface on-site;
- All new construction related to the project should be limited to areas that have already been disturbed since the site is occupied by relatively mature woodland;
- The Army should coordinate closely with the Commonwealth of Virginia and Fairfax County as the design for this project and all future projects are developed and finalized, as required by NCPC policies and guidelines.

### Proposal

The Army proposes to consolidate three existing retail buildings (a 69,200 square-foot garden center, a 10,419 square-foot military clothing store, and a 142,000 square-foot Post Exchange building) into one, single-story, 263,438 square-foot Post Exchange (PX) shopping center on a site located directly north of the existing PX building. The new building will house a large Army & Air Force Exchange Service (AAFES) store, a food court, and approximately 20 other smaller concessionaire uses. As shown in Figure 3, the AAFES store will occupy the majority of the shopping center's interior space. The Exchange's arcade section will be located in the western part of the building and contain the smaller concessionaire uses.

The project submission states that the proposed PX shopping center is intended to be a signature building for Fort Belvoir, as well as a model store for AAFES, augmenting their typical prototype store with enhancements uniquely suited to its siting at Fort Belvoir. The building design reflects Fort Belvoir's traditional red-brick "colonial" style of architecture, as shown in Figure 4. The shopping center will also adhere to Anti-Terrorism/Force Protection (AT/FP) standards and is designed to meet Leadership in Energy and Environmental Design (LEED) Silver standards.

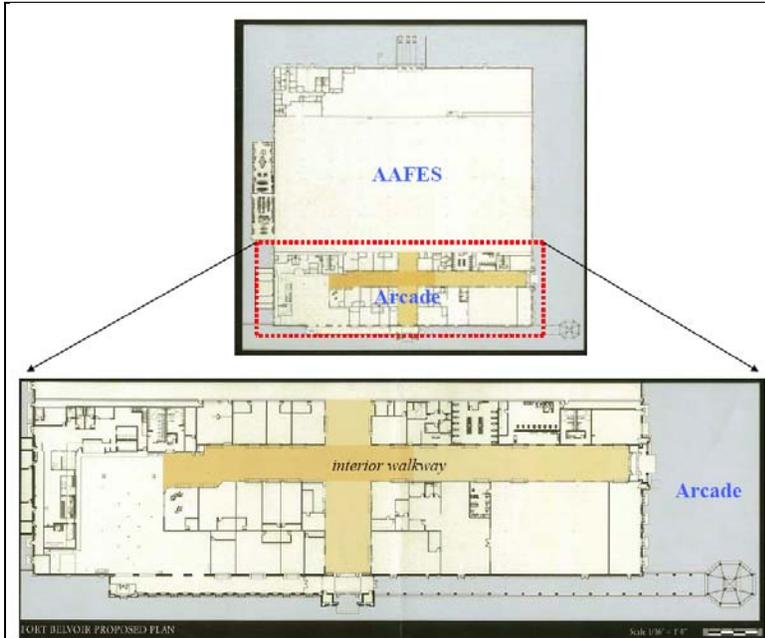


Figure 3: Proposed Post Exchange Shopping Center Floor plan

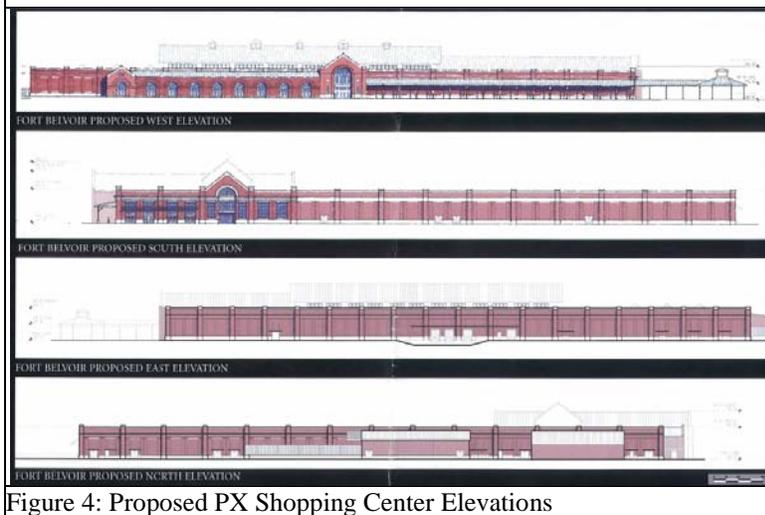


Figure 4: Proposed PX Shopping Center Elevations

Site improvements will include paved, illuminated parking lots; circulation and service drives; storm water detention and management facilities comprised of porous pavement, bio-retention trenches, mechanical filtration systems, and ponds. The submission indicates "best management practices" will be utilized to help manage and treat storm water, and the site plan is heavily landscaped to help mitigate the impact of the loss of vegetation caused as a result of construction.

Access to the site will be provided by a secured, gated entrance from John Kingman Road. Parking will be located in two separate surface lots located on the west and north sides of the shopping center, with a total of 985 spaces. The north lot will contain 150 employee parking spaces and 29 spaces reserved for vendor/delivery/customer pickups. The west lot will provide 779 regular customer spaces. To comply with the Americans with Disabilities Act (ADA) and LEED Silver requirements, 21 of the 985 total spaces will be designed as ADA-accessible, 105 of the 985

spaces will be reserved for low-emission and fuel efficient vehicles. As part of the Fort Belvoir development program, the existing Post Exchange building will be demolished once the proposed shopping center is completed. A new commissary will be constructed on the former PX site in the future.

