REPORT OF THE
DEPARTMENT OF VETERANS AFFAIRS

FEASIBILITY STUDY FOR A SECOND VETERANS CARE FACILITY IN THE COMMONWEALTH

TO THE GOVERNOR AND
THE GENERAL ASSEMBLY OF VIRGINIA

HOUSE DOCUMENT NO. 14

COMMONWEALTH OF VIRGINIA
RICHMOND
1999

COMMONWEALTH of VIRGINIA

Department of Veterans' Affairs

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November 30, 1998

MEMORANDUM

TO: The Honorable James S. Gilmore, III, Governor of Virginia
and Members of the General Assembly

FROM: Donald W. Duncan

SUBJECT: Feasibility Study for a Second Veterans Care Center

The General Assembly mandated the Virginia Department of Veterans' Affairs to conduct a feasibility study to determine the need for a second veterans' care center by a budget amendment to the 1998-99 budget.

We are submitting the enclosed study as our fulfillment of the mandate. The report and demographic analysis shows conclusively a need for a second and even a third center. The study was conducted in accordance with federal regulations for determining the need for state-supported veterans' homes.

The recommendation of the study is to build a second veterans' care center on land adjacent to the McGuire VA Medical Center in Richmond. The demographics and other factors driving this conclusion are indicated in the accompanying report. The US Department of Veterans' Affairs (USDVA) has agreed to make this site available to the Commonwealth through a long term lease or transfer of title. The federal government will fund 65% of the building of a second home if the VA approves Virginia's request.

Schematic design of the facility must be completed for the application to be considered. In addition, the Commonwealth of Virginia must have approved funding for the construction of the home. If the General Assembly approves the building of a second care center; there are many time essential steps that must be followed in order to build the facility in a timely manner.

The first absolutely essential step is to have design of a facility completed through schematic design. This is critical to pre-apply for a place on the USDVA priority list and to serve as a basis for a capital request to the General Assembly for construction money.

If the General Assembly approves construction money, the final completed application will then be submitted to the USDVA. Upon approval by the USDVA, the federal government will fund 65% of the construction cost (not equipment). The approval of the request will depend on funds available and the priority our application receives in terms of other states' application and needs.

The need is now. Veterans have paid for this service by their selfless sacrifice to protect this nation in time of peril. They have paid to protect our freedom and our way of life. They have paid with their time, energy, efforts, and in many cases loss of health and lives in an unselfish commitment to our national interest.

We believe it is now time to repay them by providing a place whereby they can spend their remaining years in a home that provides their needs medically, physically, and emotionally in a dignified and respectful environment.

Because of the lengthy and time dependent process to obtain approval from the General Assembly and the USDVA, it will be the year 2002 at best before we have such a facility. Any delay in any step of the process will extend the time frame significantly.

DWD:bt

Enclosure

ARCHITECTURE
PLANNING
INTERIORS

PRELIMINARY STUDY OF THE NEED FOR A SECOND VIRGINIA VETERANS' CARE CENTER AND SITE EVALUATIONS

Prepared For

Virginia Department of Veterans' Affairs

Roanoke, Virginia

October 15, 1998

MOTLEY + ASSOCIATES

310 First Street, Suite 300
Roanoke, Virginia 24010
Phone: 540-344-1212

M+A Comm #98009.00

October 15, 1998

Mr. Donald W. Duncan, Director
Commonwealth of Virginia
Department of Veterans' Affairs
270 Franklin Road, SW - Room 1012
Poff Federal Building
Roanoke, Virginia 24011-2215

Re: Preliminary Study for the Need for a
Veterans' Care Center and Site Evaluation
Comm. No. 98009.00

Dear Mr. Duncan:

Enclosed is our final report which examines the need for a new Virginia Veterans' Care Center. It was our objective, and yours, from the very start to assemble a highly qualified consulting team and then to tailor the methodology of the study to provide a concise, clear and logical evaluation. We believe this objective has been achieved in this report.

We would like to express our appreciation to your staff and to your Advisory Committee for their assistance with data gathering and for their input into the study process.

On behalf of Motley + Associates, SFCS, Inc., Gill/Balsano Consulting and Engineering Concepts, Inc., we thank you for the opportunity to serve the Virginia Department of Veterans' Affairs by providing this study.

Should you need additional information, please do not hesitate to contact us.

Sincerely,

MOTLEY + ASSOCIATES, P. C.

Benjamin S. Motley, AIA
President

vlw

Preliminary Study of the Need for a Second Virginia Veterans' Care Center and Site Evaluations

Prepared for

Virginia Department of Veterans' Affairs

Roanoke, Virginia

Prepared by

Motley + Associates, P. C.

Architecture - Planning - Interiors
Roanoke, Virginia

In Association with

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October 15, 1998
M+A Comm. No. 9800900

TABLE OF CONTENTS

EXECUTIVE SUMMARY

This Study examines the preliminary feasibility for a second Veterans' Care Center in the Commonwealth of Virginia. The feasibility is determined by addressing four distinct evaluations in the following order of priority:

- 1. Determining the *basic need* for a new Veterans' Care Center in view of the composition of the entire Virginia veteran population;
- 2. Determining the *preferred general location* for a new Center based upon demographics, age, income and other considerations;
- 3. Analyzing available sites from an engineering standpoint; and
- 4. Providing *recommendations* in regard to location and size

This study determines that there is not only a clearly justified need for a new center at the present time, but that consideration should also be given to long term planning for one or more additional new Virginia Veterans' Care Centers. This is due to the age and concentration of veterans within the Commonwealth.

Demographic analysis further indicates that the three metropolitan areas of *Hampton Roads*, *Northern Virginia* and *Richmond* are the best candidates to serve as the geographic centers for new Veterans' Care Centers. Additional evaluations involving factors of age, income levels and availability of other facilities indicate that the Richmond Metropolitan Area has the most pressing need.

Additionally, the Department of Veterans' Affairs identified four sites that are available either from the inventory of state properties or as sites that would be donated to the Commonwealth for use as a new Veterans' Care Center. Two of these sites were eliminated due to significant cost, access or legal implications involving their development. The remaining two sites, located in Louisa County and the City of Richmond, are favorable for development. The site in Richmond, however, has distinct advantages in terms of cost of development, regional access and direct adjacency to the federally-operated (United States Department of Veterans Affairs) Hunter Holmes McGuire Medical Center.

In view of the numerous factors considered, it is concluded that the site of the McGuire Medical Center in Richmond is the optimum location for the next Virginia Veterans' Care Center. Such a new Center should have a capacity of 240 beds. Further study is recommended to determine the precise programmatic and cost requirements for a new facility. The need for more than one new Center should be considered in long range planning.

SECTION 1
DETERMINING THE NEED FOR A NEW VIRGINIA VETERANS' CARE CENTER
Gill Balsano Consulting

BACKGROUND

Gill/Balsano Consulting, LLC (GBC), as a consultant to Motley + Associates Architects, was asked to assist in identifying both gross and net market bed need and to determine the preferred location for an additional state Veterans' Care Center in Virginia. Through analysis of Virginia Department of Health, United States Department of Veterans' Affairs, Virginia Department of Veterans' Affairs, and other data and market sources, we have developed recommendations for nursing home and domiciliary bed size and identified the preferred region for supporting such a facility. This report presents analysis and findings of state demographics, state bed need, regional demographics, regional need and facility size recommendations.

STATE DEMOGRAPHICS

Virginia has a large total and elderly veteran population. This is due to a number of factors involving the geographic position of the state, such as:

- Several active military areas,
- Proximity to Washington D.C.,
- Climate and recreational attractiveness to retirees.

There are only 10 other states in the United States with larger veteran populations. As of June 1998 there were an estimated 684,300 veterans (all ages) living in Virginia. Over 31 percent of these veterans are age 65 or older. This population has unique needs and requirements both medically and psychosocially. This veteran population is 93 percent male and typically has health and other well-being concerns related to combat and service.

REGIONAL VETERANS POPULATION BY STATE AND AGE COHORT

STATE	17-29	30-44	45-64	65-74	75-84	85+	TOTAL
Virginia	23,991	143,502	298,895	137,957	71,684	7,265	683,294
North Carolina	25,602	132,017	292,810	152,054	80,938	7,768	691,189
West Virginia	7,740	25,839	79,719	48,049	26,956	2,695	190,998
Maryland	18,252	103,654	221,507	106,217	57,249	5,712	512,591
Tennessee	18,502	87,733	219,282	110,404	59,398	6,059	501,378
Kentucky	14,747	59,410	151,168	81,217	44,278	4,308	355,128
US	911,020	4,295,462	10,621,256	5,704,939	3,202,293	327,479	25,062,449

Source: United States Department of Veterans Affairs, projections as of July 1, 1998.

DETERMINING OVERALL STATE NEED

The State of Virginia Department of Veterans' Affairs will consider the development of a second Virginia Veterans' Care Center for nursing home and domiciliary care of veterans if there is a strong need for such a facility. As shown on the following table, there are currently 470 nursing home beds in the Commonwealth dedicated to veteran care. Based on the reported average daily census, an additional 121 beds at community nursing homes are currently caring for veterans in these same counties. In order to get a more accurate account of community beds serving veterans in Virginia, GBC determined through a 1996 state nursing home inventory (1995 data - Center for Health Statistics, Virginia Department of Health) that 0.8 percent of all community nursing home days were provided to veterans. Applying this ratio to the state's total 1997 census results in a total of 227 beds estimated to be serving veterans in community nursing homes. Adding these 227 beds to the 470 beds operated by federal and state agencies results in an estimated state total of 697 nursing home beds serving veterans in Virginia. For the purposes of this study, this number will be used in calculating the net need for veteran nursing home beds in the state.

(See Chart Next Page)

EXISTING INVENTORY OF VETERANS FACILITIES

Virginia (current)	Location	Beds	ADC	Occupancy
VAMC -Virginia (federal) nursing home beds				
	Hampton	120	102	85.0%
	Richmond	80	74	92.5%
	Roanoke / Salem	90	82	91.1%
		290	258	
Community nursing homes				
	Hampton		40	
	Richmond		51	
	Roanoke / Salem		30	
			121	
State homes (Va. Vet. Care Center)				
	Roanoke / Salem	180 NH 60 dom	172	71.7%
VAMC(federal)				
	Hampton	217 dom		85%

ESTIMATED TOTAL EXISTING BEDS SERVING VETERANS

State and federal NH beds	470
Community NH total census (1995)	28,178
Community veterans census (1995)	233
Percent of total	0.8%
Community NH census (1996)	27,485
Community veterans census (1996)	227
Total NH beds caring for veterans	697

Based on the methodology stated in federal regulations 17.171 (45 FR 38357, June 9, 1980, as amended at 48 FR 1490, January 13, 1983; 52 FR 23826, June 25, 1987), the need for state-supported veterans homes shall be based on the total number of veterans in the state. The federal regulations utilize a standard of 2.5 nursing home beds per 1,000 veterans, with a limit of 4.0 nursing home beds per 1,000. The regulation states that when the nursing home beds to be constructed or acquired in a state will result in more than 2.5 beds per 1,000 veterans, the State shall provide sufficient justification for the Administrator to determine that the additional beds are required in that State. In making this determination, the Administrator shall consider the following factors: 1) demographic characteristics of the state's veteran population, 2) availability, suitability and cost of alternative nursing home beds to meet the needs of veterans in the State, 3) waiting lists for existing State nursing home facilities and 4) any other criteria which the Administrator shall deem appropriate to provide adequate nursing home care.

As shown previously, the 470 existing state and federal nursing home beds in Virginia are far fewer than 2.5 beds per 1,000 veterans. There are currently 0.7 state and federal nursing home beds per 1,000 vets. Our recommendation of state home beds will not result in the state exceeding 2.5 beds per 1,000 veterans, but will still satisfy the additional factors stated in the federal regulations. The federal regulations also stipulate a limit of 2.0 domiciliary beds per 1000 veterans.

