New Hampshire Veterans Home Master Plan

"Possibilities,
Not Limitations"

June 1, 2011

LAVALLEE | BRENSINGER ARCHITECTS

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EXECUTIVE SUMMARY

Being both fiscally responsible and proactive in meeting the needs of veterans, the New Hampshire Veterans Home (NHVH) has initiated a plan to guide them through the next 20-25 years. This Master Plan reviews existing programs and how they are delivered. It projects how the needs of future clients will impact required services over the given time frame. As part of the response to these anticipated programmatic changes, a general evaluation of the existing conditions of the buildings and campus infrastructure was conducted. This information was used to determine what actions are required to meet anticipated needs.

The changes indentified are a result of analysis of existing services, current needs, industry trends, and future projections. This information was gathered through a series of meetings conducted between January 2008, when the Master Plan Committee was formed, and September 2010, with Master Plan committee members, other key NHVH departmental staff members, other constituent groups, and the U.S. Department of Veterans Affairs, (USDVA). Analysis of the information and subsequent recommendations are based on guidelines established by the US Department of Veterans Affairs and the published reports of other major researchers.

As a result of this study, a program of services has been established and a related multi-phased construction project has been outlined. The cost related to each Project has been included, based on 2010 construction cost. A suggested strategy for accomplishing this significant task is outlined in the "**RECOMMENDED IMPLEMENTATION**" section of this report.

INTRODUCTION

In January 2008, the New Hampshire Veterans Home (NHVH) formed a Master Plan Committee with the goal of creating a strategic Master Plan to help them proactively plan for the next 20 to 25 years. In order to accomplish this goal they decided to evaluate the past and prepare for the future. The committee's initial focus was to determine which Veteran groups would be seeking services within the upcoming years. They quickly determined that the health care needs of their future "customers," veterans of Korea, Vietnam, Iraq, and Afghanistan, are going to be very different from those currently being served, the veterans of WWII. Research into what those anticipated needs may be was conducted and analyses presented.

Although armed with statistics that contribute to the recommendations of this Master Plan, the committee ultimately concluded that not all future needs of our veterans can be predicted. "Needs" will be determined by many unknown world events and circumstances; accurately defining every "need" is not possible. Because NHVH is determined to provide improved quality of life for all veterans, they pledged that they would not be constrained by the unknown nor place limitations on their plans for the future. Based on that conclusion, and in order for this Master Plan to be successful, they determined that the key would be flexibility. With these basic thoughts in mind, the NHVH Master Plan Committee declared that the motto for this Master Plan would be "***Possibilities, not Limitations.***"

The committee focused on both current and future trends in the long-term care marketplace. Knowing that future residents--veterans of the Korean and

Vietnam Wars, as well as the wars in Iraq and Afghanistan, live life differently than current WWII era residents. These future veterans are faced with complex healthcare issues not previously encountered, requiring an evaluation of potential services and programs. The anticipated needs of this next generation of veterans will require more than long-term nursing care. They will arrive with increased need for a Polytrauma System of care[1], including, but not limited to, treatment for injuries related to Traumatic Brain Injury (TBI)[2], amputations, and related psychological and psychosocial impairments.

There is a tremendous need for secure psychiatric services for veterans with severe mental illness who need long term care. At the same time, the number of veterans who suffer from Post Traumatic Stress Disorder (PTSD), Traumatic Brain Injury (TBI), or other behavioral health challenges is increasing. In response to these rehabilitation service needs and psychiatric concerns, increasingly specialized services will need to be provided. In addition, due to a growing trend for "aging in place,"[3] there is a need to provide relief to family members in the form of Respite Care, Adult Day Care, and end-of-life Hospice care.

The Tilton, NH campus has been the home of long-term care services for New Hampshire Veterans since 1890 when it was first established as the Solder's Home for Civil War Veterans. Since that time the campus has grown and evolved through a series of construction projects. The majority of the facility was designed in a traditional "institutional" style hospital care model with semi-private bedrooms on both sides of long corridors. Resident gathering spaces were primarily centered around the nurses' stations. This clinical model of delivering long-term care does not lend itself to

providing privacy for residents, nor does it offer an environment that easily allows for activities that maintain or enhance quality of life. Balancing both Quality of Care and Quality of Life, individualized person-centered care is the ultimate goal of the Master Plan Committee.

According to the U.S. Department of Veterans Affairs, (USDVA) nursing homes should be more person-centered and residential in their approach to environments. The Master Plan addresses this issue by strategically replacing the institutional style units with a style that allows for resident-centered care and is more representative of the *Eden Alternative*[4] and *Green House*[5] style of living.

Dr. William Thomas, founder of the *Eden Alternative* and *Green House* concepts, has started a major drive to humanize elder care. This approach relies on a combination of building design, trained staff, and integrated technology to support a philosophy that elders can live a healthier, more rewarding life, continue to be involved in the community, and maintain personal independence for as long as possible.

The *Eden Alternative's* basic philosophy is that providers of long-term care must transform traditional institutional care "facilities" into supportive and stimulating home environments that eliminate loneliness, helplessness, and boredom from the daily lives of elders. These living spaces are staffed with caregivers who empower elders and work with them to create communities where life is worth living.

In the *Green House* philosophy, groups of 10 to 12 residents live in a family-style home. The homes offer open living areas, family-style dining rooms, private bedrooms with private baths, and a connection to the outdoors. These physical

features are just part of the equation. Meals are freshly prepared in each home so that the pleasant aroma of fresh food increases resident appetites. Residents are encouraged to take part in everyday living activities. Residents are empowered by choice and flexibility in waking up/going to sleep times, meal times, and the delivery of clinical services. Unlike the institutional model, which delivers care on a fixed schedule (convenient for staff), care in the Green House environment is person-centered.

With the growing need to reach out to more veterans where they live and to offer their families support, NHVH will consider adding satellite long term care locations in the future; however, the probability that operating costs will increase significantly is a major obstacle at present. Satellite locations are also being encouraged by the U.S. Department of Veterans Affairs. These locations will be based on communities with the greatest concentration of veterans in need and the programs offered will reflect the needs in those communities.

In summary, this Master Plan is intended to answer the following questions;

Why is change needed?

Who are the future veterans in need of services?

What types of services will be needed?

When will these services be needed?

Where are these services best provided?

How will this plan be accomplished?

How much will this cost?

ASSESSMENT PHASE

Site Analysis

Location:

NHVH is located in Tilton, New Hampshire, and is currently licensed for 250 beds. Located near the center of the state, travel distance from the Portsmouth area is approximately 1 hour 30 minutes; from Keene, 1 hour and 20 minutes; from Salem, 1 hour; and from Stewartstown/Canadian border just over three hours. Twenty-three miles north of Concord and only seven miles from Interstate 93, NHVH is easily accessible. As the only State Veterans Home in New Hampshire, this site is centrally located.

New Hampshire Veterans Home, Tilton, NH just off Interstate 93

Site:

The existing contiguous 28.5 acre site presents a mixed offering of opportunities and challenges. The site is located on the top of a hill that offers tremendous panoramic views. With Mt. Kearsarge to the southwest, an on-site pond and Buffalo Park to the south/southeast and with the remaining site being beautifully wooded, there are many natural amenities. NHVH also owns a five acre land-locked lot located one mile down Winter Street. Due to the inaccessibility of this remote lot, it was not considered in the Master Plan.

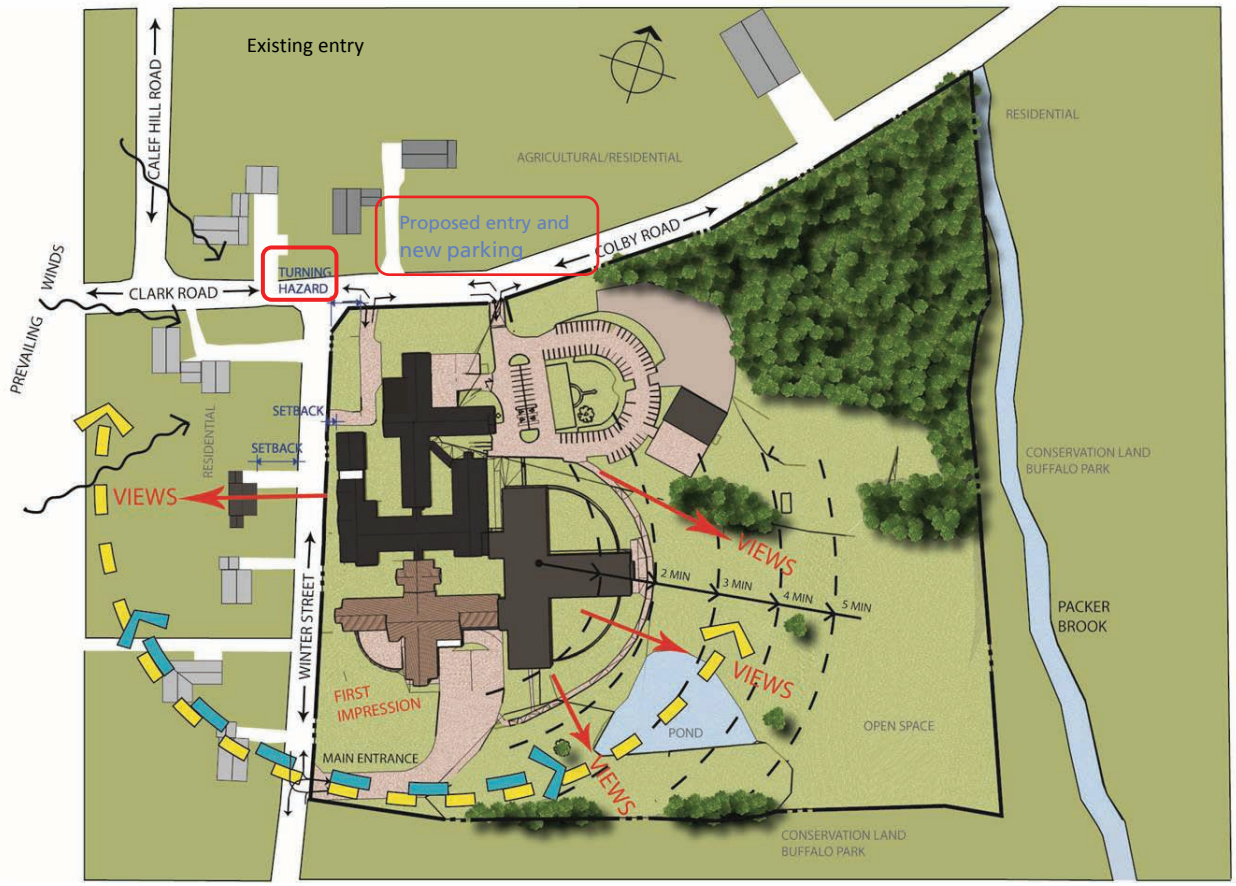
Packer Brook – eastern property line

View of LEDU from pond

View to Northwest – adjacent agricultural /residential

View to the west

The following map illustrates the many different amenities--as well as challenges--that the Tilton site offers. The main entrance is located off Winter Street, 1.05 miles west of Tilton downtown center. The entrance road rises from Winter Street around the front of Tarr South to a visitor's lot located between Tarr South and LEDU. This entry creates a dramatic first impression as one enters the campus.



Site Analysis Map 1

Continuing north on Winter Street, the Veterans Home is built to the setback limits (20’ from road). The Great Room's twenty-foot tall brick walls, with small windows that fail to take advantage of the westerly views, create an unfriendly barrier to the neighborhood homes across the street.