The new PX shopping center will serve as a "one stop" shopping destination and community focal point on the North Post, where people will be able to park once and shop in multiple stores, rather than making multiple trips within the Post to fulfill their needs. The project is the first of a three phase initiative to construct the new North Post Town Center. Figure 5 shows the town center's land use plan, with the new PX shopping center shown in red.

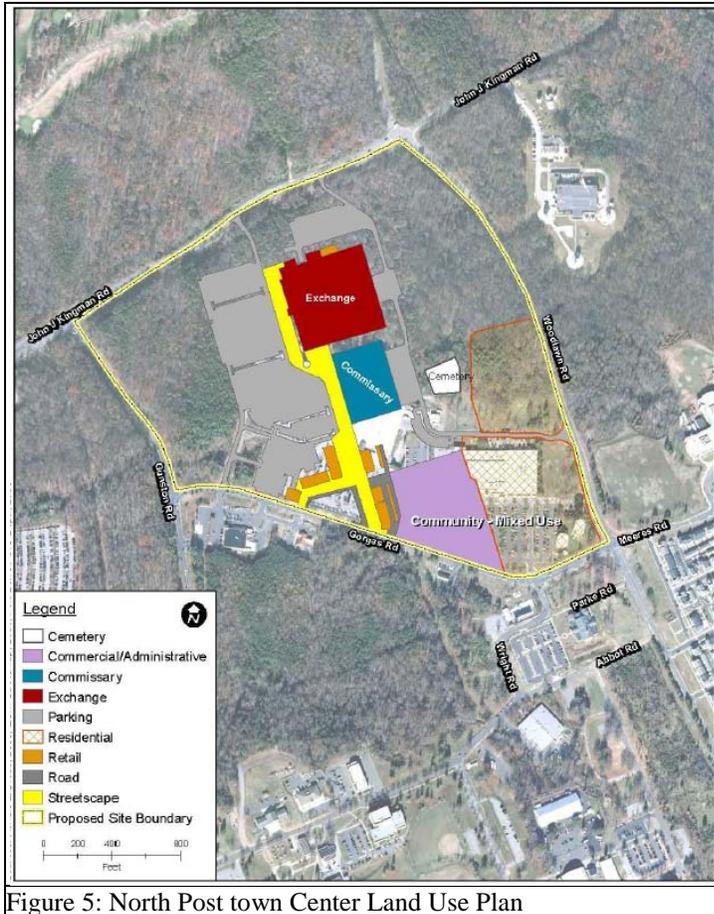


Figure 5: North Post town Center Land Use Plan

Figure 5 also shows a new commissary building (blue), several “stand-alone” retail buildings (orange), a “Commercial/Administrative” area (purple), and two areas reserved for apartment/condominium residential buildings (cross-hatch pattern). The town center development will be included in the updated Fort Belvoir master plan which is currently undergoing development by the Army.

Construction of the proposed PX will require the removal of approximately 4,700 trees. According to information provided by the applicant, new trees will be planted both on the development site and in other parts of Fort Belvoir to help mitigate the impact. Specifically, approximately 450 (two-inch or greater caliper) trees will be replanted on the shopping center site and the remaining balance (4,275) of the tree removal will be mitigated by replanting tree seedlings in other off-site locations around Fort

Belvoir. This tree replacement schedule is included as required mitigation in a Memorandum of Agreement (MOA) between AAFES and Fort Belvoir, signed in Summer 2010, and in the Finding of No Significant Impact issued by the Army to satisfy its obligation under the National Environmental Policy Act.

The shopping center site is designed to comply with the Energy Independence and Security Act (EISA) by re-creating the site's pre-development hydrology, to help mitigate the storm water impacts of the project's tree removal and soil disturbance.<sup>1</sup> Specifically, the following LID features are included in the site design and will be constructed as part of the project:

- Vegetated bio-swales located immediately south of the building, and north of both parking areas;
- Vegetated areas located around three sides of the building;
- Four bio-retention filter locations, one which utilizes infiltration. All of the bio-retention filters incorporate an aggregate storage layer below the filter material, and all bio-retention areas receive drainage from impervious areas;

<sup>1</sup> EISA, Section 438 requires a project site to be designed to fully accommodate a 95th%, 24-hour rainfall event (1.7") on-site (Option 1), or to re-create the site's pre-development hydrology (Option 2), to the maximum extent technically feasible.

- Two underground detention facilities, both utilizing infiltration;
- Porous concrete pavement in both parking areas, with infiltration. Approximately 650 (68%) of the 958 parking spaces utilize the porous concrete;
- Approximately 450 trees will be planted in two reforestation areas on the site.

These LID features are designed to mitigate post-development, storm water peak flow discharges as much as technically feasible, utilizing the 2-year and 10-year storm events as measurement criteria, consistent with Virginia and Fairfax County storm management guidelines.