The following table shows how application of the bed-to-veteran population limits to the state of Virginia veteran population base supports a gross need from 1,711 up to 2,737 nursing home beds and up to 1,369 domiciliary beds.

Subtracting the total estimated existing nursing home beds (697) available to these veterans results in a net need range of 1,014 up to 2,040 nursing home beds.

ESTIMATED BED DEMAND

Virginia Veteran Population		NH Bed Need @ 2.5 per 1,000	NH Bed Limit @ 4.0 per 1,000	Domiciliary Bed limit @ 2.0 per 1,000
684,300	**GROSS**	1,711	2,737	1,369
	EX. BEDS	(697)	(697)	(277)
	NET NEED	1,014	2,040	1,092

It is also important to consider out-of-state nursing home beds available to veterans in northern Virginia. There are a number of nursing home beds and some domiciliary beds for veterans in facilities located in Washington, D.C. GBC estimates there are approximately 338 state or federal nursing home beds in D.C. serving veterans. If we assume these beds are serving a population base of which 50 percent reside in Virginia, 50 percent of these beds (169) should be accounted for in calculating an actual net state need. The resulting net nursing home need in this scenario ranges from 845 up to 1,871.

A DETAILED REVIEW OF DOMICILIARY BED NEED

It is very difficult to verify the number of veterans needing domiciliary care that are being served by private facilities in the state. Domiciliary beds provide a number of biopsychosocial and long term health maintenance programs including vocational rehabilitation, homeless care, transitional residence, and substance abuse rehabilitation. United States Department of Veterans' (USDVA) domiciliary care is reserved for veterans with extremely low incomes. Few private homes provide this type of care.

Based on the above calculations and the existing 277 statewide veteran domiciliary beds, the net need limit is for 1,092 domiciliary beds. Because the USDVA provides reimbursement for some

private assisted-living situations (based on assessment and qualification of need). GBC speculates that a portion of this need is being met by private homes. This may be limited because of the typically higher income levels necessary to access such services even with reimbursement assistance.

There is only one domiciliary home in Washington, D.C. It is reporting an average daily census (ADC) of 78. If we assume an 87 percent occupancy of this facility, there would be 90 operating beds available. As in the nursing home discussion above, taking 50 percent of these beds (45) from the net calculation results in an adjusted Virginia state bed need for domiciliary beds of 1,047.

Please note that this is a limit calculation for domiciliary beds, not an actual need. Of additional concern is the 217 domiciliary beds in the Hampton Roads. This facility had been experiencing an occupancy level around 85 percent. There are another 40-50 beds expected to close over the next year. The closure of these beds and displacement of these veterans furthers the need for replacement domiciliary beds in another site. It is reported that these closings are due to the fact that the beds are in outdated sections of the facility and do not meet current standards or regulations. The closures are not due to low occupancy levels. Additional domiciliary bed need projections will be made later in this discussion.

DETAILED REVIEW OF NURSING HOME BED NEED

GBC also applied existing state nursing home bed-to-population age ratios, for ages 65 and older, from three different states in order to verify the validity of the federal need and need limit calculations discussed above. A 16 percent market share of these beds was applied as is used in similar USDVA Planning Model calculations (to be discussed further in a following section.) This model assumes that the remaining 84 percent of veteran need will be met by community nursing home facilities. GBC recommends that a higher expected market share percentage of 25 percent should also be applied to the bed-to-population ratio results because it is reasonable to assume the state/federal home capture of the veteran nursing home bed need will be higher in Virginia than in many other states. This higher market share capture rate can be expected to result from the strong USDVA medical center presence, from the strong referral base across the state and from the current experience of the existing Virginia Veterans Care Center in Roanoke. This experience includes waiting lists and high occupancy levels. As discussed further in this document, the state of Virginia as a whole is expected to experience a shortage of community nursing home beds in the near future. Virginia experienced greater than 94 percent occupancy in existing nursing homes in 1995.

The Bed-to-population ratio from three southeastern states were chosen for this analysis: Florida, North Carolina, and Virginia. Application of these state bed-to-population ratios for nursing home beds to the Virginia veteran age 65 + population of 217,110 results in a gross bed need of 938 to 1,667 at a 16 percent market capture and 1,465 to 2,605 at a 25 percent market share rate.

Because the market share calculation already takes into account veterans utilizing private nursing home beds, the net need calculation in this instance should be made solely on the basis of existing state/federal beds designated for veteran use. Subtracting this estimated number of beds currently serving veterans in the state (470) results in a net need of 468 to 1,197 beds (16 percent market share) and 995 to 2,135 beds (25 percent market share). This analysis further supports the need in the state of Virginia for nursing home beds dedicated for veteran use.

BED-TO-POPULATION RATIOS

Veterans 65+	Florida @ 27 per 1,000	North Carolina @ 48 per 1,000	Virginia @ 39 per 1,000
217,110	5,862	10,421	8,467
16% market share	938	1,667	1,355
25% market share	1,465	2,605	2,117
Net need @ 16%	468	1,197	885
Net need @ 25%	995	2,135	1,647

SECTION 2.
DETERMINING THE PREFERRED GENERAL LOCATION FOR THE NEXT NEW VIRGINIA VETERANS' CARE CENTER
Gill Balsamo Consulting

REGIONAL POPULATION DEMOGRAPHICS

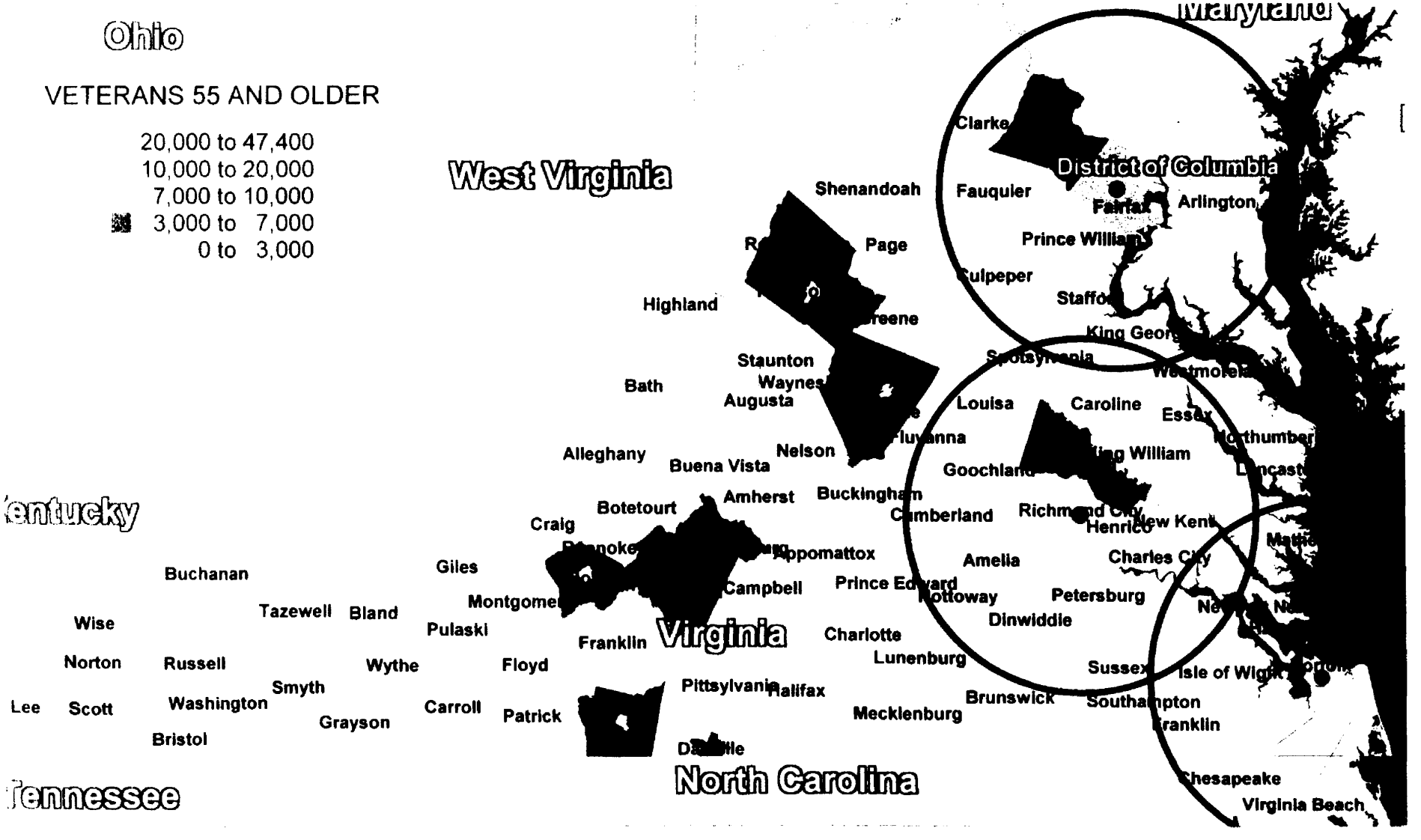
Analysis of the total number of veterans, wartime veterans, veterans age 55+, and veterans age 65+ reveals concentrated pockets of these population groups throughout the state of Virginia. The 55+ population is an important subgroup because it is a good predictor of current and future need. This group may also demonstrate more population stability because of the typical armed forces retirement at age 55. The majority of the concentrated areas of veterans in Virginia are in or around counties with existing military bases. These areas typically have a larger number of active duty military veterans and dependents. Most of the other areas with large numbers of veterans are in or around counties with existing USDVA hospitals, and state or federal nursing or domiciliary beds. As shown on the map provided on the following page, these veteran population concentrations can be divided into three areas. GBC analyzed the veteran population demographics and existing healthcare resources available to these veterans in counties falling within a 50-mile radius of each of the three largest veteran population areas: Northern Virginia (center = Fairfax), Richmond Metropolitan Area (center = Richmond VA Medical Center), and Hampton Roads Area (center = Norfolk). These 50-mile-radius rings overlap somewhat, especially between Richmond and Hampton Roads. Yet, because only counties with the majority of their land mass falling within the 50-mile rings were included in the calculations, these overlaps are considered minimal. The veteran population of these overlapping counties is considerably lower than the non-overlapping counties. Refer to the figures on the pages that follow for more detailed information and maps illustrating the veteran population in these 3 metropolitan areas and their surrounding counties. A summary of these areas and the state by age cohort is provided in the following table.