The junction of Winter Street and Colby/Clark Roads forms the northwest corner of the campus. There are two entrances off Colby Road that provide access to parking and delivery. The road cut is within just 25' of the Winter Street/Colby Road intersection and is a hazard.

The solar orientation on the site is good, with a majority of the campus having some amount of daily exposure. Prevailing winds are from the west northwest. There are a wide range of views available on the campus, from mountain views to the south and southwest, woods to the east, an on-site pond to the southeast, and with rural countryside to the north. There is great potential to take advantage of natural outdoor vistas.

Tarr North and the “Great Room” along Winter Street

Staff entrance off Clark Road

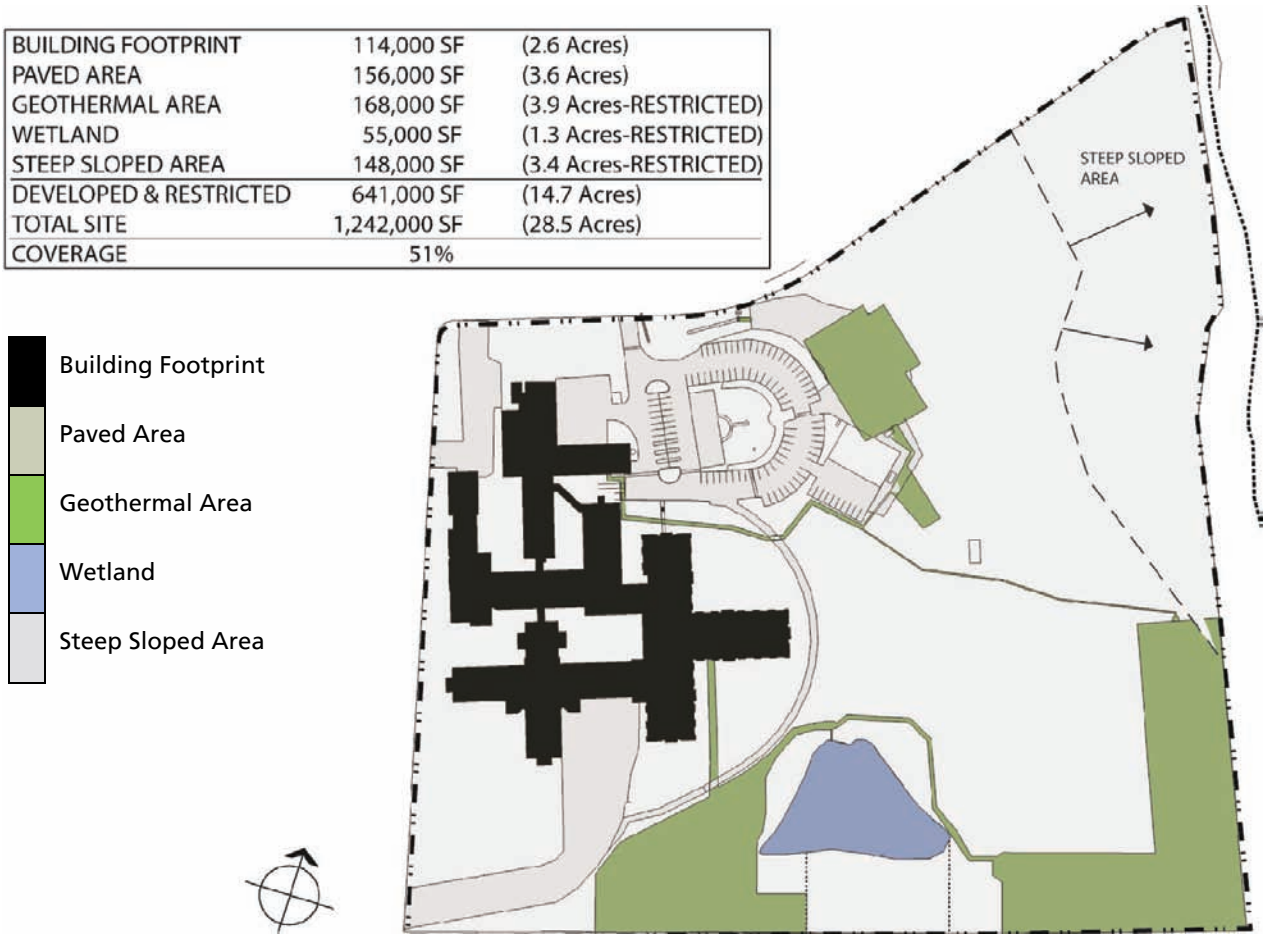
Pond and open field on southeast corner

Available buildable area:

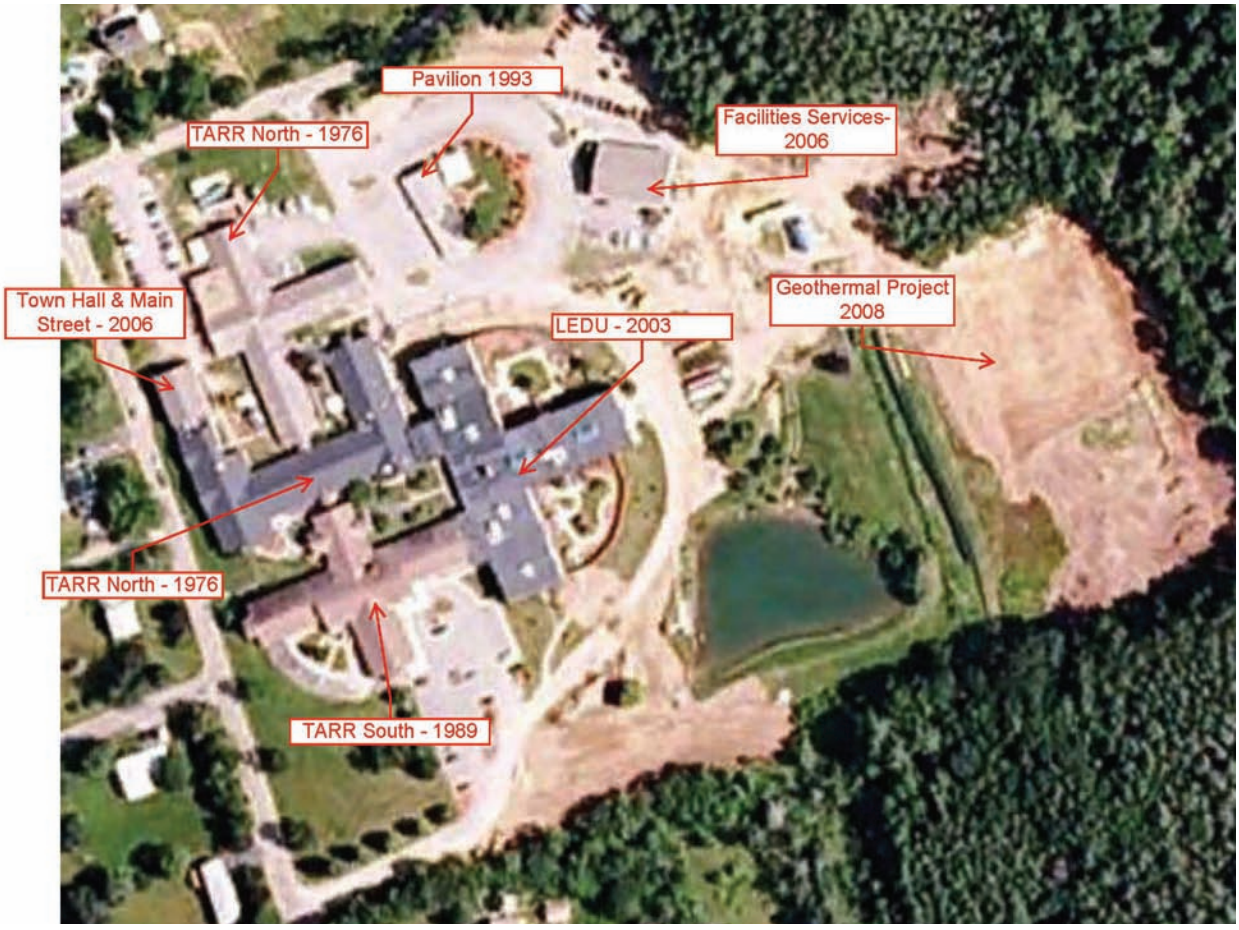
Although it initially appears that NHVH has a wealth of open space on site, a number of constraints significantly restrict the area available for building expansion and possible reorganization. The geothermal well and "Slinky" fields, the pond and adjoining restricted (dam) area, steep slopes (NE corner), location of the maintenance facility, and limited site access, all limit the area available for the future building footprint.

The existing building is configured tightly into the northwest corner of the site. The proximity of the existing footprint to the western and northern property lines greatly limits both expansion and vehicular access along those two boundaries. The campus has open space to the southeast corner; however, in 2008 it was excavated and transformed into a geothermal "Slinky" field. Therefore, this area is not available for building development. This space could be used for walking trails or other outdoor activities, but currently the paved access stops at the west side of the pond.

BUILDING FOOTPRINT	114,000 SF	(2.6 Acres)
PAVED AREA	156,000 SF	(3.6 Acres)
GEOTHERMAL AREA	168,000 SF	(3.9 Acres-RESTRICTED)
WETLAND	55,000 SF	(1.3 Acres-RESTRICTED)
STEEP SLOPED AREA	148,000 SF	(3.4 Acres-RESTRICTED)
DEVELOPED & RESTRICTED	641,000 SF	(14.7 Acres)
TOTAL SITE	1,242,000 SF	(28.5 Acres)
COVERAGE	51%	