## PROJECT ANALYSIS

### Executive Summary

Staff recommends **approval** of the preliminary and final site and building plans for the Post Exchange shopping center at Fort Belvoir. While the recommendation is to approve this particular project, staff notes its concern regarding the continued development at Fort Belvoir without an updated master plan that reflects the current and future conditions of Fort Belvoir to rely upon. Staff has worked closely with the Army in order to reasonably accommodate the additional development demands caused as a result of BRAC and the BRAC timeline. However, the Army is now beginning to submit projects that are non-BRAC related that should be analyzed in an updated master plan and associated environmental document that looks at the installation as a whole. Furthermore, in order to address the substantial tree loss caused by this project and several other projects on the Post, staff recommends that the Commission require the Army to include a reforestation plan in the updated master plan.

### Proposed Post Exchange

In response to the Commission's July 2010 comments on the concept design, the proposal has been substantially modified with the following key improvements:

- Total surface parking has been reduced by approximately 9.5 percent, or 100 spaces;
- Sixty-eight percent (68%) of the surface parking spaces will be constructed using pervious pavement;
- Secured employee/customer bicycle racks have been located near the front entrance of the building, along with employee showers within the building;
- Energy-efficient Light-Emitting Diode (LED) lighting will be used in the parking area;
- Additional landscaping has been added to the parking lots;
- Additional LID features have been incorporated to accommodate on-site storm water.

In addition, the following refinements have been made to the building design in order to meet Department of Defense standards that require a minimum LEED Silver certification:

- Addition of energy-efficient equipment, such as high-efficiency heating, ventilation, and air conditioning (HVAC) equipment, low mercury light fixtures, low-flow plumbing fixtures and high efficiency water heaters;
- Addition of high-efficiency wall and roof insulation, light-colored reflective roofing (cool roof), and high-reflectance building materials;
- Use of regional, recycled, and low-VOC materials in the building's construction.

Although substantial improvements have been made to the design of the proposed shopping center since the Commission reviewed the concept, in staff's judgment the proposed removal of such a large number of trees warrants special attention by the Commission. The Applicant has informed staff that future funding has already been identified to replant the trees lost as a result of the project and as required by the aforementioned AAFES-Army MOA. However, the Army has not yet identified where and when these trees will be planted, and therefore staff recommends that the Commission require the Army to include a detailed reforestation plan in its updated master plan for Fort Belvoir.

#### Fort Belvoir Master Plan History

In 1993, the Commission approved the Land Use Element for the Fort Belvoir Master Plan and established a master plan employment level of 21,000 employees at Fort Belvoir for the year 2015. Also at that time, the Commission urged the Army to complete the Master Plan Short Range Component and associated documents, such as a Transportation Management Plan (TMP) and an Installation Design Guide. In 1995, the Commission approved the Fort Belvoir Installation Design Guide. A TMP, however, has not been submitted for the 1993 Master Plan.

In 2002, the Commission approved the Subarea Plan for the Regional Community Support Center, and the preliminary and final plans for the replacement of the DeWitt Army Hospital. In addition to its approval of the Subarea Plan, the Commission also encouraged the Army to "immediately undertake the updating of the Master Plan for all of Fort Belvoir. New projects beyond those included for the Subarea Plan should not be submitted for consideration until the update has been completed." Subsequently, the Army worked on updating the 1993 Master Plan and submitted it to the Commission in 2005. However, in response to the Base Realignment and Closure (BRAC) Recommendations of 2005, the Army withdrew its submission due to the significant changes that the recommendations would have on the installation. For instance, as a result of the BRAC recommendations Fort Belvoir is receiving an influx of approximately 20,000 personnel. This influx will increase the installation population to approximately 40,000 personnel, 20,000 more than originally planned for in the 1993 Master Plan.

Since 2005, the Commission has approved over 24 projects at Fort Belvoir, many of them directly related to the BRAC recommendations. Some of these projects include the National Geospatial Agency, the Community Hospital, the Missile Defense Agency Headquarters, and the North Atlantic Regional Medical Center. Some of these projects were indirectly related to the BRAC recommendations such as necessary infrastructure improvements and an emergency services center. In addition to the BRAC projects, the Army has also submitted other time-sensitive projects that were funded through the American Recovery and Reinvestment Act, such as the child development center on South Post. Periodically in its review of these projects, the

Commission reminded the Army of the requirement to submit an updated Master Plan to reflect the changes at Fort Belvoir.

In April 2010, the Army submitted the draft Fort Belvoir Master Plan update for review by the Commission. In accordance with the Commission's Procedures for Intergovernmental Cooperation in Federal Planning in the National Capital Region, staff referred the draft master plan to local and regional agencies. At that time, Fairfax County, the Virginia Department of Transportation, and NCPC staff expressed to the Army that the master plan was dated 2007 and did not accurately reflect the existing and future conditions at Fort Belvoir. As a result, the Army withdrew the submission and is currently updating the master plan to incorporate BRAC projects in the baseline existing conditions at the installation, and project future growth from that point. The Army, staff, and Fairfax County have been meeting regularly since Summer 2010 to discuss the master plan update. The Army has indicated to staff that they will be undertaking an Environmental Impact Statement (EIS) to satisfy the requirements of the National Environmental Policy Act (NEPA). The EIS process has not yet begun and could take up to 15 months to complete.