1998 VETERAN POPULATION SUMMARY BY AGE COHORT

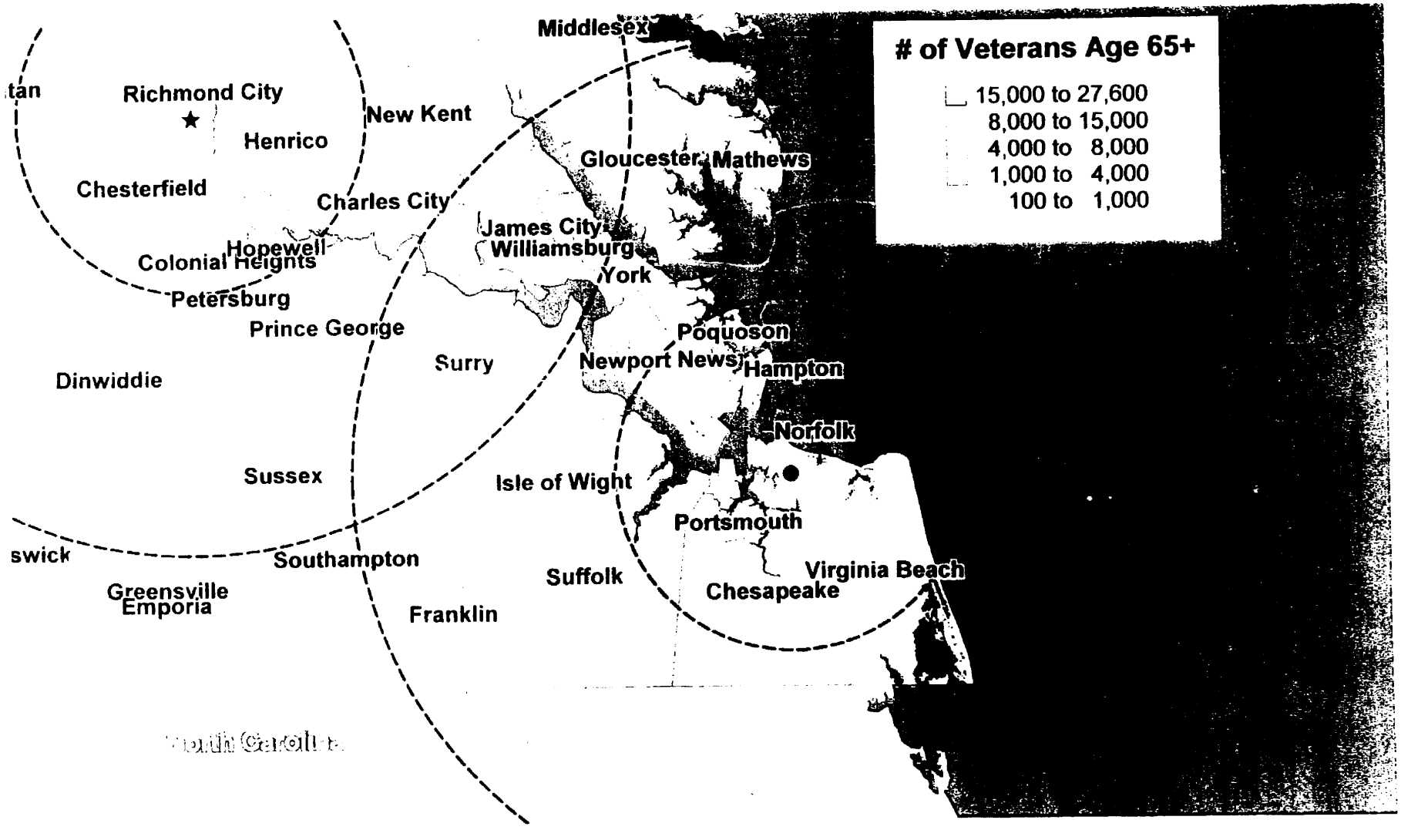
50-mile radius:	Veteran Total	20-44	45-54	55-64	65+	75+
N. Virginia	202,730	52,720	61,870	37,150	50,990	19,740
Hampton Roads	158,890	50,530	39,670	25,270	43,420	15,150
Richmond Metropolitan	121,310	28,420	29,190	21,000	42,700	16,230
State total	684,300	117,530	204,180	145,480	217,110	79,030

Source: United States Department of Veterans Affairs, projections as of July 1, 1998.

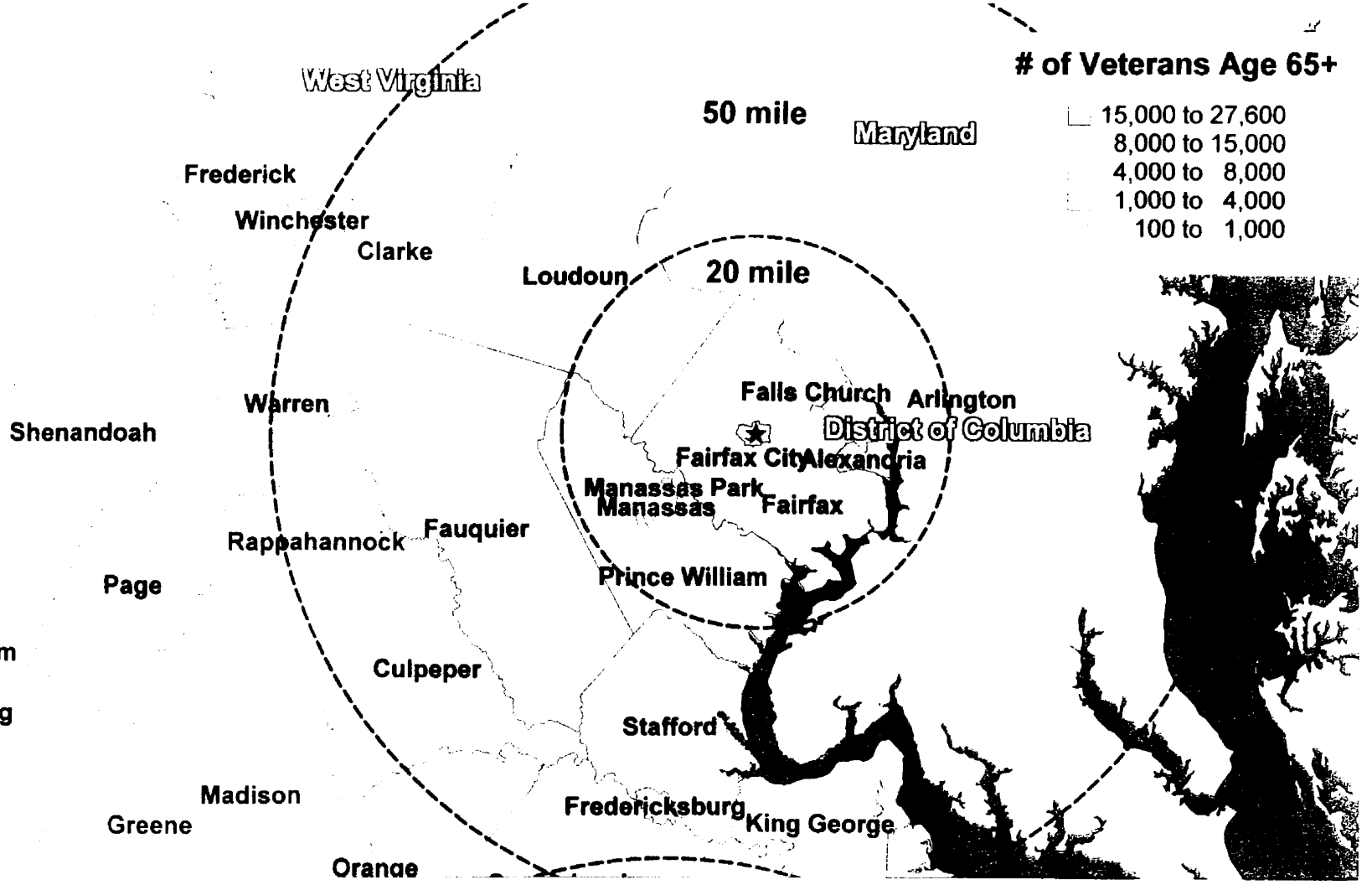
Virginia Veterans
Age 55 and over



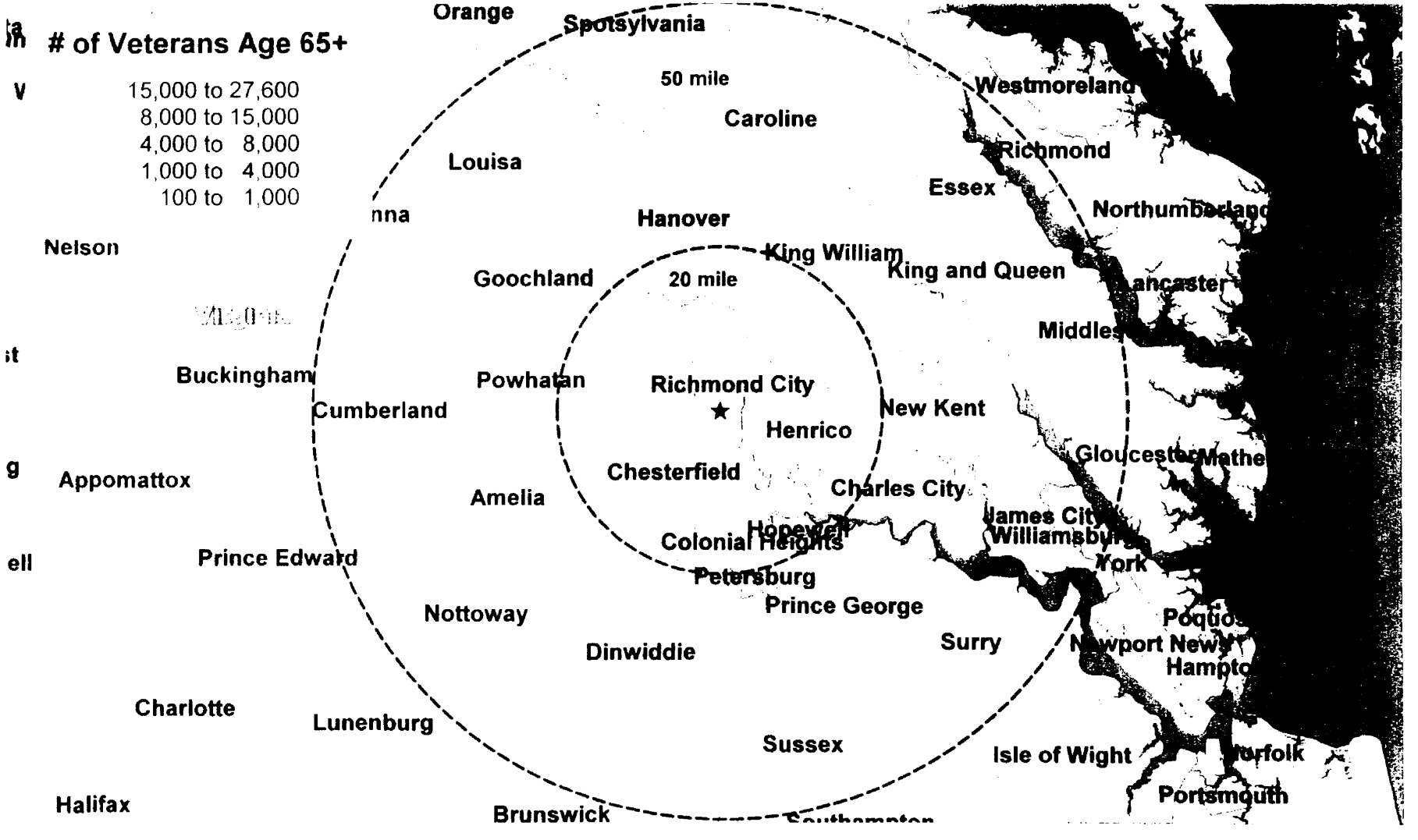
Hampton Roads (50 & 20 mile radius)



Northern Virginia (50 & 20 mile radius)



Richmond Metropolitan (50 & 20 mile radius)



1998 VETERAN POPULATION PERCENT OF TOTAL BY AGE COHORT

50-mile radius:	TOTAL	20-44	45-54	55-64	65+	75+
N. Virginia	100.0%	26.0%	30.5%	18.3%	25.2%	9.7%
Hampton Roads	100.0%	31.8%	25.0%	15.9%	27.3%	9.5%
Richmond Metropolitan	100.0%	23.4%	24.1%	17.3%	35.2%	13.4%
State Total	100.0%	17.2%	29.8%	21.3%	31.7%	11.5%

The Northern Virginia area contains the highest percentage of younger veterans. This is not surprising due to the large number of active military veterans in and around the Northern Virginia area. (The Richmond area, although smaller in absolute population size, has the highest percent of total veterans that are 65+ (35.2 percent) and 75+ (13.4 percent)). Many of these active military personnel in the Northern Virginia region may choose to retire elsewhere in the state or in the United States. Therefore, the need projections for this radius could be inflated. This area is also less attractive for placement of a new Veterans' Care Center because of its proximity to other veteran healthcare resources in Washington, D.C., and Maryland. As previously discussed, the Northern Virginia radius extends significantly into Maryland, however, the Maryland population is not included in state home need calculations for Virginia.