EXISTING BUILDING ANALYSIS

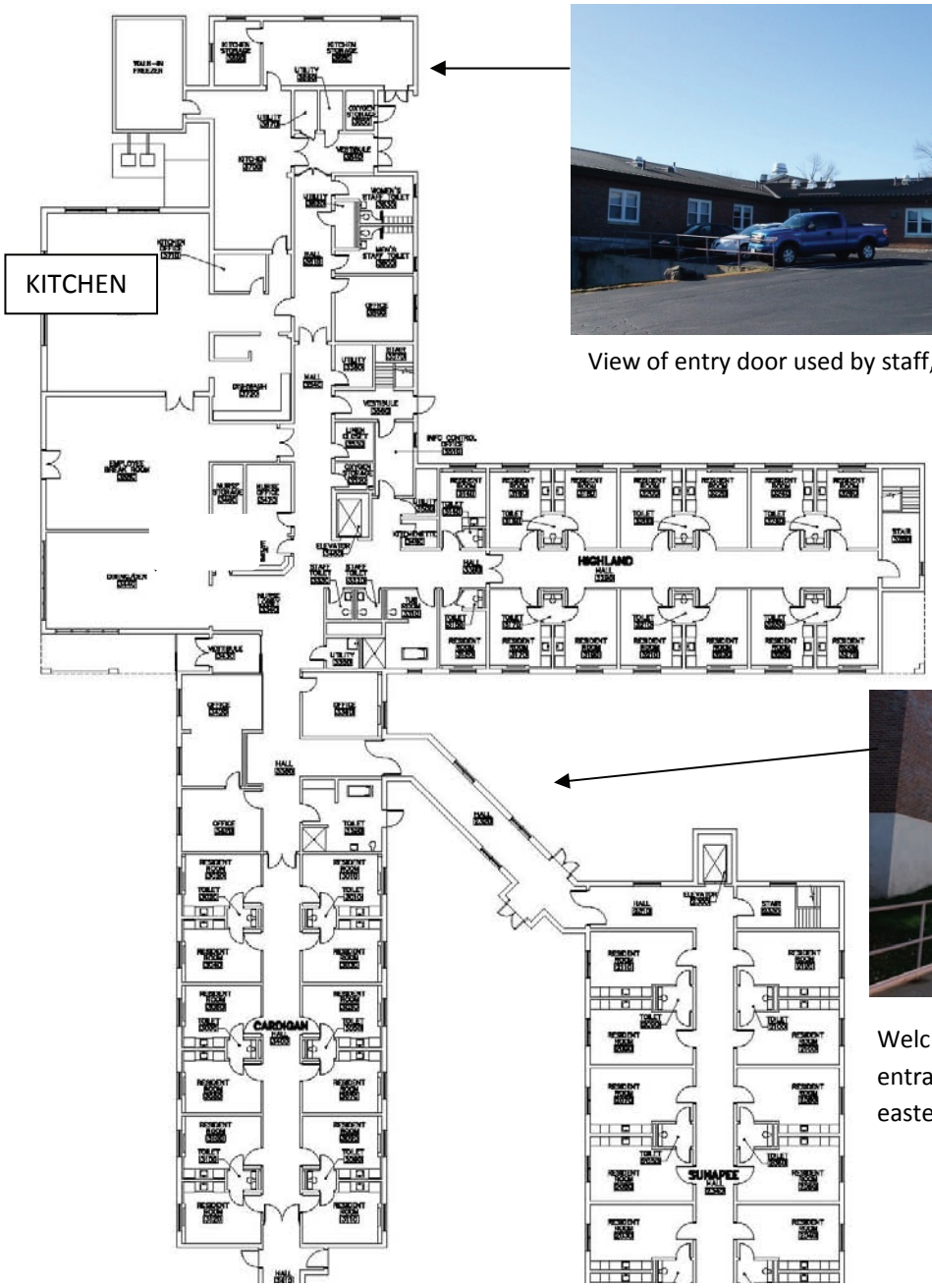


The Tilton campus consists of a series of buildings and other capital projects constructed between 1971 and 2008. The basic design is based on a traditional institutional style of service.

As each new building was added to the complex, the configuration of corridors and accessible routes became longer and more obscured. Travel distances for staff and residents increased. Corridors of existing residents' wings that were once private were turned into access corridors.

Welch – constructed 1971

Welch provides 50 beds (two singles 24 doubles). All doubles share a toilet room, resulting in four residents sharing one toilet. All rooms share one community tub/shower room. If built today the existing shared bedrooms and toilet rooms do not meet current standards. Existing Bedrooms range in size from 200 to 250 sf and shared toilets are 30 sf. Current Guidelines require single bedrooms that range between 175 sf – 320 sf and a private 75 sf minimum, private bathroom. There is one common area for gathering and dining located adjacent to the nurses' station.



View of entry door used by staff, deliveries, and food service.

Welch east courtyard – inaccessible entrance/exit. Windows on the right are from eastern wing's resident rooms.

Welch – constructed 1971 (cont)

In addition to residential units, this building houses the central kitchen, a small staff -break room, office spaces, and mechanical space related to the geothermal system. The rear entrance to Welch serves as both the delivery dock and staff entrance. With the kitchen storage and preparation area being immediately adjacent to this exit and with no immediate supervision or control point to the exit, it should be noted that this arrangement poses a security issue for the kitchen.

The central kitchen is located on the north end of the building. The central kitchen provides efficiency in production, but because the food is prepared centrally it is not delivered and served as efficiently as it could be. The institutional style of food preparation and delivery does not allow for flexibility for residents in eating times. Meals are prepared in the kitchen and placed on trays. They are then delivered either to the community dining area or to the dining area of the individual units.

In order for meals to be delivered to all residential units, the food carts need to travel through one or more residents' wing to get to their destination. The travel distance can exceed well over 600'. This is very time-consuming for staff and impacts the freshness of the food served. It is also inconvenient for the residents of the wings that the carts pass through.

The eastern and southern wings of Welch's upper level are residential units. Residents' rooms on the east wing have views of parking lots, the loading dock, or the stairs. The southern wing offers much better views from residents' rooms of adjacent courtyards.

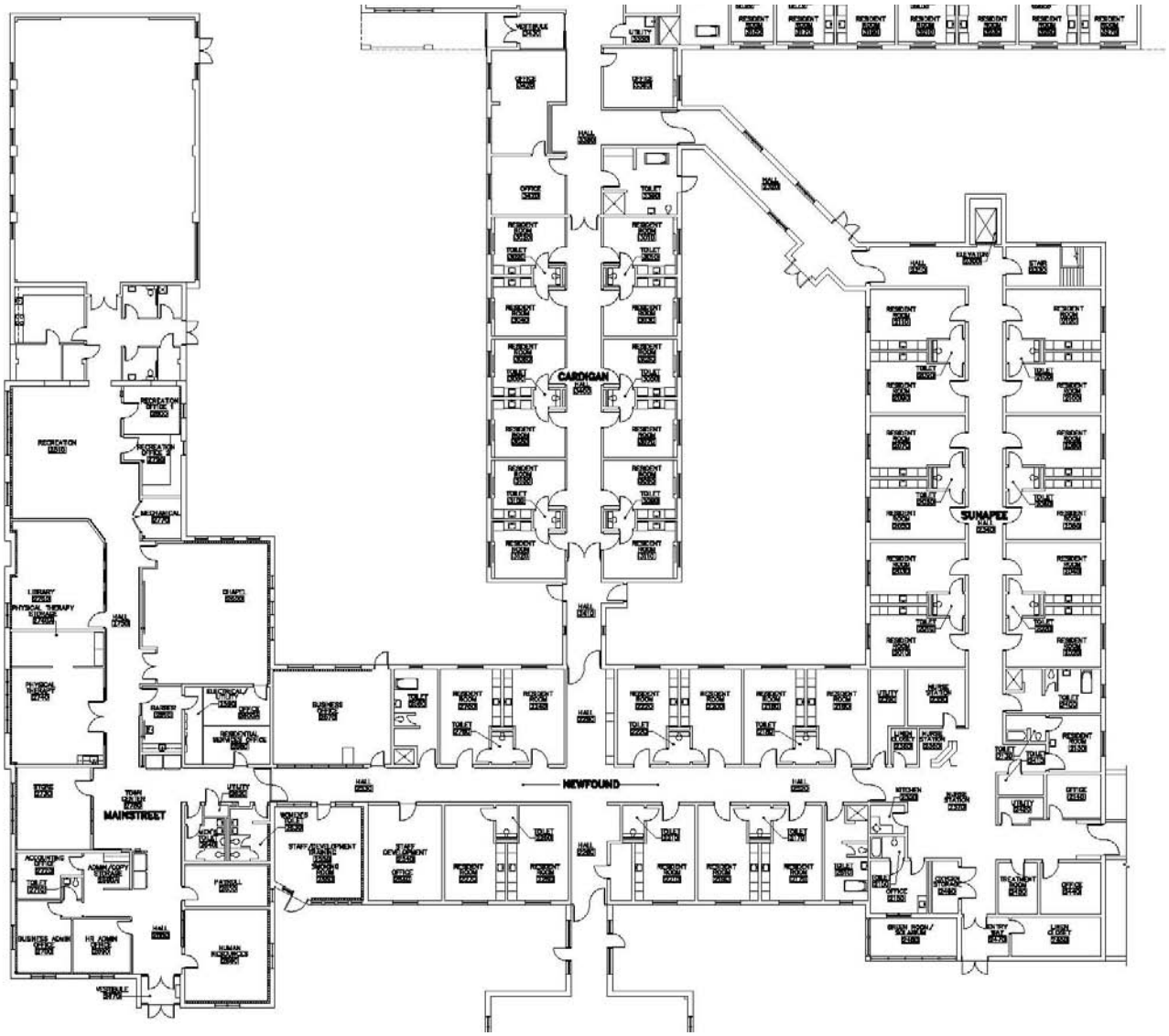
The mechanical room for the Geothermal System is on the lower level. If this space can remain intact during construction, this should be considered. The Slinky field of the geothermal system is located in the open field to the east of the pond.

Welch entrance from courtyard – to the left is the dining/living room, to the right are windows to residents' rooms.

Welch's eastern wing – residential units are on upper level with views over parking. Lower level is office space.

Tarr North (constructed 1976) including the addition of Main Street & Town Hall (constructed 2006)

Tarr North provides 48 beds (two private and 23 double), 13 toilets, and two community bathing suites shared by all of the residents on the unit. The Main Street portion of the campus, which houses physical therapy, the chapel, the Great Room (AKA "Town Hall"), the library, the smoking room, the store/gift shop, business offices, the bank, Human Resources, and the barber shop/beauty salon is located on the far western end of the building. Travel distance to the Great Room/Town Hall from Welch, Tarr North, and Tarr South is well over 400'.



Floor plan of Tarr North

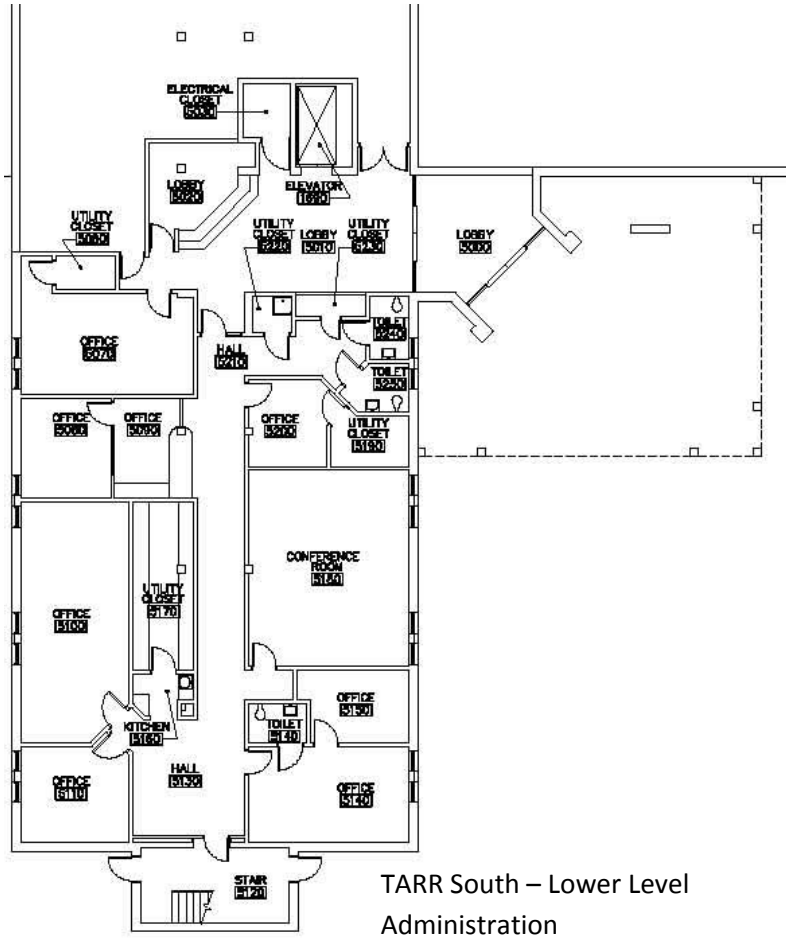
West elevation of TARR North- Main Street and Great Room/Town Hall, along Winter Street

Tarr South (constructed 1989)

Tarr South houses 52 beds (24 doubles and four singles) and 16 toilets with shared shower/tub room. The majority of the administrative offices are located on the lower level/ground floor.