Since the 1993 Master Plan does not reflect the growth cause at Fort Belvoir as a result of BRAC, an updated master plan is necessary to give staff the necessary context within which to understand the planning and siting decisions being made by the Army on projects. In addition to providing context, an updated master plan will assist staff in understanding a project's impacts on Fort Belvoir as a whole. Therefore, staff recommends that the Commission **require** the applicant to submit an updated master plan in accordance with the National Capital Planning Act.

## CONFORMANCE

### Comprehensive Plan for the National Capital

Staff has determined that the proposed project is consistent with the following policies from the Federal Workplace, Transportation, and Federal Environment Elements of the Comprehensive Plan for the National Capital.

1. Develop sites and buildings consistent with local agencies' zoning and land use policies and development, redevelopment, or conservation objectives, to the maximum extent feasible.
2. For suburban federal facilities beyond 2,000 feet of a Metrorail station, the parking ratio (1:1.5-1:2) will reflect a phased approach linked to planned improvements over time;
3. Provide employee clothes lockers and showers at federal buildings and on federal campuses to support bicycle commuters. Space should be reserved in new facilities to allow for the provision of showers and lockers to support the bicycle commuting population. Specific goals for bicycle parking should be outlined in the TMP, keeping in mind that visitors may also arrive by bicycle;

4. Encourage federal employees to rideshare, including the use of carpools, vanpools, privately leased buses, public transportation, and other multi-occupant modes of travel.
5. Give priority to carpool and vanpool parking over that for single-occupant vehicles.
6. Provide parking for disabled persons in accordance with federal law
7. Provide secure ... bicycle parking spaces or bicycle lockers in close proximity to building entrances at federal buildings and on federal campuses.
8. Use pervious surfaces and retention ponds to reduce storm water runoff and impacts on off-site water quality.
9. Encourage the use of innovative and environmentally friendly “Best Management Practices” in site and building design and construction practice, such as green roofs, rain gardens, and permeable surface walkways, to reduce erosion and avoid pollution of surface waters.
10. Encourage the use of native plant species, where appropriate.

Staff notes that the project will provide 150 employee spaces for a maximum total of 250 on-site employees, which equates to a 1:1.7 parking space-to-employee ratio, consistent with the 2004 Comprehensive Plan ratio goal of 1:1.5-2.0.

Staff has determined that the proposed project is not consistent with the following policies from the Federal Workplace, Transportation, Parks & Open Space, and Federal Environment Elements of the Comprehensive Plan for the National Capital.

1. Agencies should review masterplans on a periodic basis to ensure that both inventory material and development proposals are current. Such reviews should be conducted at least every five years. Agencies should advise the Commission of the results of such reviews and provide to the Commission a proposed schedule for revising masterplans when updating is determined to be needed. Revisions to masterplans should reflect changed conditions and provide an up-to-date plan for the development of the installation;
2. Minimize development of open space by selecting disturbed land or brownfields for new federal workplaces or by reusing existing buildings or sites;
3. Place parking in structures, preferably below ground, in the interest of efficient land use and good urban design;
4. Update TMPs at least every two years to reflect the most current employee information;
5. Conserve portions of military reservations that add significantly to the inventory of park, open space, and natural areas and should, to the extent practicable, be used by the public

for recreation. Examples include Andrews Air Force Base, Fort Belvoir, U.S. Soldiers' and Airmen's Home, Fort Meade, and Marine Corps Base Quantico;

6. Conserve and maintain the essential open space character of areas in the region with significant park, open space, cultural, or natural qualities that contribute to the setting of the National Capital Region;
7. Minimize tree cutting and other vegetation removal to reduce soil disturbance and erosion;
8. Preserve existing vegetation, especially large stands of trees.

#### Federal Capital Improvements Plan

The PX shopping center project is contained in the Federal Capital Improvements Plan for FY2010-FY2015, with funding identified for FY2010.

#### Relevant Federal Facility Master Plan

The project is consistent with the Land Use Element of the 1993 Fort Belvoir Master Plan. As noted above, the Army is currently updating the Fort Belvoir Master Plan and the update will continue to designate this area as "community" land use. The Army defines community uses as "land use that encourages a mix of uses. Facilities allowed include religious, family support, personnel services, professional services, medical, community, housing, commercial and recreational services. Users live both on- and off-post and may include soldiers, dependents, retirees, and other civilian personnel."

#### National Environmental Policy Act (NEPA)

The Army completed an Environmental Assessment (EA) for the future North Post Town Center development, which includes the PX shopping center development. The EA studied three different alternatives: one "no build" and two "build" alternatives. The Option 2 "build" alternative, which is the smaller, less impactful of the two "build" alternatives, is the Army's "preferred" alternative. The Army has issued a Finding of No Significant Impact (FONSI) for this alternative.

For federal projects in the environs, NCPC does not have independent NEPA responsibility.

#### National Historic Preservation Act (NHPA)

The Virginia State Historic Preservation Office (VA SHPO) has reviewed the project and issued a letter on September 9, 2010 stating SHPO concurrence that "the undertaking will have little impact to historic and cultural properties." Due to the project's close proximity to two archeological sites, however, the letter recommends marking these sites with fencing in order to protect them from disturbance during construction. The SHPO also requested that the Army apply for a burial permit in the event that graves are encountered.