Although the Hampton Roads area has a slightly higher number of total veterans and elderly veterans than the Richmond Metropolitan and a similar household median income distribution, it has a much greater percentage of its total veteran population under the age of 44. This population is most likely comprised of active duty veterans that will not need nursing home or domiciliary care for a number of years. This area also may experience a greater out-migration of its under-age-55 veteran population as they age and retire. The 55-and-over and 65-and-over populations of both the Richmond Metropolitan and Hampton Roads areas are essentially equal in size. With an active naval base and 120 federal veteran nursing home and 217 domiciliary beds located in the Hampton Roads area, these veterans have somewhat better access to healthcare services. The Richmond area has approximately 18 percent of the total and 55-and-over veterans population in the state, but only 80 federal nursing home beds and no domiciliary beds dedicated to serving its veteran population.

As shown in the following table, the Northern Virginia area veteran population has a substantially higher median household income level and substantially fewer veteran households with incomes below $25,000 than the other two areas. Almost 80 percent of Northern Virginian veteran households have median incomes greater that $35,000.

ANNUAL HOUSEHOLD INCOME

REGION	<$ 5K	<$15K	<$25K	>$25K	>$35K	HOUSEHOLDS
Richmond Area	2.7%	12.4%	26.8%	73.2%	57.8%	124,817
Hampton Roads Area	2.6%	12.3%	28.9%	71.1%	53.7%	182,262
Northern Virginia	1.3%	4.8%	11.3%	88.7%	79.6%	198,196
STATE	2.6%	12.4%	27.7%	72.3%	57.4%	725,251

SOURCE: 1989 VETERAN POPULATION HOUSEHOLD BY INCOME, 1990 CENSUS

These individuals have the means to obtain nursing home and domiciliary care at community homes. The Richmond Metropolitan and Hampton Roads areas have very similar distributions of income levels. More than 25 percent of all veterans in these two areas have annual household incomes below $25,000. The Virginia Dept. of Veterans Affairs supports the development of state homes in areas with veterans of lesser economic means. These veterans often have fewer healthcare options and inadequate access in terms of nursing home and domiciliary type care.

GROSS BED NEED FOR VETERANS IN THE MAJOR POPULATION AREAS

FEDERAL STATE HOME NEED METHOD

As previously described, the Veterans' Administration state home need regulations utilize a use rate of 2.5 nursing home beds per 1,000 veterans, with a limit of 4.0 nursing home beds per 1,000 veterans. For domiciliary beds the use rate limit is 2.0 beds per 1000 population. Due to a lack of community alternatives for these individuals, medical complexities, special needs (substance abuse, psychological disorders, combat related health problems, etc.), and the unique make-up (high percentage of males, lower median incomes), a large service area should be projected. The Veterans Care Center in Roanoke, Virginia is currently experiencing a service area approximately 50 miles in radius. For these reasons, GBC chose the 50-mile radius service areas for further need analysis as was used in the demographics discussion.

The following tables show that each of the three defined areas have adequate veteran populations to support the development of state nursing home and domiciliary beds.

1998 Veteran Population	NH Bed Need @ 2.5 per 1,000	NH Bed Limit @ 4.0 per 1,000	Domiciliary Bed Limit @ 2.0 per 1,000
RICHMOND METROPOLITAN AREA (50-MILE RADIUS)			
121,310	303	485	243
NORTHERN VIRGINIA (50-MILE RADIUS)			
202,730	507	811	405
HAMPTON ROADS AREA (50-MILE RADIUS)			
158,890	397	636	318

STATE BED-TO-POPULATION RATIOS

As in the overall state analysis, GBC applied 1996 nursing home use rates from the states of Florida, North Carolina, and Virginia to the veteran population age 65+. As shown in the following table, application of a 16 percent market share (as in the Veterans' Administration methodology) and 25 percent market share to these use rates projects a bed need range similar to the federal state home need calculations.

Applying the bed-to-population ratios results in a nursing home bed need for the Richmond Metropolitan area of 1,153 to 2,050 beds. A 16 percent market share capture rate projects a gross bed need of 184 to 328 beds. At 25 percent market share, the Richmond Metropolitan area projects a gross bed need of 288 to 512 nursing home beds.

Applying the bed-to-population ratios results in a nursing home bed need for the Northern Virginia area of 1,377 to 2,448 beds. A 16 percent market share capture rate projects a gross bed need of 220 to 392 beds. At 25 percent market share, the Northern Virginia area projects a gross bed need of 344 to 612 nursing home beds.

Applying the bed-to-population ratios results in a nursing home bed need for the Hampton Roads area of 1,172 to 2,084 beds. A 16 percent market share capture rate projects a gross bed need of 188 to 333 beds. At 25 percent market share, the Hampton Roads area projects a gross bed need of 293 to 521 nursing home beds.

Veterans	Florida	North Carolina	Virginia
65+	@ 27 per 1,000	@ 48 per 1,000	@ 39 per 1,000
	RICHMOND		
42,700	1,153	2,050	1,665
16% market share	184	328	266
25% market share	288	512	416
	NORTHERN VIRGINIA		
50,990	1,377	2,448	1,989
16% market share	220	392	318
25% market share	344	612	497
	Hampton Roads AREA		
43,420	1,172	2,084	1,693
16% market share	188	333	271
25% market share	293	521	423

UNITED STATES DEPARTMENT OF VETERANS' AFFAIRS GROSS NEED METHODOLOGY

The USDVA Nursing Home Care planning model combines age-specific veteran population projections for a medical district with age-specific nursing home utilization rates from the National Nursing Home Survey to arrive at projected veteran nursing home bed needs. A target USDVA auspices market share of 16 percent is then applied to determine projected nursing home census levels for state veterans homes, USDVA-operated facilities, or USDVA-reimbursed community nursing homes. Once a projected nursing home census level is identified for a particular type of facility, the census level is divided by 95 percent occupancy rate to arrive at projected bed needs. As previously discussed, GBC also considered the possibility of the state home achieving a 25 percent market share capture of veterans in applying this model. The following table demonstrates how a residents-per-1,000 population rate was calculated for the United States. GBC consulted the National Center of Healthcare Statistics for their breakdown of total nursing home residents in the United States in 1995 by age cohort.

	0-64	65-74	74-85	85+&UP
1995 POPULATION	229,226,000	18,759,000	11,145,000	3,625,000
NH RESIDENTS	124,500	189,700	509,600	723,500
UTILIZATION RATE PER 1,000 POP	0.54	10.11	45.72	199.59

Source: NCHS

Application of this utilization rate to the Richmond Metropolitan area population (center of radius = VA Medical Center) results in a veterans census projection of 208-397. As shown in the following two tables, gross bed need for veterans in the Richmond Metropolitan Area at 95 percent occupancy rates ranges from 219 to 418 nursing home beds.

AGE COHORT	0-64	65-74	75-84	85+&UP	TOTAL
Richmond Metropolitan Area Veterans	78,610	26,470	14,630	1,600	121,310
Nursing Home Residents Per 1000 Pop	0.5	10.1	45.7	199.6	
Nursing Home Census Projection	43	268	669	319	1,299
State / Fed Census Market Share	16.0%	16.0%	16.0%	16.0%	
State /Federal Census	7	43	107	51	208
Bed Need at 95 % Occupancy	7	45	113	54	219

AGE COHORT	0-64	65-69	70-79	85+&UP	TOTAL
State / Fed Market Share	25.0%	25.0%	25.0%	25.0%	
State /Federal Annual Residents	11	33	273	80	397
Bed Need at 95 % Occupancy	11	35	288	84	418

Application of this utilization rate to the Northern Virginia area population (center of radius = center of Fairfax city) results in a veterans census projection of 262-409. As shown in the following two tables, gross bed need for veterans in the Northern Virginia Area at 95 percent occupancy rates ranges from 275 to 430 nursing home beds.

AGE COHORT	0-64	65-74	75-84	85&UP	TOTAL
Northern Virginia Area Veterans	151,740	31,250	17,570	2,170	202,730
Nursing Home Residents per 1000 Pop	0.5	10.1	45.7	199.6	
Nursing Home Census Projection	82	316	803	433	1,635
State / Fed Market Share	16.0%	16.0%	16.0%	16.0%	
State /Federal Annual Residents	13	51	129	69	262
Bed Need at 95 % Occupancy	14	53	135	73	275

AGE COHORT	0-64	65-69	70-79	85&UP	TOTAL
State / Fed Market Share	25.0%	25.0%	25.0%	25.0%	
State /Federal Annual Residents	21	79	201	108	409
Bed Need at 95 % Occupancy	22	83	211	114	430

Application of this utilization rate to the Hampton Roads area population (center of radius = Norfolk) results in a veterans census projection of 200-313. As shown in the following two tables, gross bed need for veterans in the Hampton Roads area at 95 percent occupancy rates ranges from 211 to 330 nursing home beds.

AGE COHORT	0-64	65-74	75-84	85&UP	TOTAL
Hampton Roads Area Veterans	115,470	28,270	13,780	1,370	158,890
Nursing Home Residents per 1000 Pop	0.5	10.1	45.7	199.6	
Nursing Home Census Projection	63	286	630	273	1,252
State / Fed Market Share	16.0%	16.0%	16.0%	16.0%	
State /Federal Annual Residents	10	46	101	44	200
Bed Need at 95 % Occupancy	11	48	106	46	211

AGE COHORT	0-64	65-69	70-79	85&UP	TOTAL
State / Fed Market Share	25.0%	25.0%	25.0%	25.0%	
State /Federal Annual Residents	16	71	158	68	313
Bed Need at 95 % Occupancy	17	75	166	72	330

DOMICILIARY BEDS: ADDITIONAL ANALYSIS METHOD

In order to better define the need for domiciliary beds in each area, GBC also applied its own assisted-living model to a 20-mile radius around each center point. Because of medical complexities and lower median incomes, we can speculate this population as a whole will have a higher utilization need , but fewer self-pay options for these types of services. GBC's analysis of the 20-mile-radius areas utilizes the area's total 65+ and 75+ population statistics to project a gross need. GBC then calculates a midpoint of these ranges for estimating gross bed need. In order to estimate the veteran portion of the domiciliary bed need, GBC calculates the veteran percentage of total population for the 65+ and 74+ age cohorts. The weighted average of these percentages is then applied to the gross bed need previously calculated for the general population base in the 20-mile radius, resulting in a gross need for the years 1998 and 2003.

RICHMOND METROPOLITAN AREA

Richmond Metropolitan area demonstrates a gross need range of 569 to 854 domiciliary type beds in 1998 and between 707 and 1,060 for the year 2003. The midpoint of gross need for the total (veteran and non-veteran) population is 712 beds for 1998 and 884 beds for 2003.

In order to estimate the veteran portion of the domiciliary bed need, GBC calculated the veteran percentage of total population for the 65+ and 74+ age cohorts. As shown on the following table, veterans make up 28 percent of the 65 + population and 24 percent of the 75 + population in the 20- mile radius surrounding the Richmond VA Medical Center.

RICHMOND VETERAN POPULATION PROFILE: 20-MILE RADIUS

	65 +	75 +
20-MILE RADIUS POPULATION	101,874	45,877
VETERAN POPULATION	28,370	10,900
PERCENTAGE	28%	24%

The weighted average of these percentages (26.6 percent) is then applied to the gross bed need previously calculated for the general population base in the 20-mile radius, resulting in a gross veteran need in 1998 of 189 domiciliary beds for this area and 235 for the year 2003.