The administrative wing is in need of HVAC upgrades. With the addition of services and possible increases in staff, the administrative area will also need to be slightly enlarged.

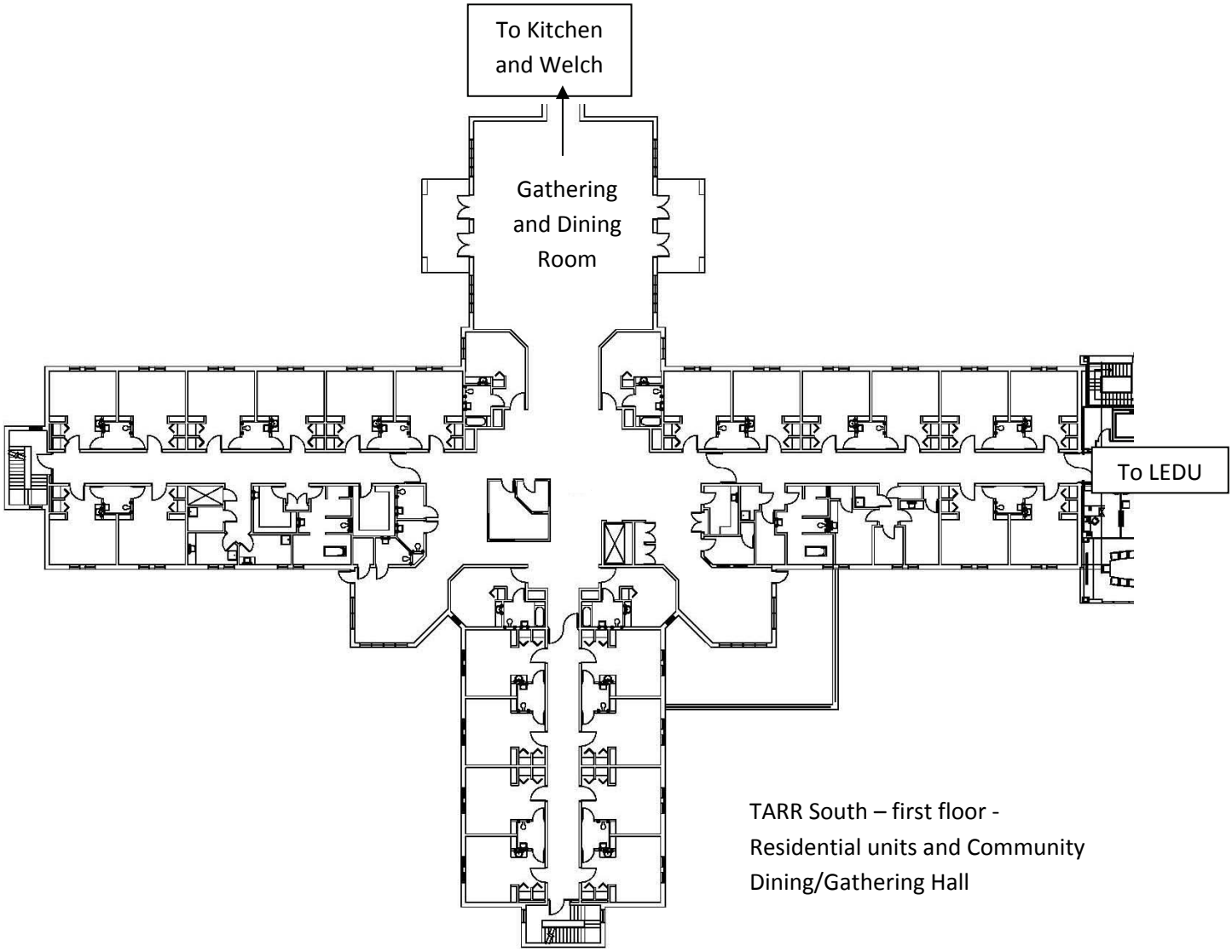
It is also recommended that the main entry be reworked to allow for a better flow through the parking lot. Currently a car parked at the designated loading and unloading zone blocks the accessible curb cut and impedes the flow of traffic. Fumes from standing vehicles such as ambulances and vans come in through doors and windows and contaminate the air.



TARR South – Lower Level Administration

The first floor level houses residential units, which like the other residential wings, feature double-loaded (rooms on both sides) institutional-style corridors. The south and west wings are somewhat private, but the east wing is the main connection to LEDU. All traffic passes by the open doors of the residents' rooms.

There are several open living/dining spaces that are shared by the residents. The Tarr South Dining Room is used for gatherings of all types: dining, music performances, meetings, and entertainment. It has some very nice connections to outdoor courtyards. The traditional nurses' station, which was originally located in the center of the wing, has recently been removed to allow space for residents and guests to sit, read, or simply visit with each other. This concept is much more in line with current programming trends although does not go far enough to meet to current requirements.



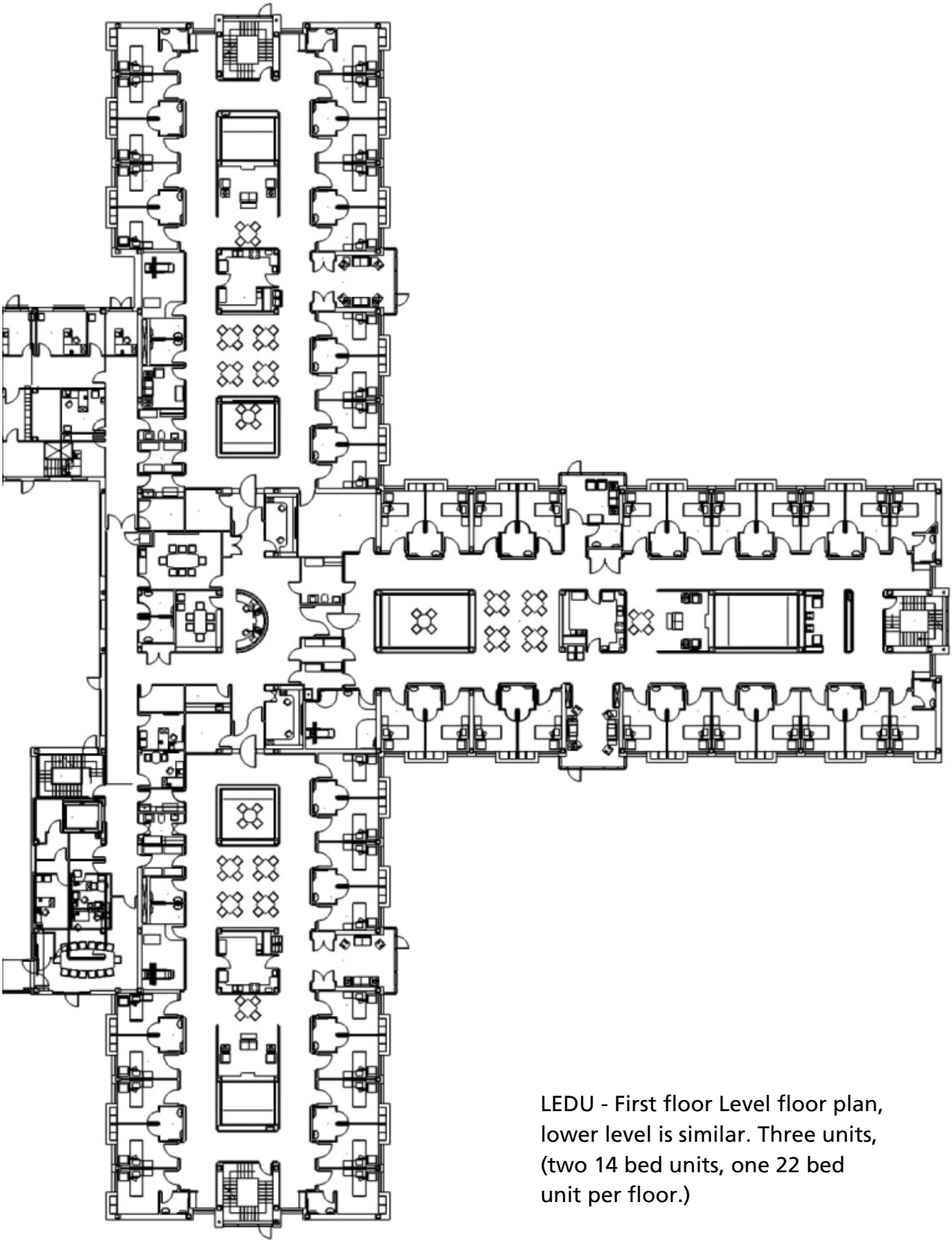
TARR South – first floor - Residential units and Community Dining/Gathering Hall

LEDU (construction complete 2003)

The newest residential building on campus houses the Life Enhancement Neighborhoods. LEDU was designed to offer services to veterans with Alzheimer's and other memory impairment disorders. There are two 22-bed units, four 14-bed units, for a total of 100 private beds. With the exception of 12 resident rooms with private toilet rooms, all others rooms share a toilet with the bedroom next door. There is one community tub/shower room per unit. The three units that are located on the ground floor have direct access to two secured outdoor courtyards. The three neighborhoods on the upper level all have sun rooms that overlook the outdoor courtyards.

The design of LEDU was considered state- of-the art in early 2000; however recent research has shown that elders suffering from memory loss respond to treatment better in a smaller more intimate setting, with fewer beds and more one-on-one care.

LEDU from the southern edge of the pond



LEDU - First floor Level floor plan, lower level is similar. Three units, (two 14 bed units, one 22 bed unit per floor.)

Facility Services Department (Constructed 2006)

The Facility Services Department's building is located in the center of the northeast parking lot. The main garage doors face south towards the pond with the overhead garage doors visible from the main building. Future design may include providing landscaping to help screen the building from outdoor gathering areas.

The building is primarily used as a workshop and storage facility. There is limited office space, a kitchen/conference space, and storage. There is some indoor parking for maintenance equipment; however the equipment is primarily parked outdoors, adjacent to the building year round. Being exposed to the elements in the northeast is difficult on equipment and adds additional financial and maintenance burden to the Facility Services Department.