For federal projects in the environs, NCPC does not have independent Section 106 responsibility.

## CONSULTATION

### Referral to relevant state, regional, and local planning agencies

NCPC staff has met with the Army on several occasions to discuss the development of the master plan update, and hosted a consultation meeting on March 31<sup>st</sup>, 2010, to specifically discuss the PX shopping center project. In accordance with the Commission's Procedures for Intergovernmental Cooperation in Federal Planning in the National Capital Region, NCPC staff twice referred the proposed project (during the concept and preliminary/final reviews) to: Fairfax County; the Virginia Department of Transportation; the Virginia Department of Environmental Quality; the Washington Metropolitan Council of Governments; the Northern Virginia Regional Commission; and the Northern Virginia Transportation Commission.

The Virginia Department of Transportation (VDOT) and Fairfax County provided comments to the project; both letters are attached. VDOT indicated that the proposed transportation network improvements being constructed to accommodate BRAC should handle associate traffic resulting from the proposed PX and USO projects.



## COMMONWEALTH of VIRGINIA

### DEPARTMENT OF TRANSPORTATION

4975 Alliance Drive  
Fairfax, VA 22030

GREGORY A. WHIRLEY  
COMMISSIONER

February 28, 2011

Mr. David W. Levy, RA, AICP  
Director, Urban Design and Plan Review  
National Capital Planning Commission  
401 9<sup>th</sup> Street, NW, North Lobby, Suite 500  
Washington, DC 20004

RE: NCPC File Numbers 7096 (Post Exchange) and 7208 (USO Family Center)

Dear Mr. Levy:

Thank you for your letter of January 11, 2011, to our former District Administrator Morteza Salehi requesting the Virginia Department of Transportation (VDOT) review the proposed plans for the construction of a new Post Exchange, Commissary, and USO Family Center at Fort Belvoir.

As you are aware, there is a great deal of activity at the post, including many transportation improvements to accommodate base realignment and closure (BRAC) changes. These improvements should provide the mitigation needed for the increased traffic from these new ancillary uses. We have completed our review and have no objection to approval of these projects.

Sincerely,

A handwritten signature in cursive script that reads "Renée N. Hamilton".

Renée N. Hamilton  
Assistant District Administrator for  
Program and Investment Management



## County of Fairfax, Virginia

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

March 21, 2010

David W. Levy  
Director, Urban Design and Plan Review  
National Capital Planning Commission  
401 9<sup>th</sup> Street, NW  
North Lobby, Suite 500  
Washington, DC 20004

Dear Mr. Levy:

Thank you for the opportunity to provide comments on the preliminary and final review submission for the Post Exchange Shopping Center (PX) and USO Family Center, NCPC File Numbers 7096 and 7208, respectively. In collaboration with the Department of Public Works and Environmental Services (DPWES) and Fairfax County Department of Transportation, the Department of Planning and Zoning has reviewed the submitted documents and offer the comments attached. Please note that these comments have not been endorsed by the Fairfax County Board of Supervisors.

### **Post Exchange**

In September of 2010, we reviewed and provided comments on the Environmental Assessment and Draft Finding of No Significant Impact for the New Commissary, Post Exchange, and Future Mixed Use Development. As described in the submission documents, the PX will consist of a 263,438 square foot one-story retail building with 3,130 square feet of exterior canopies and 1,083 parking spaces. The PX will be located on a currently undeveloped 27.4 acre site that is heavily wooded. Our previous comments focused on the amount of impervious surface created by a single-story design with surface parking, and recommended a two-story building and structured parking be considered to limit impacts on stormwater runoff, ground and habitat disturbance, Resource Protection Area (RPA) encroachment and tree removal. We are disappointed to find in this submission that those alternatives have been rejected as too costly or impractical, as was a green roof as a mitigation strategy for dealing with stormwater runoff. It appears that the project will incorporate pervious pavement in some areas, although it is unclear what percentage of the paved surfaces will be pervious materials. We encourage the developer to consider other Low Impact Development (LID) site design alternatives to reducing stormwater runoff volume and pollutant impacts from the site with the goal of "no net increase" from current conditions.

Additional details and a number of transportation-related concerns are included in the attached comments.

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David W. Levy  
March 18, 2011  
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**USO Family Center**

As explained in the submission, the USO Family Center is a component of the Warrior in Transition complex, located on approximately 4.2 acres adjacent to the new community hospital on the corner of Belvoir Road and 9<sup>th</sup> Street. The USO Family Center will consist of a 26,870 square foot, two-story family center and gardens to serve Warriors in Transition stationed at Fort Belvoir. In the summer of 2009, we reviewed and supported the finding of no significant impact with the Environmental Assessment for the Warrior in Transition complex; we included in our comments a number of recommendations related to stormwater management and avoidance of impacts to nearby wetlands and waterways.