HAMPTON ROADS AREA

The Hampton Roads area demonstrates a gross need range of 539 to 808 domiciliary type beds in 1998 and between 657 and 985 for the year 2003. The midpoint of gross need for the total (veteran and non-veteran) population is 674 beds for 1998 and 821 beds for 2003.

In order to estimate the veteran portion of the domiciliary bed need, GBC calculated the veteran percentage of total population for the 65+ and 74+ age cohorts. As shown on the following table, veterans make up 36 percent of the 65 + population and 29 percent of the 75 + population in the 20- mile radius surrounding the USDVA hospital in Hampton Roads.

HAMPTON ROADS VETERAN POPULATION PROFILE: 20-MILE RADIUS

	65 +	75 +
20-MILE RADIUS POPULATION	119,099	51,688
VETERAN POPULATION	42,420	15,150
PERCENTAGE	36%	29%

The weighted average of these percentages (34 percent) is then applied to the gross bed need previously calculated for the general population base in the 20-mile radius, resulting in a gross veteran need in 1998 of 229 domiciliary beds for this area and 279 for the year 2003.

NORTHERN VIRGINIA AREA

Northern Virginia area analysis requires a slightly adjusted calculation. A portion of the 20-mile radius from Fairfax city extends into D.C. and Maryland. GBC calculated the gross need for the Virginia portion of this radius only. This area demonstrates a gross need range of 953 to 1,429 domiciliary type beds in 1998 and between 1,181 and 1,772 for the year 2003. This midpoint of gross need for the total (veteran and non-veteran) population is 1,191 beds for 1998 and 1,477 beds for 2003.

In order to estimate the veteran portion of the domiciliary bed need, GBC calculated the veteran percentage of total population for the 65+ and 74+ age cohorts. As shown on the following table, veterans make up 27 percent of the 65 + population and 24 percent of the 75 + population in the 20- mile radius surrounding Fairfax city.

NORTHERN VIGINIA VETERAN POPULATION PROFILE: 20-MILE RADIUS

	65 +	75 +
20 MILE RADIUS POPULATION	188,723	84,163
VETERAN POPULATION	50,990	19,740
PERCENTAGE	27%	24%

The weighted average of these percentages (26 percent) is then applied to the gross bed need previously calculated for the general population base in the 20-mile radius, resulting in a gross veteran need in 1998 of 310 domiciliary beds for this area and 384 for the year 2003.

It should be noted that domiciliary care for veterans has many unique characteristics. Because they serve homeless, indigent and veterans with substance abuse and vocational needs, occupancy levels tend to fluctuate dramatically and often seasonally. They also serve a population that is younger and more physically capable than the typical assisted living resident.

NET NEED SUMMARY: NURSING HOME BEDS

Net need for a new Veterans' Care Center should take into account any existing USDVA nursing home or domiciliary beds serving veterans in the defined service area.

RICHMOND METROPOLITAN AREA

There are only 80 USDVA nursing home beds in this area. They are located at the Federal Medical Center in Richmond. There are approximately 51 veterans receiving nursing home care in private nursing homes. Results of various need methodologies are presented in the table below.

RICHMOND NURSING HOME BED NEED ANALYSIS

	GROSS NEED	BEDS AVAILABLE	NET NEED
Veterans' Administration Planning Model			
@ 16% Market Share	**219**	**80**	**139**
@ 25% Market Share	**384**	**80**	**304**
VA State Home Method			
@ 2.5 beds per Veteran	**303**	**131**	**172**
@ 4.0 beds per Veteran	**485**	**131**	**354**
State Bed to Pop Ratio			
@ 16% Market Share	**256**	**80**	**176**
@ 25% Market Share	**400**	**80**	**320**

As the table demonstrates, there is a projected net need range for 139 to 354 nursing home beds.

HAMPTON ROADS AREA

There are 120 nursing home beds at the USDVA Medical Center in Hampton. There are an additional 40 census days reportedly reimbursed by the USDVA. The resulting Hampton Roads net need range is from 97 to 476 nursing home beds. This area also has a lower percent of total veterans that are elderly, which accounts for the higher USDVA State Home Method results.

HAMPTON ROADS AREA NURSING HOME BED NEED ANALYSIS

Method	Gross Need	Available Beds (est.)	Net Need
Veterans' Administration Planning Model			
@ 16% Market Share	211	120	91
@ 25% Market Share	330	120	210
VA State Home Method			
@ 2.5 beds per Veteran	397	160	237
@ 4.0 beds per Veteran	636	160	476
State Bed to Pop Ratio (average)			
@ 16% Market Share	310	120	190
@ 25% Market Share	484	120	364

NORTHERN VIRGINIA AREA

In calculating the beds available to veterans in the Northern Virginia area, beds in Washington, D.C. and Maryland must be taken into account. Beds in Baltimore, MD also must be accounted for, considering the city of Baltimore is 37 miles (driving distance) closer than the city of Richmond to the city of Fairfax, VA. There are a total of 298 VA nursing home beds in the Washington, DC and Baltimore, Maryland area. There is a reported 214 average daily census at the federal nursing home for veterans in Washington, D.C. The USDVA also reports an average daily census total of 105 veterans in the D.C. and Maryland area. Obviously, these beds are also serving the needs of veterans in Washington, D.C. and parts of Maryland. However, as shown in the attached maps, Fairfax (center of N. Virginia 50-mile radius) is only a few miles from Washington, D.C. and approximately 50 percent of the N. Virginia circle encompasses Virginia counties, the other 50 percent, Washington, D.C. and Maryland counties. For calculating net need for the Northern Virginia area, we assume 50 percent of the defined beds in the D.C. and surrounding area are serving these Virginia residents. This results in 191 state/federal beds and an estimated total of 222 beds available to serve veterans of Northern Virginia.

NORTHERN VIRGINIA NURSING HOME BED NEED ANALYSIS

Method	Gross Need	Total Available	Net Need	Adjusted Available	Net Need
		Beds (est.)	#1	Beds	#2
Veterans' Administration Planning Model					
@ 16% Market Share	275	512	-237	256	19
@ 25% Market Share	430	512	-82	256	174
VA State Home Method					
@ 2.5 beds per Veteran	507	617	-110	309	199
@ 4.0 beds per Veteran	811	617	194	309	503
State Bed to Pop Ratio (average)					
@ 16% Market Share	310	512	-202	256	54
@ 25% Market Share	474	512	-38	256	218

As shown, the net need for nursing home beds in Northern Virginia is from 19 to 503. This range is extremely broad because the federal regulation (VA State Home Method) is made on the total veteran population. The other two models used are weighted to take into account the age breakdown of the population. Because the Northern Virginia market has such a large number of younger veterans, the federal regulation calculation is inflated.

Please note, the 4.0 per 1000 veterans in the VA State Home Method calculation is a bed LIMIT calculation and therefore substantially higher than the other results.

Further analysis of the average occupancy of the community nursing homes in the area reveals limited local options for nursing home care. This will be shown in more depth in a following section.

NET NEED SUMMARY: DOMICILIARY BEDS

There are no domiciliary beds at the Richmond VA Medical Center. The GBC model of projecting need results in net need ranges from 189 to 235 domiciliary beds with a federally defined need limit of 243 beds.

Richmond Metropolitan Area Domiciliary Care	Gross	Available	Net
@ 2.0 per 1000 Veterans	243	0	243
GBC Model			
1998	189	0	189
2003	235	0	235

There are 217 domiciliary beds currently operational at the VAMC-Hampton Domiciliary facility. The GBC model projects a net need range of 12 to 62 domiciliary beds with a federally defined need limit of 101 beds. Even with the expected closure of an additional 50 beds, GBC only projects a need for 62-112 with a limit of 151 domiciliary beds.

Hampton Roads Area Domiciliary Care	Gross	Available (a)	Net
@ 2.0 per 1000 Veterans	318	217	101
GBC Model			
1998	229	217	12
2003	279	217	62

(a) 217 existing beds at Hampton State Domiciliary Facility. May be reduced by 50 later this year.

There is currently a 90-bed (estimated, precise figures not available) domiciliary facility in Washington D.C. As in previous calculations, it is assumed half of these beds can serve Virginia veterans. The GBC model projects a net need range of 265 to 339 domiciliary beds with a federally defined need limit of 360 beds.

Northern Virginia			
Domiciliary Care	Gross	Available (b)	Net
@ 2.0 per 1000 Veterans	405	45	360
GBC Model			
1998	310	45	265
2003	384	45	339

(b) Half of the estimated beds (ADC 78) at the state domiciliary home in Washington, D.C.

RECOMMENDATIONS FOR PREFERRED GENERAL LOCATION AND CAPACITY

There is a defined net need for nursing home beds in all of the three concentrated areas that GBC has analyzed. Regardless of this dispersed statewide need, recommendations must be made for priority development in one region over another.

Northern Virginia should be given the lowest priority of the three areas. Because of its proximity to Washington, D.C., the Northern Virginia area has the least nursing-home bed need of any of the three areas analyzed. Strict analysis of the domiciliary bed need projects a tremendous need for these services in Northern Virginia, but this straight numerical calculation of need is most likely overstated because of the area's substantially higher household median incomes. Domiciliary care of veterans is traditionally aimed at serving those with lesser economic means and associated biopsychosocial health problems. Regardless, this area has the potential to fully utilize a state domiciliary home at some point in the near future.

The Hampton Roads area is recommended as the second choice for location of the next Virginia Veterans' Care Center. Although the Hampton Roads area projects a greater need for nursing home beds than Richmond, and has a similar economic profile, the area already has 217 domiciliary beds. The USDVA center in Hampton also has 40 more nursing home beds than the USDVA center in Richmond. Nonetheless, as funding and sites may become available, it is recommended that the Hampton Roads area also be considered in the future for a new Virginia Veterans Care Center nursing home facility to complement the existing 217 domiciliary beds in the area.

The Richmond Metropolitan area has the most pressing need and is thus the recommended general location for the next Virginia Veterans' Care Center. There are 1,080 more veterans at age 75+ than the Hampton Roads area. A new facility in the Richmond area will be capable of developing a strong continuum of care in association with the existing USDVA McGuire Medical Center. Another factor influencing this recommendation is Richmond's central location, which promotes accessibility from other areas of the state. These factors help ensure any new facility's ability to attract the number of residents necessary to reach efficient utilization

of any developed beds or services. Richmond's central location improves access to these services for veterans in all areas of the state. The area is also attractive because of its identity as the state's capital.

CAPACITY RECOMMENDATIONS

Commonwealth of Virginia health plan and licensure requirements indicate a standard nursing home requirement of one nursing station per 60 nursing home beds. Our analysis supports the construction of 139 to 354 nursing home beds and up to 243 domiciliary beds in the Richmond Metropolitan area. GBC recommends construction of a facility with 120 nursing home beds and up to 120 domiciliary beds at this time, followed by construction of similar facilities (more study needed to determine size) in the Hampton Roads area as soon as economically feasible. This recommendation should ensure that the facility would easily meet occupancy targets and result in an operationally efficient and medically sound environment. In fact, these additional beds bring the total state/federal veteran nursing home beds total to 590. As shown on the following table, this still results in a bed-to-1,000 veteran ratio of 0.9, which is far below the objective of 2.5 set forth in federal regulations.