Facility Service Department - Shop area

Facility Service Department – conference room/ staff break room

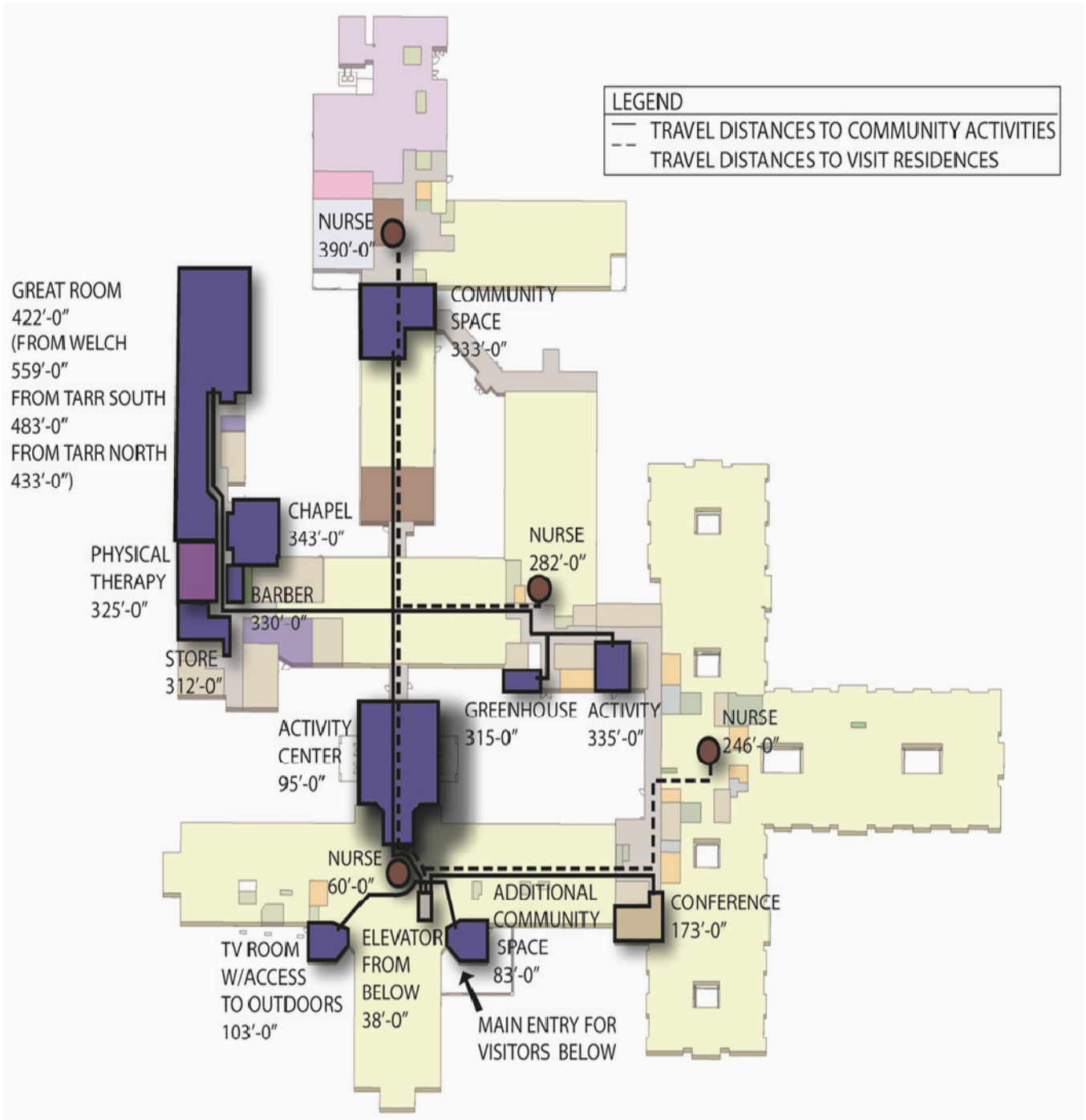
Facility Service Department – West elevation

Existing Travel Distances within the facility

Current travel distances from residential units to gathering spaces and other public areas range from 80' to 600', well exceeding the recommendations of the *2006 Nursing Home Design Guide* for walking distances. The guidelines recommend for older people - average travel distances of 50' to 60', with extremes of less than 80'. The guidelines suggest that distances that fall within this range can encourage resident ambulation and self-propulsion. When faced with distances greater than recommended, residents need or look for assistance, resulting in more staff time, less involved residents, and lower self esteem for those who can't get "there."

The accumulation of many building additions has created a number of inefficiencies which are addressed by this Master Plan. These include but not limited to:

- Resident Privacy
- Food service - Delivery of food to residents
- Travel distances for residents to everyday living and community activities
- Transportation of maintenance, housekeeping, and laundry carts/supplies throughout the facility
- Travel distances for visitors from main entry to Residential Units to visit residents
- Access to outdoor spaces
- Inefficient use of staff time


LEGEND
TRAVEL DISTANCES TO COMMUNITY ACTIVITIES
TRAVEL DISTANCES TO VISIT RESIDENCES
NURSE
390'-0"
GREAT ROOM
422'-0"
(FROM WELCH
559'-0"
FROM TARR SOUTH
483'-0"
FROM TARR NORTH
433'-0")
COMMUNITY
SPACE
333'-0"
CHAPEL
343'-0"
PHYSICAL
THERAPY
325'-0"
BARBER
330'-0"
NURSE
282'-0"
STORE
312'-0"
GREENHOUSE
315-0"
ACTIVITY
335'-0"
NURSE
246'-0"
ACTIVITY
CENTER
95'-0"
NURSE
60'-0"
ADDITIONAL
COMMUNITY
SPACE
83'-0"
CONFERENCE
173'-0"
TV ROOM
W/ACCESS
TO OUTDOORS
103'-0"
ELEVATOR
FROM
BELOW
38'-0"
MAIN ENTRY FOR
VISITORS BELOW

Main Entrance/Visitor Drop:

The main entrance is designed with a porte cochere that provides shelter for those being dropped off or picked. This entry is used for residents, visitors, and ambulance access. The adjacent parking lot is configured with one-way traffic: all vehicles must exit through the porte cochere, which is only one lane wide. This creates a problem when a vehicle is dropping off or picking up a passenger. It forces the driver to wait or to turn around and go the wrong way out of the parking lot. Safety is an issue at this location.

Main Entry Porte cochere and link from TARR south to LEDU

Parking:

Staff parking currently fills nearly every available space near the building with asphalt and cars. This situation creates poor and unsafe traffic patterns, contributes to indoor air quality issues, and corrupts the views from many resident rooms. Delivery truck access and on-site maneuvering is difficult, and early morning back-up "beepers" annoy residents and neighbors.

The northwest access drive on Colby Road near the Winter St. intersection is too close to the intersection. This is a traffic hazard that needs to be corrected.

A significant portion of the parking area to the north of the maintenance building is gravel, making it difficult to maintain. The lot is also not well lit, which is a safety concern.

Staff parking adjacent to Welch and TARR North

Staff parking – north lot

Outdoor Activities:

Pavilion: According to leading researchers, access to the outdoors has major health benefits, especially for older people. As little as ten minutes per day has a positive impact on both their physical and mental health. Outdoor spaces should be easily accessible, safe, and inviting.

Scattered throughout the campus are many existing outdoor gathering spots for residents; however, while accessibility to some locations is good, others are nearly impossible for elders to reach. The pavilion, located in the center of the northeast parking lot, offers a covered space with open sides that is used for live performances, cookouts, and community gatherings. The east side has a grassed area (American Legion Park) and adds some flexibility to the use. The remaining sides are surrounded by the asphalt parking lot. There is no protected walkway from the building to the pavilion.

Access to the pavilion is very difficult. Change of grades from the residential floors to the parking area is not direct and is not fully accessible. Travel distances from residential units to the pavilion can exceed 500' and will take staff hours to accompany residents to an event.

The door that is used to access the pavilion is on the lower level, thus requiring use of an elevator. The time commitment for all involved well exceeds the time allocated for the actual event. Since 85% of residents use wheelchairs or walkers, they need assistance with transportation, and transportation of residents to events at the pavilion is extremely time-consuming. It can be exhausting for residents and it takes staff away from other responsibilities on their units.

American Legion Park is a grassed area located to the east of the Pavilion

Pavilion –west side

Door used to access Pavilion

On-site pond

NHVH annually stocks the on-site pond for fishing. This outdoor activity is a great attraction for the residents. The pond has a dock from which to fish and a gazebo to provide shelter from the sun. The primary access to the pond for residents is via the main entry of the facility and around the parking lot. The result is a path that does not encourage residents to take the trip. The existing sidewalks to the pond are steep and long, which makes accessibility difficult. Self maneuvering a wheelchair to and from the pond is difficult and poses a risk for frail elders.

The pond has an open grassed perimeter, but lacks access paths to allow residents to fully enjoy this area. Beyond the pond are wide open fields surrounded on three sides by attractive wooded property. The portions to the east and north are part of the NHVH property. The property to the southeast, Buffalo Park, is managed by the Tilton Conversation Commission and offers potential for access to an extensive trail system.

Fishing dock and covered seating at on-site pond

Courtyards:

The existing courtyards offer opportunities for residents to gather outdoors. Some offer beautiful views and others are sheltered from sun and winds. There is a wide range of spaces to choose from but not every location is accessible to all. Security and life safety issues are always a concern in open courtyards.

Access to some of these courtyards by construction and maintenance equipment is very difficult and results in spaces that are challenging to maintain. In the winter this is an issue to remove snow and maintain safe means of egress from the building. As an example at the TARR North exit adjacent to the smoking room, snow will fall from the metal roof and block the exit egress. If this is not quickly removed a life safety issue is created.

TARR South - Outdoor space

Outdoor space between Tarr North and Welch

TARR North - Outdoor space

The "flag pole patio" located in the southwest corner of TARR South offers a large gathering spot with beautiful views and a southern exposure. The one challenge to using any of these outdoor spaces is indigenous to the northeast, snow and cold. An outdoor patio that is highly used during the more moderate times of the year can quickly become inaccessible in the winter.

TARR South – "flag pole patio" summer

TARR South – "flag pole patio" winter

Outdoor space between Tarr North and Welch - winter

Residential units:

Of the 250 licensed beds, 142 are semi-private. For nearly 50% of the population of the Home, two veterans share a room and four share a toilet. All residents in the dementia unit have private rooms and semi-private toilet rooms.

The result is that many residents may not have access to toilets when they need them and they do not have the privacy they deserve. The current bathrooms, as constructed some 30+ years ago, cannot meet the needs of residents. The lack of patient lifts, motorized transports, and the need to support bariatric residents limits staff's ability to provide the level of clinical care required today.

No rooms have private showers or tubs; there are only between one and three tub rooms for each 50-bed unit.

Semi-private resident's room

Semi-private resident's room

Private resident's room with views to parking

Although efforts continue to be made to make the Veterans Home feel more like a home and less like an institution, there is a great deal of work ahead. Space is limited so the option of bringing even a few special items from home is difficult. If a resident would like to have space to do something as simple as a jigsaw puzzle in their room, it becomes a challenge due to the space constraints.

According to Gerontological Society of America[6], there are many studies that indicate that shared bedrooms and shared bathrooms lead to increased health risks. Research has demonstrated that 84% of elders who share a room with a roommate are likely to develop acute non-bacterial gastroenteritis symptoms, whereas only 16% of residents who live in private rooms will develop the same symptoms. Pneumonia infections are much more common in shared bedrooms and are a leading cause of death among nursing home residents. (Please see the attached article, "Envisioning your future in a nursing home" for additional information on single vs. semi-private rooms.) [7]

Due to the configuration of the buildings and the layout of units, direct access to outdoor spaces is limited and views to the outside are often over parking lots. Outdoor activities become a challenge instead of being a part of everyday life.

PROPOSED SERVICES

Introduction

New Hampshire Veterans Home has historically provided outstanding long-term care for New Hampshire's elderly veterans. In 2007 NHVH was one of four New Hampshire nursing homes to win the first Quality of Life Award from the Department of Health and Human Services.

Prior to August 2010 only veterans who served at least 90 days during "a time of war" were eligible to apply. A new law now allows anyone who was honorably discharged from the armed forces (including the Reserves and National Guard) to apply. New Hampshire residency, financial, and medical criteria still apply, but eligibility has been greatly expanded.

The demographic profile of New Hampshire veterans is changing. Young veterans in need of specialized treatment for Traumatic Brain Injury or polytrauma are currently unable to receive those services at NHVH. As the veterans age, the Veterans Home must make changes to meet their needs.

The current facilities were designed and constructed around a long-term care institutional style model and form of service. Double-loaded corridors, shared resident rooms, and shared bathrooms do not contribute to the quality of life of residents.