The green design of the USO Family Center represents an exciting new direction in on-post construction. We are pleased to note the significant decrease (44%) in imperviousness from the existing conditions on the site. We applaud the planned inclusion of a green roof, bioretention and other innovative stormwater BMPs. It is not mentioned in the text, but there are suggestions in some drawings that the planned therapeutic gardens may contain one or more water feature(s). Interior plantings are also mentioned. We encourage the re-use of stormwater retained in underground storage (if available) for water features and landscaping of the therapeutic gardens, and for irrigation of the interior plantings.

We find that the submission demonstrates that the proposed building and gardens will be integrated into the Warrior in Transition campus, and will be compatible with homes in the immediate vicinity as well as within the larger context of existing development on Fort Belvoir and within the Woodlawn Historic District. The therapeutic garden is incorporated into the design to provide outdoor amenities for resident soldiers, their families and visitors.

There are other issues described in greater detail within the attached staff comments.

If you have any questions about our comments, please do not hesitate to contact Lindsay Bell of my staff at [Lindsay.Bell@fairfaxcounty.gov](mailto:Lindsay.Bell@fairfaxcounty.gov).

Sincerely,

Fred R. Selden, Acting Director  
Department of Planning and Zoning

FRS: MG: LMB

Attachments: As Stated

cc: Board of Supervisors  
Anthony H. Griffin, County Executive  
Robert A. Stalzer, Deputy County Executive  
Pamela G. Nee, Chief, Environment and Development Review Branch, DPZ

**Fort Belvoir Post Commissary and USO Family Center  
Preliminary and Final Design Submissions, January 2011**

**Comments from Fairfax County Staff, March 2011**

**Staff Contact: Lindsay Bell, [Lindsay.Bell@fairfaxcounty.gov](mailto:Lindsay.Bell@fairfaxcounty.gov); 703-324-1382**

We have reviewed the Post Exchange and USO Family Center preliminary and final design submissions and offer the following comments:

**Post Exchange**

- We are disappointed to find in this submission that structured parking and building design alternatives have been rejected as too costly or impractical, as was a green roof as a mitigation strategy for dealing with stormwater runoff.
- It appears that the project will incorporate pervious pavement in some areas, although it is unclear what percentage of the paved surfaces will be pervious materials. The use of permeable pavement may be an acceptable alternative if the recharge bed is designed appropriately for soil type, traffic loading, etc., and the subsurface below the bed is not too compacted. However, a surface parking lot is obviously exposed to the elements. In event of snow or ice, the users would not be able to apply sand or other grit to the surface, as this clogs the pores of the pervious pavement and ultimately defeats the purpose. With structured parking, all levels except the top level would be protected for the most part from the elements, and would need only minimal treatment should snow or other precipitation blow in. A green roof atop a parking structure need not occupy the entire level; the County's green roof on the Herrity parking garage covers a relatively small area on the top level, so no additional structural reinforcement was needed. The county has collected runoff data from the Herrity garage since the green roof was installed in 2008; results show that even this small green roof area captures an average of more than 50% of the SW runoff from the structure.
- Although numerous stormwater Best Management Practices (BMPs) are described, it is unclear which BMPs will be receiving rooftop runoff from the PX building. We question whether the underground storage units mentioned in the document will have sufficient capacity to handle the substantial volume of runoff from this very large building during significant storm events.
- We encourage the developer to consider other Low Impact Development (LID) site design alternatives to reducing stormwater runoff volume and pollutant impacts from the site with the goal of "no net increase" from current conditions. For example, constructing bio-swales at the perimeter or the use of tree box filters in a surface parking lot. Note: The pending Virginia Stormwater Management Permit will soon require developers to demonstrate "no net increase" in stormwater volume, in addition to meeting pollutant (nutrient and sediment) reductions stipulated by the Chesapeake Bay Total Maximum Daily Load (TMDL).
- The submission package mentions periodic irrigation of landscaped areas onsite. We encourage re-use of stored water for landscape irrigation.

Attachment: PX and USO Family Center Comments  
March 18, 2011  
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- We are pleased to see the commitment to using native species and non-invasive plantings, as well as the commitment to replace the trees that are lost during construction. The trees were previously discussed as having to be replaced at a 2:1 ratio (two trees replaced for every one lost). The current submission describes replacing 4,725 trees (MOU, August 2010). This is considerably lower than either option 1 or option 2 as was previously presented in the EA. What is the total number of trees that will be removed with this project, and is the ratio still 2:1 for replacement?
- The current submission does not contain any mention of previously discussed invasive plant management control plans or habitat restoration plans. Are these plans still under consideration for the project?
- We are pleased to see that the LEED Silver certification for the PX structure is still planned; however we do not see LEED-ND discussed as a possibility for the entire project, as was detailed in previous submissions. Is LEED-ND still under consideration?
- Pages 4 & 5, Project Narrative, Site: The other access point off Woodlawn Road and the secondary access points off Kingman Road and Gorgas Road also need to be mentioned. It is mentioned that all vehicles entering the north side of the building will use the security gated entrance from Kingman Road. It appears that this entry point is an unsignalized secondary access off Kingman Road and needs to be mentioned. Is this the only access that is planned to be gated?
- The access at the Gorgas Road/Stonewall Jackson Road intersection is right-in/right-out only and proposed pavement markings and channelizing island need to be shown appropriately on the site plan. The secondary access off Gorgas Road which is proposed to be a signalized full access intersection also needs to be shown on the site plan.
- Pavement markings shown at the Kingman Road access locations need to be rectified. The west access which is the main access, has an exclusive left turn lane and a shared left/right lane that is provided out of the facility, and an exclusive westbound left turn lane and eastbound right turn lane that is provided to the site.
- Page 11 of 25, Transportation Impact Study (TIS): Additional trips generated from other planned facilities including the National Museum of the United States Army, the INSCOM and DLA expansions on post that may influence the traffic through Fort Belvoir have been accounted for in the Traffic Impact Study. The Army's Privatization of Army Lodging program (PAL) states that a potential site for a 200 room hotel is located south of Kingman Road and east of Gunston Road. If this site were to be chosen, the trips associated with this facility need to be accounted for in the TIS.
- Can the trip distribution percentages be depicted on a graphic?
- Signal plans for access location off Kingman Road need to be included in the plan set.

