

## Executive Summary

Benham / SAIC was contracted by the United States Army Corps of Engineers (USACE) to develop a Transportation Management Plan (TMP) for BRAC 133 in Mark Center. BRAC 133, the Base Realignment and Closure Commission's Recommendation No. 133 involves relocation of 6,409 federal personnel working in 24 different defense organizations occupying leased spaces throughout the National Capital Region (NCR) to a consolidated space in the City of Alexandria. As mandated by the 2005 BRAC legislation, the move will occur by September 15, 2011. The Mark Center site is an established mixed-use business park with a 16-acre master-planned space for office buildings and structured parking and will be owned by the U.S. Army Fort Belvoir.

Mark Center is located adjacent to Interstate 395 (I-395), and is bounded by Seminary Road to the east and North Beauregard Street to the north. The proposed BRAC 133 facility will have a North and South Campus, and a Remote Inspection Facility (RIF). The north campus will include the North Parking Garage with visitor parking and a Transportation Center. The south campus will include the East and West office building towers, the South Parking garage, the visitor control center, the main access control point to the site and the remote delivery facility. The complex is being designed and constructed to achieve a LEED "Gold" rating, a national standard set by the U.S. Green Building Council to foster sustainable building design and construction. The facility, when completed, will use 30 percent less energy and 45 percent less water than comparable office buildings. A number of on-site amenities will also be made available for the employees.

This TMP identifies and discusses a series of Travel Demand Management (TDM) strategies that can influence travel behavior and mode choice of employees thus reducing SOV trips made to the site. Guidelines and standards set forth by National Capital Planning Commission (NCPC), General Services Administration (GSA) and Metropolitan Washington Council of Governments (MWCOCG) were utilized in development of the BRAC 133 TMP to obtain an achievable plan.

### ***Transportation Management Plan Goals***

- *Achieve a minimum 40% reduction in single occupancy vehicle trips*
- *Encourage alternate commuter modes to facilitate mobility*
  - *Ridesharing (Carpool/Vanpool/Slug)*
  - *Public Transit Use (Metrorail/Bus)*
  - *Walk & Bike*
- *Establish a Transportation Management Program Office*

A brief review of previous studies and the trip generation methodology was evaluated. Employee home zip codes were obtained from human resources records, and existing commute patterns, employee attitudes towards alternate modes, and expected mode choice data were obtained from a transportation survey conducted by WHS. This information was compared against general commuter patterns in the Washington DC region to determine anticipated employee mode choices for commuters to BRAC 133. Single occupant vehicle trips were determined based on the number of parking spaces that will be available at the site for employees, visitors and government vehicles.

The following mode splits are anticipated at the BRAC 133 site:

- SOV – 57%
- Carpool – 5%
- Vanpool – 3%
- Slug – 3%
- Bus Transit – 5%
- Rail Transit – 23%
- Walk – 2%
- Bike – 2%

The proposed DoD shuttle plan will provide connections from key Metrorail stations to BRAC 133 and the shuttle service is expected to serve all the anticipated rail ridership. The proposed plan serves a total of 2,970 commuters during the peak period, providing connections to the Pentagon Transit Center and the King Street Metrorail station (serving VRE, Blue and Yellow Lines) as well as to Ballston, East Falls Church, and West Falls Church (serving Orange Line). The site also offers public and private bus transit service provided by City of Alexandria Transit Company (DASH), Washington Metropolitan Area Transit Authority (WMATA), and Quick's Bus Company.

A detailed review of the existing and proposed site conditions including site access, external and internal roadway network, pedestrian facilities, access control points, and pedestrian, shuttle bus and truck circulation was conducted to study the adequacy of the facilities. The roadway geometry and lane configuration data were used in conducting detailed traffic operational analysis for the proposed site. The proposed site offers pedestrian walkways, and bike racks, lockers and shower facilities for employees who walk or bike to work. A slug area is being provided near the parking garages with a pedestrian refuge area to promote slugging.