Traditional style nursing care facilities are often filled with residents who experience feelings of loneliness, helplessness, a lack of privacy and dignity, and boredom. NHVH is dedicated to providing services to their customers that will greatly increase their quality of life. The Home's commitment to culture change demands that care should be resident-focused, not program driven. One of the major priorities is to provide each resident with a private room and bath.[8]

The transition from the existing double occupancy, ward-style resident rooms, to the single occupancy, private bath, "Green House" residential model, is one of the driving forces behind the direction of this Master Plan effort. This dramatic change in resident accommodations, which has been mandated by the USDVA for all future veterans home construction projects, has physical and operational implications that touch every department and function of the Veterans Home. From housekeeping and meals to clinical services, all will be centered in the residential living units. For the most part, services come to the resident, not the resident to the service.

The following program and design reflect the anticipated changes that are now mandated by USDVA, the vision of the Master Plan committee members, and the recommendations based on research related to elder care, the unique needs of aging veterans, new understanding of veterans' mental health issues, and long-term care options. In reviewing this plan, it is important that the reader clearly understand this new residential model in order to better understand the program comments and recommendations offered across all departments. Please refer to "The Green House Concept" included in Appendix A, for additional information on the Eden Alternative and the Veterans Administration Green House model.

Changing Demographics

The veterans of yesterday and those of tomorrow are dramatically different. To meet the needs of both, flexibility of services and spaces are needed. Clinical staff will need to be crossed- trained in many aspects of care.

In 2007 the New Hampshire Employment Security Economics and Labor Market Information Bureau reported: [9]

- There are 132,000 veterans in NH; approximately 10.1% of NH's population (6th largest share of its population among all states and the District of Columbia)
- Nearly 20,000 veterans that reside in NH are between the ages of 60 and 64
- 6% of the NH veteran population are women; the highest number of female veterans are between the ages of 45 and 64.
- The youngest group, 17 to 44 years, had the largest percentage of woman: over 12%
- Less than 5% of NH Veteran population is below the poverty level (almost evenly split between 18-64 year age group and those 65 years and older.)
- 72% of the veterans in NH served during wartime.
- 46.1% served in Vietnam Era
- In 2007 there were 15,500 WWII veterans in NH

According to USDVA

Of all USA Women Veterans[10]

- As of 9/30/2007, the percentage of U.S. veterans who are women is 7.4 percent.
- The average age of women veterans is 47 years, compared to 61 years for their male counterparts.
- In 2006 and 2007, PTSD, hypertension, and depression were the top three diagnostic categories for women veterans treated by the Veterans Hospital Association.
- In 2007, 22 percent of women veterans who used the VA for health care screened positive for Military Sexual Trauma (MST).

In just New Hampshire

- Women are the fastest growing group among the Veteran population, consideration of their related health needs must be a priority.

Changes in Program types

Traumatic Brain Injuries (TBI)

According to The Department of Defense and Veteran's Brain Injury Center[11]

- The conflicts in Iraq and Afghanistan have resulted in an increase of traumatic brain injuries. 22% of all the causalities from these conflicts are TBI compared to 12% of Vietnam related combat casualties
- 60-80% of soldiers who have other blast injuries may also have traumatic brain injury

Behavioral Health and related issues[12]

- Coexisting medical conditions such as heart disease, hypertension, diabetes, lung disease, arthritis, or other conditions are often found in older veterans
- One third of all veterans who seek treatment at VA facilities receive treatment for mental disorders
- Three important issues in older veterans are PTSD, dementia, and suicide

Known and Unknown Gulf War illnesses

- USA Department of Veteran Affairs continues to investigate soldiers that served in the Gulf War and their related illnesses

A change in demographics and modification of programs will bring a change in staffing needs.

With the focus of care being expanded to meet the long term care resident's need for a wide range of services, NHVH will need to train existing staff and position themselves to attract qualified staff. Ongoing support for continuing education and a supportive work environment that attracts and retains this professional group will be critically important to the long term success of the NHVH.

Program areas should generally be easily visible, welcoming and open, attracting the attention and participation of residents. Specific areas may need to be enclosed as appropriate to the program's privacy, safety, and/or acoustic issues. Areas should be individual and unique, like storefronts along a village Main Street each advertise their business or trade. A variety of small, quiet "niches" for family to gather with loved ones, or for residents to gather in small groups is needed.

The following are just a few of the activity/services that exist currently or are suggested for the future:

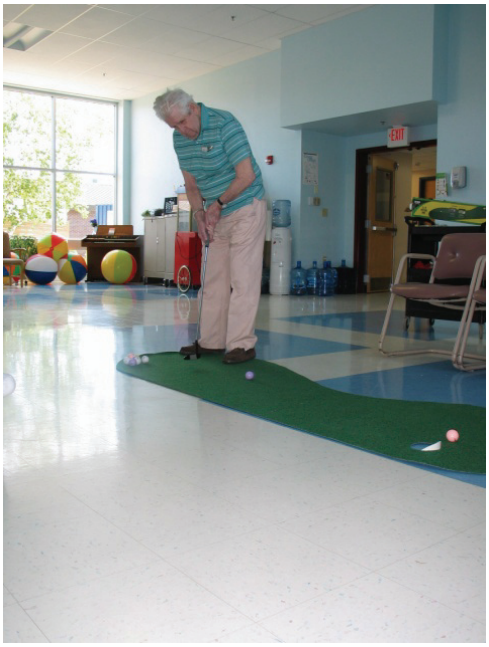
Existing Programs

- Barber Shop/Beauty Salon
- "Town Hall"/Great Room for Community Events
- Recreation Room
- Intergenerational Programs
- Chapel; Spiritual Care Programs; Choir
- Jug Band
- Tai Chi, Exercise Programs
- Yoga (currently offered for staff)
- Library with two computers, Skype access
- TV, Video, Video Games
- (Wii and "It's Never 2 Late" programs")
- Reading/Writing/Art groups
- Concerts, performances, and presentations
- Darts, pool tables, card games, table games
- Store/Gift Shop
- On-Campus Events and Entertainment
- Trips to external events and activities, including regularly scheduled shopping trips
- Fishing in the NHVH Trout Pond
- Outdoor Pavilion and American Legion Park
- Handicapped-accessible gardens
- Indoor golf

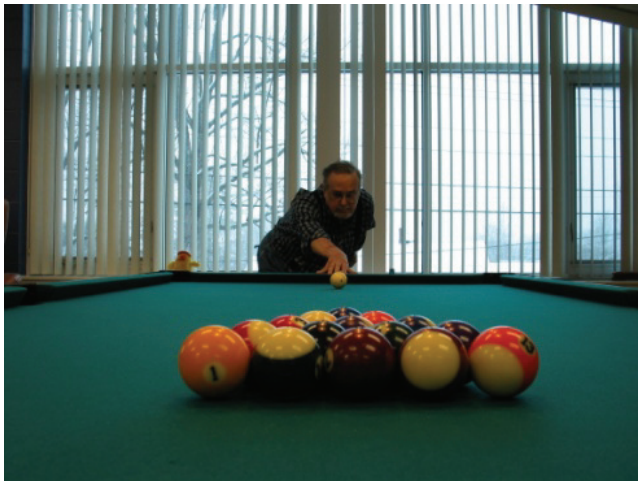
Arts in Healthcare – African Drumming

"It's Never 2 Late" programs

Fishing in the NHVH Trout Pond



Indoor putting green



Recreation Rooms

Intergenerational Programs

Raised Gardens for accessibility

Future Services and Activities to be considered:

- Electronic Health Records
- Expanded Rehabilitation programs in Occupational and Physical Therapy
- Behavioral Health Programs for PTSD, TBI, and other Mental Health conditions
- Hospice Wing
- Therapeutic Pool/Aquatic Therapy/Wellness/Fitness Center
- Day Care for staff children, Adult Day Care, and/or Intergenerational Day Care
- Respite Care
- Craft/Art Studio/Woodworking Workshop
- Performance/conference center and Learning Center (for residents and staff) with wireless Internet access and Computer/Technology Training
- Wireless Internet throughout the campus
- Expanded Store/Gift Shop with Café
- Music programs; rooms to play or listen
- Research/educational programs on *Aging Issues Unique to Veterans* with visiting faculty
- Expanded support and education for families; more overnight facilities for families who want to stay at the bedside of a loved one.
- Development of outdoor programs using Buffalo Park for residents, staff, families, volunteers, and community members. Resources from organizations like the Science Center of NH, the Society for the Protection of New Hampshire Forests, Cub Scouts/Boy Scouts, could help provide enrichment for all NHVH constituents. Accessible Nature Walks and exercise/stretching stations could be added with support from the Tilton Conservation Commission. The addition of walkways from NHVH buildings could offer access to nature and gardens within a five minute stroll. Buffalo Park has 55 acres of trails that could be accessed.
- Fire pit; outdoor pavilions in courtyards
- Picnic BBQ area for community gathering
- Putting Green
- Horseshoe pit
- Shuffleboard
- Bocce
- Butterfly, song bird garden
- Ball field could be available for community use.
- Programs using technology we can't even begin to imagine.

Remembering those that served

Walking trails and gardens

View from location of proposed roof top garden

Increased programs to keep residents active and creative

Outdoor sitting areas to sit in the shade and enjoy a book

Clinical

Monitoring and administering to the health of the residents is critical to quality of care and quality of life at NHVH. Throughout the programming meetings there were numerous discussions of the kinds of nursing and clinical services that might be provided to future veterans. There are a number of legislative, regulatory, fiscal, social, and demographic dynamics that will shape the landscape of veterans' care in the future, and it is only possible to speculate about these possibilities at this time.

The Master Plan seeks to provide flexibility to accommodate future clinical services and to modify existing program spaces for new roles over time.

Existing Clinical Services:

NHVH offers 24-Hour a day Long Term Nursing Care and has the following clinical staff/services: Medical Director, Psychiatric Nurse Practitioner, Registered Nurses, LPNs, LMNAs, LNAs, Pharmacists, Dietitians, Therapeutic Recreation, Physical/Occupational/Speech Therapy, Hearing/Vision screening, and Social Workers. A dentist makes scheduled visits to the Home and mental health services are contracted out. We make appointments and transport residents to off-campus medical facilities when they need to see specialists and have tests or medical procedures performed.

Additional Opportunities for the future:

- 24-Hour a day Long Term Nursing Care
- Technology for Electronic Health Records
- Dialysis
- Bariatric Care
- Wireless electronic medical monitoring from remote locations
- Unknown future medical technology
- Adult Daycare
- Respite Care
- Secure Behavioral Health Services
- Assisted Living
- Dedicated Hospice Living Unit
- Traumatic Brain Injury (TBI) and Polytrauma Support Services
- Transitional Support for Homeless Veterans
- Expanded Rehabilitation Services including Wellness and Aquatic Therapy

Dining/Kitchen/Food Service

Like most of us, food and dining are among the most compelling social experiences of the day for a NH Veterans Home resident. The "Green House" residence model will offer much greater flexibility in meals and snack planning. The in-home kitchens allow for food to be prepared based on the preferences of the residents of that house. Meals are regularly served family-style with staff, family members, and visitors able to take part. Choice is a big factor in empowering the residents. Dining options such as a central dining room "restaurant" or coffee shop will be part of the residents' options.

Although all agree that the current food service is of high quality, the diversity, efficiency, choice, and ambience of future service were repeatedly voiced as important issues for the Master Plan to address.