IMPACT OF RECOMMENDED ADDITIONAL BEDS

Existing beds	470
Recommend additional beds	120
New total	590
Total veteran population	684,300
Beds to 1,000 veterans	0.9

There are a number of reasons why GBC is not recommending a facility larger than 120 nursing home beds and 120 domiciliary beds for the Richmond Metropolitan Area (even though the construction of these beds still results in a low (0.9) nursing home bed and (0.7) domiciliary beds per 1000 veterans ratios). The first reason is that the Virginia Department of Health, in projecting community nursing home bed need, rounds facility size to 30, 60, 90, 120 and 240 beds. The rationale for these bed sizes is based on operational efficiency of nursing home design and licensure requirements for one nursing home station per 60 beds. Another factor in limiting the total facility size is the long term flexibility this affords the state and the Virginia Department of Veterans' Affairs. The duration of military conflict has subsided over the past 20 years, and world dynamics have changed. Barring another major conflict, the number of veterans projected for 15 years or more in the future could decline steadily. In this case, the state must have a facility that can be converted to other government or community usage or one that is of reasonable size and design to be attractive for sale or lease.

The recommended 240 total bed facility is substantial enough to meet the needs of the veterans in the Richmond Metropolitan and surrounding areas. As has been demonstrated, the Northern

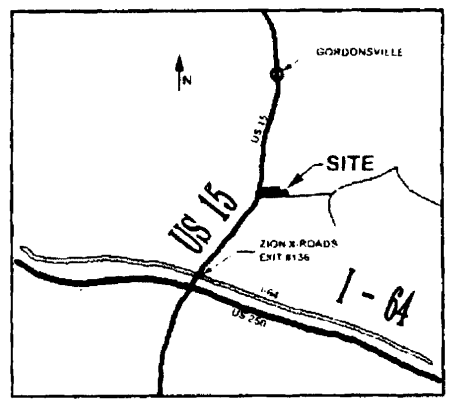
Virginia and the Hampton Roads area also have veteran populations that are sufficient to support additional veteran home beds (domiciliary in N. Virginia, nursing home in Hampton Roads). In order to facilitate access and ensure efficient utilization numbers, healthcare planning would recommend a reasonable size facility in the Richmond Metropolitan area with staged planning of additional facilities in the other two areas as opposed to constructing one large, financially and operationally cumbersome facility in Richmond. However, it is recommended that the facility proposed for Richmond be designed to accommodate additions of 60-bed nursing home units or additional domiciliary pods. The need for expansion and additional beds in the future will depend on occupancy levels at the proposed facility, occupancy levels at community nursing homes and retirement facilities in the area, veteran population fluctuation, and any changes in Virginia Certificate of Public Need regulations. For these reasons, the recommendation for a new facility to be built now (with 120 nursing home beds and 120 domiciliary beds), while holding open the option of future construction of additional facilities in Hampton Roads and Northern Virginia (should the need remain), meets a substantial portion of the most urgent veteran need in the Commonwealth without creating undue financial burden or long term risk to the state.

SECTION 3.
ANALYSIS OF AVAILABLE SITES
Engineering Concepts, Inc., Gill Balsano Consulting

BACKGROUND
Engineering Concepts, Inc. under the direction of Motley and Associates performed cursory site analyses of (4) four available properties that are being considered for the possible construction of a new Virginia Veterans' Care Center within the eastern half of the Commonwealth. The Virginia Department of Veterans' Affairs identified these four sites either from the inventory of state properties or as sites that owners have indicated would be donated to the Commonwealth. It is important to note that cost-free land and economically developable properties were established by the Virginia Department of Veterans' Affairs as the essential criteria in the consideration and evaluation of any sites. The following information characterizes each of the properties and identifies individual site challenges and opportunities. The sites are listed in the order of visitation.

Louisa County Site

Location – The Louisa County property is located 20 miles east of Charlottesville and is approximately 2.5 miles north of the Interstate Route 64 corridor along State Route 15. State Route 15 is accessed via exit 136 on Interstate Route 64. The property is situated in the northeast quadrant of the intersection of State Routes 15 and 617.



Parcel Size – The subject Property is identified as tax parcel #33-22 within the land records of Louisa County. The boundary of the property encloses 195 acres of land and is currently listed as a Department of Corrections parcel.

Surrounding Property – The Louisa property is located within an agricultural zoning district of Louisa County. All surrounding properties are predominantly in farm use with scattered residential dwellings. The majority of the study property is currently in crops and has apparently been leased to nearby farm interests. The site is also located within the Green Springs National Historical Landmark District, which is under the purview of The National Park Service. The Green Springs District is located on 14,000 acres in Louisa County and is meant to be a visual experience best viewed by driving the many roads that cross the park limits. The farming communities that exist within the park limits and the farmland itself are the main features of the park. Architectural features and the effective integration of residential dwellings over 270 years as well as the preservation of the farmland were the driving factors in the establishment of this

area as an historic landmark district. An attempt at development of the subject property in the 1970's met with severe opposition. The Department of Corrections had initiated design and started construction of a new facility but chose to abandon their efforts due to local opposition. The negative image associated with the proposed use of the property was most likely the platform from which the community staged their protests.

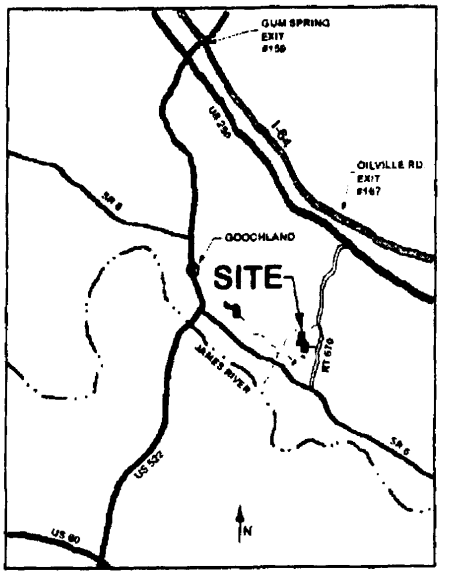
Topography & Existing Features – Preliminary topographic and drainage characteristics of the property appear favorable for development and flooding impacts are expected to be negligible. Site observation and analysis of the Boswells Tavern USGS quadrangle map depict the site as flat to gently sloping. Soils appear to be stable and do not exhibit serious erosion potential. A wide flat ridge that falls across the property from the southwest toward the northeast divides the property. The property drops in elevation along the same line approximately 55 feet. Average site gradient ranges from 2 – 5%. A stand of mature hardwood trees exist in the southwestern quadrant of the property and cover approximately 25 acres, the remaining property is open farmland. Two small feeder tributaries of Wheeler Creek drain this property toward the north. The drainage features enter a small farm pond that is located directly adjacent and central to the northern boundary. The farm pond discharges approximately 750 feet south of the confluence of Wheeler Creek.

Access – Regional access to the property is along the State Route 15 corridor. State Route 15 near the study area of Louisa County is a moderately traveled, two lane, major collector roadway and is of adequate section. The subject site has nearly 1700 feet of frontage along this road and would be the required location for access to the property. State Route 617 is contiguous to the southern boundary and shares the entire 2600 feet of line. Route 617 is a gravel section roadway, approximately 20 feet in width and serves as an alternate collector street for properties to the east of Route 15. The use of this roadway could only serve as a secondary emergency access point unless considerable upgrades are undertaken.

Utilities – Extensive utility upgrades or extensions will be required if this site is selected for development. Cost magnitudes for utility extension will be dependent upon the internal mechanical and program needs of the proposed facility. There are no public sewer or water lines near the subject property. Louisa County utility maps depict the nearest service connections to be approximately two miles away along the Route 64 corridor. Louisa County has no plans to extend water or sewer to the area of the site. Should this property be considered for development of the Veterans Care Center, an on-site sewage treatment plant will be required. Further study will be needed to determine the adequacy of available sewer discharge points from the property and the permitting potential for the operation of the plant. An adequate water source will need to be identified on-site to meet the supply demands of the facility. Storage and distribution systems will need to be analyzed if an adequate source is identified. We have confirmed the availability of other support utilities from various local utility companies. Visual inspection and map observations indicate that single-phase electric service is available along Route 15 adjacent to the site. The nearest three-phase power is 3 miles north on Route 15 at Boswells Tavern. Gas service locations are 10 miles north and east of the site in Gordonsville and the Louisa Industrial

Park respectively. Residential and small business telephone lines are in the vicinity; however, fiber optic and cable lines are not.

Goochland County Site



Location – The Goochland County property is located 30 miles west of Richmond and is approximately 5 miles south of the Interstate Route 64 corridor along State Route 670. State Route 670 can be accessed from exit 167 on Interstate Route 64. The subject property is approximately 1100 feet west of Route 670 and is accessible via a private 20–foot right-of-way.

Parcel Size – The subject Property is identified as tax parcel #55-47 within the land records of Goochland County. The tract consists of 82 acres of land and is currently listed as a Department of Corrections property.

Surrounding Property – The subject property is located within an agricultural zoning district of Goochland County. All surrounding properties are predominantly in farm use. The majority of the property is currently open pastureland and was utilized in the past by the Department of Corrections for farming interests.

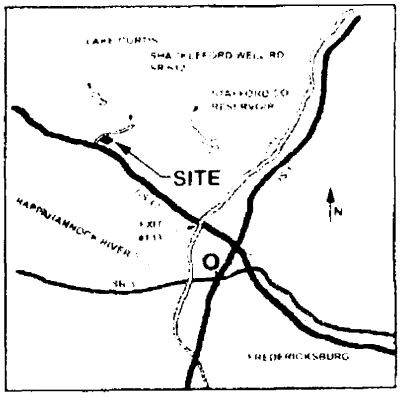
Topography & Existing Features - Preliminary topographic and drainage characteristics of the property appear favorable for development and flooding impacts are expected to be negligible. Site observation and analysis of the Perkinsville USGS quadrangle map depict the site as gently to moderately sloping. Soils appear to be stable and do not exhibit serious erosion potential. A wide flat ridge extends from west to east across the property. A similar ridge also extends to the north and is formed at the intersection of the two ridgelines near the western boundary. The property drops in elevation along the east – west line approximately 10 feet. Elevation changes along two-thirds of the south – north ridgeline are approximately 50 feet with the remaining one-third falling another 40 feet to Wolf Creek. Wolf Creek forms the northern boundary of the property. Average site gradient ranges from 2 to 10%. A stand of mature hardwood trees exists in the northwestern quadrant of the property on the approach slopes to Wolf Creek and covers approximately 15 acres. The remaining property is open pastureland. 75% of the land drains north toward the Wolf Creek Basin with the remaining 25% draining south toward an unnamed feeder tributary. The topographic and drainage characteristics of the property appear favorable for development and flooding impacts are expected to be negligible.

Access – Regional access to the property is along State Routes 250 and 670. State Route 250 is a moderately traveled, two-lane major collector and is of adequate section. State Route 670 is a two-lane narrow section rural collector that is lightly traveled. The drive path to the subject site

is circuitous at best. Route 250 is traveled for less than a mile before intersecting with Route 670, which leads south toward the site. Total travel distance from the Interstate 64 corridor is approximately 5 miles. The subject site has no platted frontage along Route 670 and is currently accessible through adjoining properties across an existing 20-foot wide easement that is 1100 feet long. The easement serves other property beyond the study tract in perpetuity and would need to be maintained through the property to continue as a service drive. The existence of the easement through this property will not adversely affect the development potential given the size of the available land for development of the Veterans Care Center. The existing gravel access drive is less than 20 feet in width and would require an extensive upgrade and widening should this site be selected for development. In order to accommodate the road upgrades, additional right-of–way or easement limits would need to be secured from the property owners along the path of the easement. At a minimum an additional 30 feet of width will be required along the access easement.