The Traffic Impact Analysis section of the Transportation Management Plan documents the operational analysis results for the existing and build-out morning and evening peak hour conditions on the adjacent roadway network at the BRAC 133 site. Traffic operational analysis and micro simulation modeling using Synchro and CORSIM (Corridor Simulation) were conducted for the existing conditions with baseline (2011) traffic demand and future conditions with projected traffic demand. The projected traffic demand included drive-alone and rideshare trips such as carpool, vanpool, slug and shuttle trips generated by the BRAC 133 facility and the proposed IDA facility. The rideshare trips to the BRAC 133 facility were determined based on the above mode split and a 2.3 passengers per vehicle occupancy for

carpools, a 7.0 passengers per vehicle occupancy for vanpools and 3.0 passengers per vehicle occupancy for slugs.

The Mark Center site with BRAC 133 and IDA is expected to generate a total of 2,022 trips in the morning peak hour and 1,910 trips in the evening peak hour. The generated trips were distributed along the existing roadway network serving the site as per the home zip code distribution. The future operational analysis under full build-out conditions included existing and interim site improvements (scheduled for completion before September 15, 2011).

Upon review of the analysis results, it was noted that the interim improvements offered minor operational benefits with many ramp sections, roadways and intersections operating at unacceptable Level of Service (LOS) under full build-out conditions. The notable areas of congestion and vehicular delay are as follows:

- I-395 general purpose northbound and southbound ramps
- I-395 general purpose mainline diverge sections
- Seminary Road rotary interchange southeast ramp intersection
- North Beauregard Street and Seminary Road intersection

In addition to the interim recommendations that are being implemented by the DoD to accommodate BRAC growth, various short and long-term recommendations are identified in the report to improve traffic operations and LOS. A direct HOV access ramp plan from I-395 to Mark Center is also currently being evaluated by Virginia Department of Transportation (VDOT) in association with the City of Alexandria.

The TMP includes a detailed Travel Demand Management (TDM) Plan identifying goals and strategies to effectively reduce the transportation related impacts of BRAC 133 on the adjacent roadway network. The primary task in implementing the TDM plan is to establish a “WHS Transportation Management Program Office” onsite at BRAC 133 to assist all commute needs of employees and visitors. The Washington Headquarters Services (WHS) BRAC Program Office will manage the BRAC 133 TMP program in coordination with the Pentagon Force Protection Agency-Parking Management Branch (PFPA PMB) which will manage the BRAC 133 parking facilities. The highlights of the proposed TDM Plan and strategies are listed below:

- Designation of a Transportation Management Plan Coordinator
- Employee Orientation and Pre-Relocation Outreach
- Employee Enrollment and Periodic Transportation Survey
- Ride matching Assistance
- Biking and Walking Assistance
- Coordination with Pentagon Transit Center and Public Transit Agencies
- DoD NCR Mass Transportation Benefit Program
- Shuttle Service to Pentagon Metrorail Station
- Coordination of Telecommuting/Flex time/Compressed Work Week Programs

## EXECUTIVE SUMMARY

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- Parking Permitting
- Priority Parking ( Carpool/Vanpool/Low-Emission vehicle)
- Reserved Flex-Time Employee Parking
- Parking Overflow Management
- Special Events Protocol

The TMP discusses multiple recommendations to the transportation management program to improve the effectiveness of many of the recommended TDM Plan elements and strategies. A Monitoring and Evaluation Plan will help the Transportation Coordinator to evaluate the effectiveness of the various transportation programs and strategies under the BRAC 133. The Transportation Management Program is included as part of the TMP. A periodic survey will assess vehicle ridership, parking utilization, mode choice and incentives offered under BRAC 133 Transportation Management Program. It will be conducted annually with the TMP being amended as necessary to effectively and efficiently serve the BRAC 133 commuters and surrounding community needs.