Existing Food Service:

- Located remotely from the heart of the facility; inefficient distribution of food.
- Deliveries to the facility are awkward and the back-up beepers on delivery vehicles can annoy neighbors, especially in the early morning.
- Need larger coolers and freezers
- Kitchen layout and equipment are outdated

Opportunities for the future:

- More centrally located kitchen
- Meals could be freshly prepared and served in residential living units, with support from central kitchen
- Family-style dining with fellow residents, staff, and family members
- Flexibility in choice of foods, and when and where to eat
- Develop a variety of dining venues, geared to differing functioning levels
- Main dining room should be table service, restaurant style, not served on trays
- Dining venues should be comfortable and promote a more relaxed dining experience
- Important to have pleasant cooking odors in dining areas; for example, fresh bread baking
- Include smaller cafes, snack stations, and a bistro
- Special consideration should be given to appropriate dining for families of residents. This could be for a wide range of reason, from celebration of a special festive occasion or those families with a loved one is very ill or dying that needs some privacy.
- Programs to engage residents in meal preparation and education

Administration

Unlike most departments at NHVH, the administration will not require dramatic change as a result of the transition to the "Green House" model. They will certainly be challenged with development of staff transitional strategies, construction phasing, and a myriad of other operational issues, but the basic administration organization and staffing patterns within the administrative offices are expected to remain fairly stable. The programming effort suggests that an increase in total administrative area of +/-10% should be sufficient to allow for any future staffing increases.

There are a number of administrative support facilities that are needed:

- Multi-purpose training/computer classroom for certification classes.
- Archival records storage – this need will have to be monitored as records are being converted to electronic files.
- Wireless data and communications systems throughout facility with appropriate security and encryption to support medical records management.
- Human Resource staff may need to expand in response to other staff growth.

Employee Support

As is the case in all organizations, the quality of NHVH services is due to the hard work and dedication of an exceptional staff. The current staff of 400 is committed 24/7 to the quality of life of the veterans in their care. It is immediately apparent on walking through the facility, that every staff member, whether administrator, maintenance, food service, or nurse, treats the residents as if they were a member of their own family. "The veterans don't live where we work, we work where they live," is the staff motto, and they truly practice it every day.

The administration emphasized the need for enhancements that will benefit staff. The ability to recruit and retain high quality employees requires a supportive work environment. In the many renovation and upgrade projects that have been implemented at NHVH over the years, staff support components have always been the first to be cut. This can no longer be the case, and staff support must be a strong focus of the Master Plan. Since there are minimal physical facilities for staff, we do not include an "existing" description.

Opportunities for the future:

- Dedicated staff entrance
- Staff lockers/shower/lounge

- Café for 24-hour snack/beverage service
- Computer terminals for personal use
- Staff fitness / exercise space in Rehab/Wellness Center
- On-site day care with sick room
- Expanded Staff Development Space and Resources (library, books, videos, computers with internet access for webinars, video conferencing)
- Quiet/Safe room for privacy after emotional episode

Housekeeping - Linen/Laundry

A "mission critical" department, the housekeeping and laundry staffs work 24/7 to manage the cleaning and laundry duties generated by up to 250 residents, a staff of nearly 400, and a 165,000 sf facility. Generally, the existing facilities serve the department well, but there are enhancements that will be required during the transition to the "Green House" residential model.

Existing Housekeeping – Linen/Laundry

- Housekeeping changes resident beds daily
- Laundry processes all resident clothing
- Addition of an ozone laundry system to improve the quality of laundry service.
- Laundry is reasonably centrally located on the lower level
- Additional space is needed for existing automatic folder.

Opportunities for the future:

- Better lower level distribution in order to minimize transit of linens/clothes through resident spaces.
- A steam tunnel
- Additional staff will be needed.
- More efficient floor and carpet machines required.
- Storage will be required in each residential unit for housekeeping/laundry.

Facilities

The facilities manager noted that "every day seems like chaos around here." Regardless of what project they are undertaking, they are always either in or traveling through the middle of the resident wings. This was noted by others as well, suggesting the desire to have "back of the house" access for maintenance, laundry, housekeeping, and food service, eliminating the need to wheel carts through the resident corridors.

Although challenging to achieve, the plan attempts to find strategies to keep service functions out of the primary resident areas.

It was also noted that these systems continue to become more and more complex, requiring staff with the training and capabilities to manage these them. For example, renovations to the heating and cooling systems have resulted in a climate control system that is controlled by a computer.

Opportunities for the future:

- Improved delivery and waste removal staging areas
- Dedicated employee parking and entry
- Improved delivery area, including better truck ingress and egress
- Indoor storage for trucks and grounds equipment
- New resident houses to have independent HVAC systems
- Multi-Purpose Emergency Operations center – currently under development

Storage

Adequate storage is essential for every program area at NHVH. The existing space program generally identifies the current storage available for each area. Storage spaces have been developed throughout the facility wherever space is available, and in most instances, the staff does an admirable job of managing limited storage space.

The planned Multi-Purpose Emergency Operations Center will provide some additional general storage capacity. In addition, the Master Plan's program space summary includes storage space for each program area.

PROGRAMMING

The following *Space Analysis* outlines a program for both the *Village Center* and *Cottage Neighborhood* concepts. These concepts are described in the **Design Narrative** that follows. These programs are based on a combination of current guidelines of The United States Department of Veterans Affairs, the anticipated changes that will be presented in the upcoming 2011 USDVA Guidelines, and interviews with New Hampshire Veterans Home staff.

The overall intent of these programs is to provide a basis for future development of the current Tilton site and to give a general outline for the possibilities of community based facilities strategically located throughout NH. The logistics of rebuilding the Tilton campus have to be carefully orchestrated to insure that services to current residents are not affected, and that the number of beds at anyone given time does not go below anticipated need. The development of community based facilities will need a more in-depth study of New Hampshire's demographics.

The section that follows the **Space Analysis** is **Design Solutions**. These designs are a representation of the direction of the NHVH and their vision for providing services for all New Hampshire Veterans. They reflect a sense of home and community.

VILLAGE CENTER PROGRAM SPACE ANALYSIS

It is anticipated that the VA Space Planning Criteria will be updated and issued in spring of 2011. The guidelines are anticipated to require less beds per residential living unit (12 beds max), a more residential approach, private rooms with private baths, more community based housing and more resident focused accommodations are being designed for. In preparing the program we have made some adjustments to meet those anticipated guidelines, but a review of current guidelines at the time of design will be required.

"Village Center", 200 beds - 10 beds per Residential Living Unit with some support space shared between 2 homes.	*VA Space Planning Criteria (106) March 2008 (SEPS Version 1.6)*	*nsf*	*Per House*	*nsf per house*	(net to gross)	*10 bed per house*	*(avg of 2 houses) per neighborhood*	***10 neighborhoods (200 beds)***
Residential House (General, Specialty or Combined)								
1. Bedroom, Resident Provide one for each General Resident.	175 NSF	200	8	1,600				
2. Bedroom, Bariatric Provide two per General Residential House. These room are for residents with bariatric care needs, and other conditions which require additional space for mobility and equipment clearances.	320 NSF	320	2	640				
3. Bathroom, Resident (SHOWER added) Provide one per General Resident Bedroom.	55 NSF	75	8	600				
4. Bathroom, Bariatric Provide one per General Bariatric Bedroom	100 NSF	110	2	220				
5. Vestibule Provide one per General Residential House.	50 NSF	50	1	50				
6. Living Room Minimum NSF; provide an additional 20 NSF per general resident greater than twelve; provide one per General Residential House.	360 NSF	360	1	360				
7. Quiet Room Provide one per General Residential House.	120 NSF	120	1	120				
8. Toilet, Resident / Visitor Provide one per General Residential House.	50 NSF	65	1	65				
9. Dining Room (FSCD1) Minimum NSF; provide an additional 30 NSF per general resident greater than twelve; provide one per Residential House. Dining Room areas for two or more Houses should be combined into a centralized Neighborhood Dining Room when consistent with program of Operations.	360 NSF	360	1	360				
10. Kitchen and Servery Minimum NSF; provide an additional 25 NSF per General Residential House greater than one if serving a Residential Neighborhood.	150 NSF	150	1	150				
11. Pantry Minimum space required for staging and serving food. Coordinate the provision, size and configuration of this space with food preparation and delivery system determined in collaboration with Nutrition and Food Service for each facility. Minimum NSF; provide an additional 10 NSF per General Residential House greater than one if serving a Residential Neighborhood. Pantries can be combined and shared by two or three houses.	80 NSF	80	1	80				
12. House Care / Workstation Provide one per Residential House. This space functions as a nursing sub-station.	50 NSF	50	1	50				
Support Areas								
13. Storage, Clean Linen Provide one per Residential House.	20 NSF	20	1	20				
14. Storage, Soiled Carts Provide one per Residential House.	20 NSF	20	1	20				
15. Storage, Equipment Provide one per Residential House.	100 NSF	100	1	100				
16. Storage, Medical Supplies Provide one per Residential House.	100 NSF	100	1	100				
17. Housekeeping Aides Closet - HAC Provide one per Residential House.	50 NSF	50	1	50				
GSF of space required for "Residential Living" unit		340		4,585	1.55	7,107	14,214	142,135

"Village Center", 200 beds - 10 beds per Residential Living Unit with some support space shared between 2 homes.	VA Space Planning Criteria (106) March 2008 (SEPS Version 1.6)	nsf	Per House	nsf per house	(net to gross)	10 bed per house	(avg of 2 houses) per neighborhood	10 neighborhoods (200 beds)
Residential Neighborhood: Shared Resident Areas								
18. Laundry (shared between two homes) Provide one per General Residential House. Laundries can be combined and shared by two or three houses.	100 NSF	100	2	200				
19. Activity / Multipurpose Minimum NSF; provide an additional 15 NSF per neighborhood resident greater than twenty. Provide one per Residential Neighborhood.	400 NSF	400	1	400				
20. Bathing Suite Provide one per Residential Neighborhood.	360 NSF	360	1	360				
21. Neighborhood Care (Nursing) Station Provide one per Residential Neighborhood.	250 NSF	250	1	250				
22. Exam Room Provide one per Residential Neighborhood.	120 NSF	120	1	120				
23. Medication Room Provide one per Residential Neighborhood if Medication Room is authorized in Concept of Operations.	100 NSF	100	1	100				
24. Utility Room, Clean Provide one per Residential Neighborhood.	120 NSF	120	1	120				
25. Utility Room, Soiled Provide one per Residential Neighborhood.	100 NSF	100	1	100				
26. Housekeeping Aides Closet - HAC Provide one per Residential Neighborhood.	50 NSF	50	1	50				
27. Storage, Stretcher / Wheelchair Provide one per Residential Neighborhood.	60 NSF	60	1	60				
				1,760	**1.55**		**2,728**	**27,280**
Residential Neighborhood: Staff and Administrative Areas								
28. Office, Activities Coordinator Provide one per Activities Coordinator FTE position authorized.	120 NSF	120	1	120				
29. Office, Nurse Supervisor Provide one per Nurse Supervisor FTE position authorized.	120 NSF	120	1	120				
30. Conference / Classroom Provide one per Residential Neighborhood. Could be combined and shared by two neighborhoods.	240 NSF	240	1	240				
31. Toilet, Staff Provide one if total number of Residential Neighborhood FTE positions authorized is between three and fifteen. Provide an additional one if total number of Residential Neighborhood FTE positions authorized if greater than fifteen.	50 NSF	60	2	120				
				600	**1.55**		**930**	**9,300**
ANTICIPATED GROSS SQUARE FOOTAGE FOR 28 HOMES							**17,872**	**178,715**