Attachment: PX and USO Family Center Comments  
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- The anticipated growth of traffic from BRAC expansion and construction of a new commissary at Fort Belvoir and USO family center will greatly affect the 2015 levels of service at the intersection of John Kingman Road and Fairfax County Parkway. The signalized intersection capacity analyses indicate that this intersection will not operate at a satisfactory level of service. The AM and PM peak hour delays will require interim improvements at the intersection and beyond.
- The Fairfax County DOT recommends construction of additional NB lane along Fairfax County Parkway to accommodate free flow right turn lane along Fairfax County Parkway and right turn overlap signal for NB Parkway as an interim improvement in addition to the list of other extensive improvements to the intersection (dual SB left turn and dual NB right turn lanes) recommended by Gannett Fleming study and based on necessary capacity and safety improvements.
- A graphic or table that shows the midday and weekday PM peak hour queue lengths along with levels of service for existing year and year 2015 (plus change in site-generated traffic) would be informative.
- A summary table for Intersection Capacity Analysis for 2009 existing conditions and 2015 (with and without site generated trips) would be helpful if provided.
- Space along the building frontage, potentially with a pull-out/bay, should be designated for a bus stop. This could be for an outside provider that is allowed on the base (e.g., Richmond Highway Express) and/or an internal shuttle service.
- Better pedestrian connectivity should be provided and shown in the site and landscape plans. A concrete sidewalk is shown on Kingman Road, but there does not appear to be any pedestrian connection from the PX site. In addition, the plans show no pedestrian connections to the existing sidewalk on Gorgas Road (via Stonewall Jackson Road). Pedestrian connectivity should also be better shown between the PX site and the new Commissary site, immediately to the south (along the frontage of the buildings).
- Will space be allocated for bicycle storage (racks and/or lockers)? This could be for guests or employees. It is not clear from the plans.
- With an estimated 125 employees per shift (Project Report, NCPC Submission Package), only 75 parking spaces should be provided (based on 60%). The employee parking lot (north) is shown to have 179 parking spaces, but includes vendor parking as well as customer parking. There would appear to be sufficient customer parking in the main parking lot (west) with 653 spaces. The employee lot to the north should be reduced in size to better encourage alternative modes of transportation, such as walking, bicycling and transit.

3-25-11

## **Design Build Shopping Center**

**Ft. Belvoir, VA**

### **Army's responses to Fairfax County's comments**

#### County of Fairfax, VA/ NCPC Responses

The following responses are in response to the letter dated March 21, 2011 from Mr. Fred R. Selden to Mr. David W. Levy. This is an updated letter from a DRAFT letter dated March 18, 2011 from Mr. Selden to Mr. Levy, adding a new fourth comment for a total of twenty-two comments.

Comment #1 (Structured parking and building, green roof)- As noted in Tab 4, A., National Capital Planning Commission- Commission Action, July 1, 2010, item 1: It is not feasible economically to construct a multi-level garage with regards to the approved funds for the Project. See also item 3 in this section for a discussion regarding the many disadvantages associated with a multi-story PX such as efficiencies, costs and operations. Also discussed are the pros and cons associated with green roofs.

Comment #2 (Pervious pavement)- Pervious pavement is proposed for approximately - 650 spaces of the PX parking lot (see updated Plan C1). Of the total parking spaces, this represents approximately 68% of the total parking provided. Additionally, as was recommended in the earlier NCPC Concept Review and Fairfax County comments, both agencies suggested a reduction of 110 spaces, which was agreed to by AAFES, resulting in a lower ratio than the 4 spaces/ 1,000 GBA recommended by Fairfax County.

Comment #3 (BMP's)- See updated Plans C4 and C5. Two separate BMPs will receive and treat rooftop runoff. The first BMP is located in the west parking area adjacent to the main underground storage area. A piping system will carry runoff from 6 of the 7 rooftop runoff downspouts and send it west to two diversion structures located in the west parking lot. These structures will divert the water quality flow to an underground aggregate storage layer which will provide water quality control by absorption, filtering, sedimentation, biological action, and infiltration into the underlying soils in exactly the same manner as the porous pavement provides water quality for the parking lot. Runoff in excess of the water quality flow will be diverted directly to the underground detention system. The northeast corner of the roof will be directed to a bioretention area located east of the PX. This bioretention area will provide both stormwater quality and quantity control for this portion of rooftop runoff.