Utilities – Extensive utility upgrades or extensions will be required if this site is selected for development. Cost magnitudes for utility extension will be dependent upon the internal mechanical and program needs of the proposed facility. There are no public sewer or water lines near the subject property and Goochland County has no plans to extend water or sewer to the area in the future. Should this property be considered for development of the Veterans Care Center, an on-site sewage treatment plant will be required. Further study will be required to determine the adequacy of available sewer discharge points from the property and the permitting potential for the operation of the plant. An adequate water source will need to be identified on-site to meet the supply demands of the facility. Storage and distribution systems will need to be analyzed if an adequate source is identified. We have confirmed the availability of other support utilities from various local utility companies. Visual inspection and map observations indicate that single-phase and three-phase power is available along Route 670. Gas service locations are 4 miles north and 7 miles east of the site in Manakin and Oilville, Virginia respectively. Residential and small business telephone lines are in the vicinity; however, fiber optic and cable lines are not.

Stafford County Site



Location – The Stafford County property is located 40 miles south of Washington, D.C. and is approximately 8 miles west of Interstate Route 95 along the State Route 17 corridor. State Route 17 can be accessed from exit 133 on Interstate Route 95. The subject property is approximately 2 miles northwest of the Routes 17 and 612 intersection. The site entrance to the subject parcel is directly across from State Route 649.

Parcel Size – The subject 20 acre tract is a portion of a total property area of 312 acres that is identified as tax parcels #26-24, 24A, 25, 25A & 26B within the land records of Stafford County, Virginia. The 312-acre property is the estate of the late

A.W.L. Davenport. The 20-acre tract would be donated by the Davenport heirs to the Commonwealth should this site be selected for development.

Surrounding Property – The subject property is located within an agricultural zoning district of Stafford County and is undeveloped. All surrounding properties are predominantly farm uses with associated single family dwellings, except for Curtis Memorial Park bordering on the north. Curtis Memorial Park is a Stafford County owned and maintained facility that features 91-acre Curtis Lake, an 18-hole public golf course and other miscellaneous park amenities.

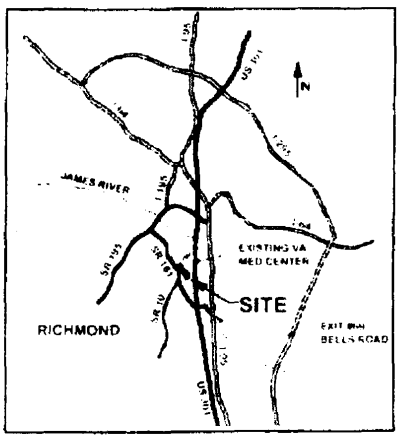
Topography & Existing Features – Preliminary topographic and drainage characteristics of the property appear favorable for development and flooding impacts are expected to be negligible. Field observation and analysis of a site development plan by Kidde Consultants, Inc. dated 11-22-88 depicts the site as gently to moderately sloping. Soils appear to be stable and do not exhibit serious erosion potential. A wide flat ridge extends from northwest to the east across the property. The property drops in elevation along the ridge approximately 35 feet. Average site gradient ranges from 2 to 10%. A mixture of mature evergreen and deciduous trees exist on 75% of the property with miscellaneous scrub brush and open areas covering the remainder. An intermittent drainage feature exists in the southeast quadrant of the property and has an estimated flood width of 200 feet.

Access – Regional access to the property is along U.S. Routes 17 and State Route 612. Route 17 is a moderately traveled, four-lane major collector and is of adequate section. State Route 612 is a two-lane rural collector that is lightly traveled. The drive path to the subject site follows a direct route. Route 17 is traveled for approximately 6 miles before intersecting with route 612 which leads 2 miles north to the site. Total travel distance from the Interstate 95 corridor is approximately 8 miles. The subject site has nearly 250 feet of platted frontage along Route 612 and it is the desire of the Davenport heirs to place the site access point from Route 612 directly across from the Route 649 intersection located in the northwest corner of the property. The site entrance in the requested location would be the most feasible considering VDOT permit requirements. During a previous, failed subdivision venture of the 312-acre parcel, internal roads were platted, cleared and rough graded. The platted road property, outside of the estate ownership, cuts across the eastern half of the 312-acre tract and is owned by a party other than the Davenport heirs. The location of the donated 20 acre parcel is in the extreme northeast corner of the tract and is situated in a manner that would require purchase of the existing road property in order to gain access to the Care Center site. A private access road approximately 4500 feet in length would be required and would cross the other property owner twice. The heirs have determined that the owner of the road property is interested selling the land, however, the selling price in their opinion is beyond what the land is worth.

Utilities – Extensive utility upgrades or extensions will be required if this site is selected for development. Cost magnitudes for utility extension will be dependent upon the internal mechanical and program needs of the proposed facility. There are no public sewer or water lines near the subject property and Stafford County has no plans to extend water or sewer to the area

in the future. Should this property be considered for development of the Veterans Care Center, an on-site sewage treatment plant will be required. Further study will be needed to determine the adequacy of available sewer discharge points from the property and the permitting potential for the operation of the plant. An adequate water source will need to be identified on-site to meet the supply demands of the facility. Storage and distribution systems will need to be analyzed if an adequate source is identified. We have confirmed the availability of other support utilities from various local utility companies. Visual inspection and map observations indicate that single-phase power is available along Route 612. Three-phase electric is available along the Route 17 corridor that is nearly 2 miles south on 612. Adequate gas service is located 2 miles south of the site at the intersection of Routes 17 and 612. Residential and small business telephone lines are in the vicinity as well as fiber optic service; however, the nearest cable lines are most likely along the U.S. Route 17 corridor.

Richmond Site



Location – The City of Richmond property is located on the campus of Hunter Holmes McGuire Veterans Medical Center. The available 19.2-acre tract is located east of the Belt Boulevard and Broad Rock Road intersection (State Routes 161 and 10 respectively). State Route 161 can be accessed from exit 69 on Interstate Route 95. The subject property is located approximately 4 miles west of the Route 95 corridor within the City limits.

Parcel Size – The subject property is identified as a residual tract of land within the land records of Medical Center Engineering Department. The tract consists of 19.2 acres of land.

Surrounding Property – The subject property is located within a residential zoning district of the City of Richmond. Properties across routes 161 and 10 are predominantly residential in nature. Routes 161 and 10 border along the western boundary. The remainder of the Medical Center campus shares the northern and eastern boundaries and the Army Reserve Center is along the southern line. An existing access road serving the southern perimeter of the existing campus is contiguous to the northern boundary. The existing road connects to Route 10, Broad Rock Road, and could adequately serve the subject property. The majority of the property is currently open grassland and contains a fitness trail that is utilized by the V. A. Medical Center.

Topography & Existing Features - Field observation and analysis of a site plan provided by the Medical Center Engineering Department depict the site as flat to gently sloping. Soils appear to be stable and do not exhibit serious erosion potential. The tract of land is consistent in elevation north to south with the property dropping in elevation along the east – west line approximately 10 feet. Average site grades range from 2 to 5%. A stand of mature screening shrubs exists in

the southwest quadrant of the property within an existing storm water detention basin that serves the existing campus. The remaining property is open grassland with a few mature evergreen trees located in the eastern section of the property. An existing fitness trail is located in the northern portion land and covers approximately 5 acres. The topographic and drainage characteristics of the property appear favorable for development and flooding impacts are expected to be negligible. The existing storm water detention pond could be expanded to serve the additional development areas of a Veterans' Care Center.

Access – Regional access to the property is primarily along State Route 161 and minimally along Route 10. Both routes are adequate Virginia primary roadways and are heavily traveled multi-lane collectors. After exiting from Interstate 95, Route 161 is traveled for approximately 4 miles before intersecting with Route 10, which leads north 500 feet to the existing site access road. Total travel distance from the Interstate 95 corridor is approximately 4 miles. The subject site has approximately 500 feet of platted frontage along Route 10 and 250 feet along Route 161. Internal access to the subject tract can be accommodated via the existing access road that runs contiguous with the northern boundary and serves the existing Medical Center campus.

Utilities – Sewer and water lines are located on the Medical Center campus or are available in the immediate vicinity of the subject property. City of Richmond public utility maps identify both water and sewer availability. An existing gravity sewer line bisects the subject tract along a west to east line and appears to serve existing V. A. facility buildings bordering on the east. The expected connection point to the existing City line is within Hopkins Road, which is approximately 750 feet east through the Medical Center property. Should this property be considered for development of the Veterans' Care Center, further study will be required to determine the exact service route of the existing line. We expect that the line can be relocated and aligned to allow for adequate development area. An existing 10-inch water line is available within the Broad Rock Road right-of-way and would appear to be adequate to serve additional development on the subject property. Visual inspection and map observations indicate that and three-phase power is available along Routes 161 and 10. Adequate gas service is in the immediate vicinity. Residential and large capacity business telephone lines are nearby. We anticipate that fiber optic and cable lines are also available given the size of the adjacent service districts. Minimal utility extensions or upgrades are anticipated to accommodate a Veterans Care Center on this site. Preliminary engineering efforts will further define the system requirements with cost magnitudes dependent upon the internal mechanical and program needs of the facility.

ENGINEERING SITE ANALYSIS RECOMMENDATIONS

After our analysis of the available properties, it became apparent that some locations had more favorable development characteristics than others did. Given the available site study data, we have formulated a site suitability listing that places the study sites in an order of feasibility that realistically reflects the potential for development of a Virginia Veterans' Care Center. Each site was reviewed based on the same limited development criteria. The main site analysis characteristics included ease of regional and local access, utility availability, surrounding community uses, topographic conditions and any obvious site constraints that severely limited development potential. Based on our findings we offer the following prioritized list for your consideration.

1. First Choice – Richmond Site – Hunter Holmes McGuire Medical Center

2. Second Choice - Louisa County Site

3. Not Recommended - Stafford County Site

4. Not Recommended - Goochland County Site

DEMOGRAPHIC ANALYSIS OF RICHMOND AND LOUISA COUNTY SITES
(Gill/Balsano Consulting)

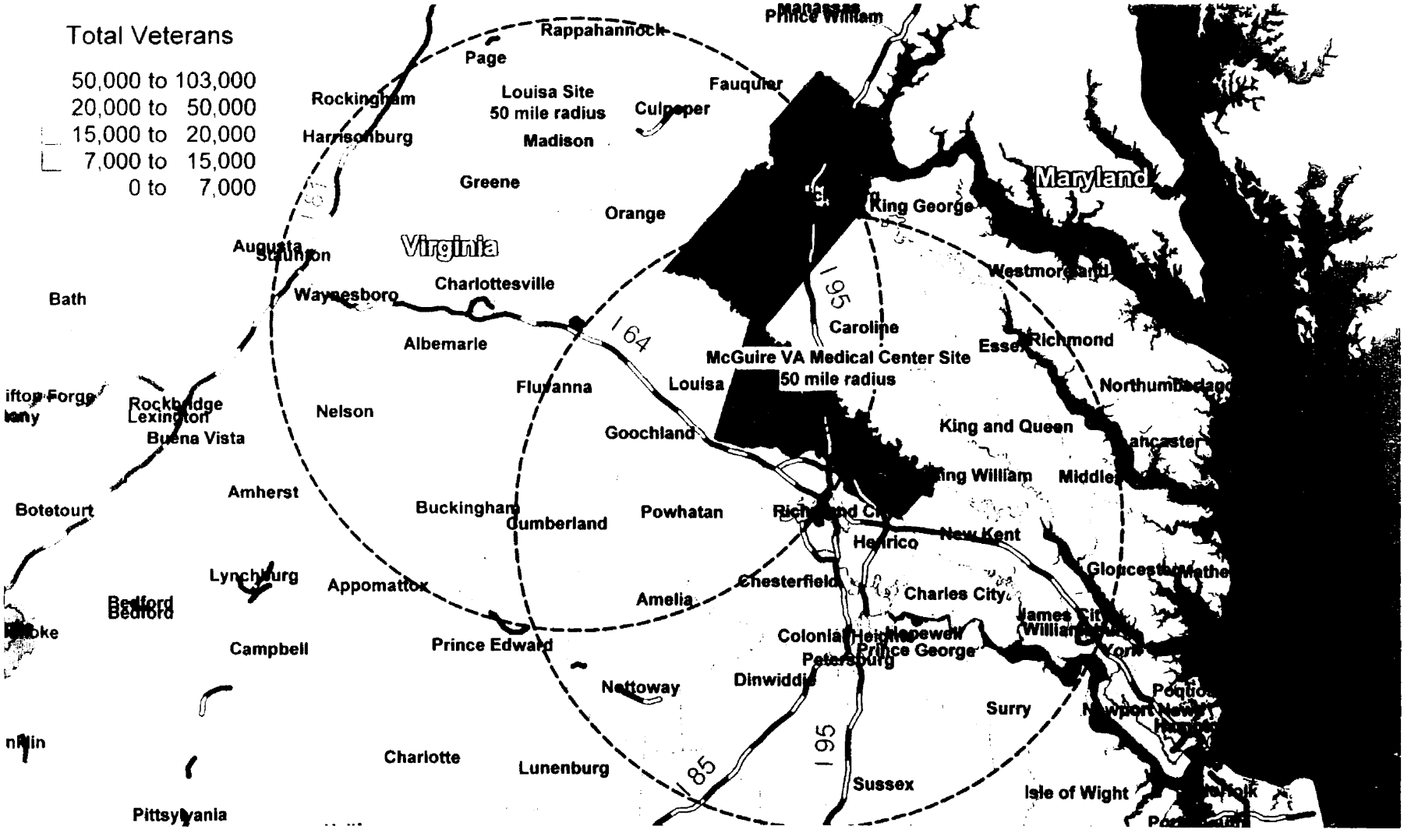
Based on the engineering analysis recommendation that the Stafford and Goochland Sites are not recommended, these 2 sites are eliminated for further consideration in this report. The Richmond and Louisa County Sites, however, are compared based on demographics and other factors as follows:

The map on the following page highlights the 50-mile radius around the two most attractive sites and counties by number of total veterans and by the number of veterans age 65 +.

As shown on the following tables, the area around the Louisa site has a much smaller veteran population than the area around the site at the McGuire Medical Center in Richmond. The two areas have a very similar age cohort population distribution.

	AGE COHORT					
	TOTAL	20-44	45-54	55-64	65+	75+
Richmond Metropolitan	121,310	28,420	29,190	21,000	42,700	16,230
LOUISA	77,750	17,070	19,350	15,140	26,190	8,760
DIFFERENCE	43,560	11,350	9,840	5,860	16,510	7,470

Richmond and Louisa Sites



	TOTAL	20-44	45-54	55-64	65+	75+
Richmond Metropolitan	100.0%	23.4%	24.1%	17.3%	35.2%	13.4%
LOUISA	100.0%	22.0%	24.9%	19.5%	33.7%	11.3%

Applying the federal need calculations to the Louisa area veteran population projects a much smaller bed need.

	1998 TOTAL VETERAN POPULATION	NH BED NEED @ 2.5 PER 1,000	NH BED LIMIT @ 4.0 PER 1,000	DOMICILIARY BED LIMIT @ 2.0 PER 1,000
Richmond Metropolitan	121,310	303	485	243
LOUISA	77,750	194	311	156

The veterans of these areas are most likely obtaining their hospital-based services at the Richmond Metropolitan VA Medical Center and therefore would have similar access to existing nursing home beds in and around the area, making net need projections proportional to the gross projections. The Richmond Metropolitan site has the added advantages of being adjacent to the VA Medical Center and logically accessible to veterans already utilizing the Medical Center. There are numerous other medical and operational efficiencies and synergies resulting from locating on the Medical Center campus.

FURTHER JUSTIFICATION OF NEED IN THE RICHMOND METROPOLITAN AREA

Further justification of the need for a Veterans Care Center in the Richmond Metropolitan Area can be found in the overall profile of the veteran population.

- 41.4 percent of the veterans in the Richmond Metropolitan area are between the ages of 45 and 64
- 35.2 percent of the veterans in the Richmond Metropolitan are 65 +
- 13.4 percent of the veterans in the Richmond Metropolitan area are 75 +

These statistics demonstrate not only an existing need for a new Veterans' Care Center in the area, but also a growing need. As with the general population, over the next five to 10 years, the size of both the 65 + and the 75 + population will continue to grow. This will result in a greater need for nursing home and domiciliary bed services. As shown in the tables below, the Richmond Metropolitan area's general population is also expected to experience growth in these age groups. With existing occupancy levels of community nursing homes in the defined service area around 90 percent, there will be fewer options for veterans. In fact, these community

nursing homes are currently providing less than 1 percent of their patient days to veterans. This demonstrates that existing state and federal homes have had to serve a high percentage market share of the veteran need.

RICHMOND METROPOLITAN AREA (50-MILE RADIUS)
POPULATION DEMOGRAPHICS BY AGE COHORT

	0-64	65+	75+	85+
1998	1,049,330	149,383	67,072	17,109
2003	1,107,174	161,202	76,796	20,450
Change	57,844	11,819	9,724	3,341
% Change	5.5%	7.9%	14.5%	19.5%

Source: Claritas, 1998.

RICHMOND METROPOLITAN AREA
COMMUNITY NURSING HOME PROFILE

Planning Districts	Occupancy Rates	ALOS	ADC
14	94.3	512.5	561.3
15	93.2	288.9	3,485.8
16	97.5	319.4	590.6
18	95.7	401.6	496.5
19	98.4	412.0	792.9

Planning Districts	Total Census	VA Census	% VA
14	582	1	0.2%
15	3,500	25	0.7%
16	600	7	1.2%
18	505	1	0.2%
19	794	5	0.6%
Total	5,981	39	0.7%
STATE	28,178	233	0.8%

Source: Center for Health Statistics, January 97, Virginia Department of Health

The state of Virginia also projects a need for community nursing home beds in the planning districts that encompass the Richmond Metropolitan area. As shown in the following table, the state projects an overall need in these planning districts of 822 beds. State homes are not taken into consideration in these calculations, but this projected need demonstrates two things. One, there is not expected to be excess community nursing home bed capacity in the area to meet the needs of aging veterans. Two, the projected need for community nursing home beds may positively affect the projected state home's ability to capture veteran market share, thereby

enhancing the financial feasibility of such a project. A profile of the planning districts in the state is provided below.

Planning Districts	Year 2000 Need Forecast	Existing and Authorized	Net Need
14	749	635	114
15	4,333	3,917	416
16	791	611	180
18	584	544	40
19	1,087	1,015	72
TOTAL	7,544	6,722	822

Source: Virginia State Board of Health, Virginia Dept of Medical Assist. Services, April 1997

SECTION 4.
SUMMARY OF FINDINGS AND RECOMMENDATIONS

Analysis of demographic and other related information concerning Virginia veterans indicates a distinct need for additional nursing home beds and additional domiciliary type beds in the Commonwealth. This need is particularly acute in the three major metropolitan areas studied in detail; *Northern Virginia*, *Hampton Roads* and the *Richmond Metropolitan Area.*

The analysis indicates that each of these three areas studied could reasonably justify a new Veterans' Care Center. Therefore, there is not only a clearly justified need for a new center, but also that consideration should be given to long term planning for one or more new Virginia Veterans' Care Centers.

If only one new Virginia Veterans' Care Center facility is considered for the near future, it is recommended that the *Richmond Metropolitan Area* be given first priority. This area has the most pressing need given the age and income capability of veterans in that region and given the current availability of facilities.

While additional study is certainly necessary to refine the cost and programmatic requirements of such a new facility, preliminary evaluation indicates it should be planned to accommodate 120 nursing home beds and 120 domiciliary beds (240 beds total). In order to have the maximum flexibility to meet probable future changes in the levels of care needed, this facility should be designed with resident rooms having the flexibility to accommodate either level of care in a majority of the 240 beds.

Analysis of the four available sites identified by the Virginia Department of Veterans Affairs gives significant preference to the federally-operated (United States Department of Veterans Affairs) Hunter Holmes McGuire Medical Center located in the City of Richmond. The reasons are highlighted as follows:

- It will be made available to the Agency at no cost.

- It would have relatively lower site development costs, and have significantly lower costs for providing sanitary and water utilities on and/or to the site.

- It offers more opportunities to obtain services by contracting or out-sourcing with other Federal, State, public and private entities given the adjacency to the existing federally-operated medical center.

END OF REPORT

APPENDIX
SUMMARY OF QUALIFICATIONS OF THE CONSULTING TEAM

The consulting team that has served as the authors of this study is comprised of four firms that are uniquely qualified for the task:

Motley + Associates, P.C.
Architects and Team Leaders
Roanoke, Virginia

SFCS, Inc.
Architects and Engineers Specializing in Senior Design
Roanoke, Virginia

Gill/ Balsano Consulting
Specialists in Senior and Healthcare Planning
Atlanta, Georgia

Engineering Concepts, Inc.
Civil Engineers

Motley + Associates has designed numerous facilities for the Commonwealth of Virginia. Of particular and relevant importance, however, is that Motley + Associates designed the existing Virginia Veterans' Care Center in Roanoke. Motley + Associate's Project Manager for this study has been Mr. C. Calvin Phelps, AIA, who was also the Senior Project Manager for the Virginia Veterans' Care Center. Mr. Phelps has over 27 years experience as an architect and project manager. Mr. Benjamin S. Motley, AIA, president of Motley + Associates, has served as Principal-in-Charge of the study.

SFCS (Sheretz Franklin Crawford Shaffner, Inc.) is a Virginia firm recognized nationally as a leader in Seniors Design with nearly fifty years of specialized experience. SFCS has served clients from Florida to Massachusetts, and Virginia to California with projects that include nursing homes and continuing care retirement communities, ranging in construction cost from $1 million to over $50 million, and including all levels of care ranging from skilled nursing facilities to continuing care retirement communities. SFCS is experienced in providing architectural and engineering services for all aspects of nursing homes, assisted living facilities, dementia care facilities, retirement communities and Senior service centers. SFCS also authored the original preplanning study for the existing Virginia Veterans Care Center in Roanoke.

Gill/Balsano Consulting, LLC (GBC) is a management consulting firm with a focus to meet the changing needs of the healthcare industry and preparing its healthcare clients to meet the demands of tomorrow. Located in Atlanta, GBC maintains a national practice involving project work for over 250 clients in approximately 32 states. The firm, using its expertise in planning, finance, development, implementation, and operations, has assisted these clients to build the structure, design the systems, and manage the resources required for the most effective and efficient delivery of services. Sections 1 and 2 of this study were led by Mr. David S. Levitt. As a Senior Consultant, Mr. Levitt brings to consulting engagements a broad range of healthcare experience. His experience includes program modeling within both community and university based hospitals as well as long term care facilities. In the strategic planning segment he has been involved in feasibility assessments including financial evaluations, Certificate of Need development and defense, functional program delineation, business plan development (including marketing and promotion), and implementation tracking for a number of product line diversification efforts. His experience also includes assessment, strategy development and implementation of vertically integrated systems across multi-provider networks. Mr. Levitt also brings significant experience in the areas of Certificate of Need preparation and defense. His CON projects have included a multitude of product lines within both the acute care and long term care industries. In addition to providing Certificate of Need services to healthcare providers, Mr. Levitt was responsible during a 12-month period for conducting all Certificate of Need review functions for skilled nursing and subacute care applications submitted in the state of Tennessee. Mr. Levitt has qualified in legal proceedings as an expert witness in the area of healthcare planning.

Engineering Concepts, Inc. has provided the civil engineering component of evaluating potential sites. Engineering Concepts is advanced in their use of computer-based technology in site analysis, site design and three-dimensional site visualization. Mr. Jack Ellinwood performed the site analysis found in Section 3 and has over 18 years experience in site-related engineering and analysis.

END OF APPENDIX