Comment #4 (LID)- The designer of the PX site, after evaluating the site and the development planned, has developed a range of site improvements and computations to show how the site development will improve current site retention through the use of low impact development (LID), which includes the use of vegetated swales, four bioretention filter locations, two underground detention areas each with infiltration which helps maintain water on site, porous concrete pavement areas under both parking areas, and the planting of 460 trees on the site together with reforestation of selected areas at various remote sites on the Installation.

The design process developed for the site followed the outline of the EISA 438 in the evaluation of site design options. Technical constraints identified on the site included soils with poor infiltration rates, fixed development area, and the desire to avoid wetland impacts. There are five (5) drainage areas on the site (refer to Table 1-5 provided in NCPC responses March 21, 2011 for more detail).

Comment #5 (landscape irrigation)- Landscaping will be initially established with temporary irrigation. We anticipate one growing season for establishment, at which time temporary irrigation will cease.

Comment #6 (Tree count, native species)- The replacement ratio is not 2:1. The final number was reduced to the 4,725 as identified in the FONSI and Memorandum of Agreement between the Installation and the AAFES (see updated plan C2). A total of some 490 new trees will be planted on the site along with two reforestation areas on site. The remaining tree plantings and reforestation will occur at sites remote from the PX as identified by the Fort Belvoir Forestry POC.

Comment #7 (invasive plant management)- Fort Belvoir has an on-going program for invasive plant management. No invasive plant species will be used on the site.

Comment #8 (LEED-ND)- The LEED rating system is currently only applied to individual projects per Army policy. Therefore, LEED-ND is not applicable at this time.

Comment #9 (Road access points)- A security access gate is provided at the delivery access to comply with AT/FP standards. Other entrances will not be gated.

Comment #10 (Gorgas/ Stonewall Jackson)- See updated plan C1. The intersection has been revised.

Comment #11 (Pavement markings)- See updated plan C1. The plans show one left and one right turn lane onto John Kingman. In the future when John Kingman is widened to two westbound lanes the right turn lane will be converted to a left and right turn lane.

Comment #12 (Transportation Impact Study)- The final determination for the Privatization of Army Lodging (PAL) site has not been made. Should the Kingman/Gunston be determined to be the preferred and selected site, the required analysis will take place to determine impacts and mitigation measures.

Comment #13 (Trip Distribution Percentages)- A trip distribution graphic is provided (see revised Exhibits F and G).

Comment #14 (Signal Plans)- The Traffic Impact Analysis did not provide for signalization plans. The Installation will update traffic information prior to completion of the future Commissary to determine final road improvements and traffic signal plans prior to initiating such work.

Comment #15 (Anticipated Traffic Growth)- Comment noted. This will be further analyzed with the Fort Belvoir Master Plan Transportation Management Plan.

Comment #16 (Additional NB lane)- Comment noted. This will be further analyzed in the Fort Belvoir Master Plan Transportation Management Plan.

Comment #17 (Queue Length Graphic)- See Table I-2 indicating queue lengths.

Comment #18 (Intersection Capacity Analysis)- See Table I-1 for Intersection Capacity analysis.

Comment #19 (Bus stop)- The PX design incorporates a continuous, covered exterior canopy, terminated with a covered “Gazebo” to the south. This pathway will serve as a pedestrian connection to the future Commissary when constructed. The Ft. Belvoir shuttle bus service, once funded, will incorporate a stop at the covered “Gazebo”. A drop-off lane here may be considered upon the finalization of the Commissary plans. Coordination with off-post bus service providers will be completed and stops within the shopping area developed based on that future coordination and agreements reached.

Comment #20 (Pedestrian Connectivity)- The proposed new hardscape paving at the PX is extended to the existing Bicycle trail along Kingman Road at the north end of the site. A covered, paved walkway will extend to the south as noted in Comment #19 and terminate at the “Gazebo”. Upon finalization of the future Commissary design, a walkway extension may be considered as part of the Commissary construction. A pedestrian sidewalk from the PX to Gorgas Road has not been included in the project budget due to the light pedestrian traffic at this end of the Post, but may be considered upon finalization of the Commissary plans and eventual connection to Stonewall Jackson Road. Connectivity exists currently with Lewis Village across Woodlawn Road.

Comment #21 (Bicycle Storage)- Four (4) Bicycle racks for a total of approximately 88 bicycles will be provided for employees and customers. One (1) rack will be provided for at the Employee/ Administration Entrance at the northeast corner of the PX, one (1) will be provided at the northerly Entrance to the PX near the Food Court, one at the Main entrance and one (1) at the southerly Entrance to the Mall. A shower and lockers are provided for employees; public restrooms are available for customer use.

Comment #22 (Employee Parking)- As noted in the current NCPC Narrative, there will be overlaps of shifts in which case the parking requirement is based upon 250 employees, not 125. The additional 15 customer parking spaces provided are for customers utilizing the Outdoor Living (ODL) area for waiting and loading outdoor, and other large, bulky items purchased. Lastly, 14 spaces are allocated to store visitors and vendors entering through the Employee/ Administration entrance. The total number of parking spaces provided is less than the recommended 4 spaces / 1,000 GBA.