"Village Center", 200 beds - 10 beds per Residential Living Unit with some support space shared between 2 homes.	VA Space Planning Criteria (106) March 2008 (SEPS Version 1.6)	nsf	Per House	nsf per house	(net to gross)	10 bed per house	(avg of 2 houses) per neighborhood	10 neighborhoods (200 beds)
Clinical Program Spaces / Therapeutic Areas								
32. Staff offices								
33. Occupational Therapy Provide one for Nursing Home / Residential Care.	300 SF	300	1	300				
34. Office, Therapist Minimum NSF; provide an additional 50 NSF per each increment of four Therapist FTE positions authorized greater than two.	120 NSF	120	1	120				
35. Pharmacy (Existing to remain) Provide one if Pharmacy is authorized in Concept of Operations. (existing pharmacy is 660 sf)	160 NSF	160	1	660				
36. Toilet, Resident Provide one for Nursing Home / Residential Care.	50 NSF	50	1	50				
				1,130	**1.55**			**1,751.50**
37. Therapeutic Pool, Wellness & associated spaces (Based on Feasibility Study of 2008)								
Reception and Lobby areas				2,000				
Therapeutic Pool				1,144				
Exercise Pool				520				
Pool Deck				3,458				
Physical Therapy (PT)	400 NSF			680				
PT Private Area				140				
PT Office				140				
PT Storage				280				
Observation Room				270				
Men's Locker/Shower				475				
Women's Locker/Shower				475				
Staff Wellness Area				780				
Staff Lockers/Staff Shower/toilet rms				300				
Housekeeping				155				
Vestibule				475				
Clean Linen				165				
Dirty Linen				155				
Oxygen Storage				780				
Storage				165				
Mechanical/Elec				2,800				
				15,357	**1.55**			**23,803**
Community Areas								
38. Chapel / Meditation Provide one if Chapel / Meditation is authorized in Concept of Operations.	300 NSF	*1000*	*1*	*1,000*				
39. Barber / Beauty Salon Provide one if Barber / Beauty Shop is authorized in Concept of Operations.	240 NSF	240	1	240				
40. Library (based on existing SF +/-)				650				
41. Gift Shop (based on existing SF +/-)				700				
42. Recreation Room / Support (based on existing SF +/-) Should be adjacent to Gathering to combine for large events.				1,000				
43. Gathering Room/ Community Center(based on existing SF +/-)Should be adjacent to Recreation to combine for large events.				2,800				
44. Smoking Room (based on existing SF +/-)				500				
				6,890	**1.55**			**10,680**

"Village Center", 200 beds - 10 beds per Residential Living Unit with some support space shared between 2 homes.	VA Space Planning Criteria (106) March 2008 (SEPS Version 1.6)	nsf	Per House	nsf per house	(net to gross)	10 bed per house	(avg of 2 houses) per neighborhood	10 neighborhoods (200 beds)
Houskeeping and Support Services								
45. Laundry Provide one if Laundry is authorized in Concept of Operations.	600 NSF	600	1	4,100	Existing to remain			
46. Housekeeping (existing space to be reused at 1000 sf) Provide one for Nursing Home / Residential Care. Provides nominal staging and storage area for housekeeping supplies and personnel.	200 NSF	200	1	1,000				
47. Maintenance / Engineering Shop Provide one if Maintenance and Engineering Shop is authorized in Concept of Operations.	800 NSF	800	1	800				
48. Office, Security Provide one if Security service is authorized in Concept of Operations.	200 NSF	200	1	200				
49. Receiving / Loading Provide one for Nursing Home / Residential Care	150 NSF	150	1	150				
50. Storage, Bulk Provide one for Nursing Home / Residential Care. Space provided for storage of bulk materiel. For additional Bulk Storage areas as may be required for food service refer to Nutrition and Food Service	100 NSF	100	1	100				
				6,350	**1.55**			**9,843**
51. Food Service Nutrition and Food Service	0 NSF							
Kitchen				3,600				
Kitchen Storage				2,500				
Dining				6,000				
Kitchen Support (offices, locker, etc.)				800				
				12,900	**1.55**			**19,995.00**
52. Storage, Resident Minimum NSF, provide an additional 2 NSF per projected General and Specialty Resident greater than forty-eight. Storage for resident clothing, luggage and other personal items. (310beds -48 min)*2sf per resident over 48 = 524 additional sf req.)	150 NSF	150 **524**	1	**674**	**1.55**			**1,045**

"Village Center", 200 beds - 10 beds per Residential Living Unit with some support space shared between 2 homes.	VA Space Planning Criteria (106) March 2008 (SEPS Version 1.6)	nsf	Per House	nsf per house	(net to gross)	10 bed per house	(avg of 2 houses) per neighborhood	10 neighborhoods (200 beds)
Staff and Administrative Areas.								
53. Lobby /Reception Provide one for Nursing Home / Residential Care.	200 NSF	200	1	200				
54. Office, Service Chief Provide one for Nursing Home / Residential Care.	150 NSF	150	1	150				
55. Office, Nursing Administration Provide one per Administrative FTE position authorized; provide OFA01 if standard furniture is authorized or OFA02 if systems furniture is authorized.	120 NSF	120	4	480				
56. Office, Physician Provide one per Physician FTE position authorized.	120 NSF	120	2	240				
57. Conference Room Provide one for Nursing Home / Residential Care.	300 NSF	300	2	600				
58. Medical Records / QA Provide one for Nursing Home / Residential Care.	150 NSF	150	1	150				
59. Copy Room Provide one for Nursing Home / Residential Care.	100 NSF	100	3	300				
60. Cubicle, Clerical Provide one per clerical FTE position authorized.	64 NSF	64	4	256				
61. Toilet, Staff	50 NSF	60	2	120				
62. Toilet, Visitor / Resident Provide two for Nursing Home / Residential Care.	50 NSF	60	2	120				
63. Additional administrative space as discussed in meetings				*800*				
				3,416	**1.55**			**5,294.80**
Staff Lockers, Lounge, and Toilets								
64. Lounge, Staff	80 NSF	80	1	80				
		15	28	420				
For less than five FTE combine Lounge facilities with adjacent department or sum in chapter 410.								
65. Locker Room, Staff Minimum NSF if total number of FTEs for whom office or cubicle space is not authorized is between five and thirteen; provide an additional 6 NSF per FTE for whom office or cubicle space is not authorized greater than thirteen. Provide locker space only for those FTEs without assigned office or cubicle space. For less than five FTE combine Locker Room facilities with adjacent department or sum in chapter 410.	80 NSF	80	1	80				
		6	120	720				
	?							
66. Toilet, Staff Minimum one; provide an additional staff toilet for each increment of five projected FTEs on peak shift greater than thirteen.	50 NSF	480	1	480				
67. Staff Resources Staff Library and conference space for training				*1000*				
68. Daycare Provide a daycare center for children of staff members.				*1000*				
				3,780	**1.55**			**5,859.00**
69. Family Stay Suite (3 separate suites recommended)								
Bath room				80				
Bedroom				400				
living space/kitchenette				150				
			3	**630**	**1.55**			**2,929.50**
								256,985

COTTAGE NEIGHBORHOOD PROGRAM SPACE ANALYSIS

Specialty Services Residential 10 bed home	VA Space Planning Criteria (106) March 2008 (SEPS Version 1.6)	nsf	Per House	nsf per house	(net to gross)	Totals SF per Cottage
1. **Bedroom, Resident** Provide one for each General Resident.	175 NSF	175	0	0		
2. **Bedroom, Bariatric** Provide one per General Residential House. This room is for residents with bariatric care needs, and other conditions which require additional space for mobility and equipment clearances.	320 NSF	320	10	3200		
3. **Bathroom, Resident** Provide one per General Resident Bedroom.	55 NSF	90	0	0		
4. **Bathroom, Bariatric** Provide one per General Bariatric Bedroom (large enough to allow two staff to assist if needed.)	100 NSF	105	10	1050		
5. **Vestibule** Provide one per General Residential House.	50 NSF	50	1	50		
6. **Living Room** Minimum NSF; provide an additional 20 NSF per general resident greater than twelve; provide one per General Residential House.	360 NSF	360	1	360		
7. **Quiet Room** Provide one per General Residential House.	120 NSF	120	1	120		
8. **Dining Room** Minimum NSF; provide an additional 30 NSF per general resident greater than twelve; provide one per Residential House. Dining Room areas for two or more Houses should be combined into a centralized Neighborhood Dining Room when consistent with program of Operations.	360 NSF	360	1	360		
9. **Kitchen and Servery** Minimum NSF; provide an additional 25 NSF per General Residential House greater than one if serving a Residential Neighborhood. Minimum space required for staging and serving food. Coordinate the provision, size and configuration of this space with food preparation and delivery system determined in collaboration with Nutrition and Food Service for each facility.	150 NSF	150	1	150		
10. **Pantry** Minimum NSF; provide an additional 10 NSF per General Residential House greater than one if serving a Residential Neighborhood. Pantries can be combined and shared by two or three houses.	80 NSF	80	1	80		
11. **Toilet, Resident / Visitor** Provide one per General Residential House.	50 NSF	60	1	60		
12. **Laundry** Provide one per General Residential House. Laundries can be combined and shared by two or three houses.	100 NSF	100	1	100		
sub total resident space req.				**5,620**	1.55	**8,711**

Staff and Administrative Areas						
13. **House Care / Workstation** Provide one per Residential House. This space functions as a nursing sub-station.	**50 NSF**	50	1	50		
14. **Storage, Clean Linen** Provide one per Residential House.	**20 NSF**	20	1	20		
15. **Storage, Soiled Carts** Provide one per Residential House.	**20 NSF**	20	1	20		
16. **Storage, Equipment** Provide one per Residential House.	**100 NSF**	100	1	100		
17. **Storage, Medical Supplies** Provide one per Residential House.	**100 NSF**	100	1	100		
18. **Housekeeping Aides Closet - HVAC** Provide one per Residential House.	**50 NSF**	50	1	50		
				340	1.55	**527**
						9,238
esidential Neighborhood: Shared Resident Areas						
Residence Areas						
Activity / Multipurpose Minimum NSF; provide an additional 15 NSF per neighborhood resident greater than twenty. Provide one per Residential Neighborhood.	**400 NSF**	400	1	400		
Bathing Suite Provide one per Residential Neighborhood. Residential Neighborhood: Support Areas	**360 NSF**	360	1	360		
Neighborhood Care (Nursing) Station Provide one per Residential Neighborhood.	**250 NSF**	250	1	250		
Exam Room Provide one per Residential Neighborhood.	**120 NSF**	120	1	120		
Medication Room Provide one per Residential Neighborhood if Medication Room is authorized in Concept of Operations.	**100 NSF**	100	1	100		
Utility Room, Clean Provide one per Residential Neighborhood.	**120 NSF**	120	1	120		
Utility Room, Soiled Provide one per Residential Neighborhood.	**100 NSF**	100	1	100		
Housekeeping Aides Closet - HAC Provide one per Residential Neighborhood.	**50 NSF**	50	1	50		
Storage, Stretcher / Wheelchair Provide one per Residential Neighborhood.	**60 NSF**	60	1	60		
Recreation Therapy Room, Group			1	500		
Physical/Occupational Therapy			1	900		
sub totals				**2,960**	1.55	**4,588**
Total for 50 beds in a Specialty Services type cottage community						**41,850**

DESIGN SOLUTIONS

Design Narrative

When a New Hampshire Veteran comes to a point in his/her life when he/she, or his/her family, needs to find a home that focuses on a high quality of life, is safe, and provides the highest level of long term care, the New Hampshire Veterans Home should be their first choice. Design should reflect the high level of care and be centered on the needs of the residents. NHVH will provide several different community living centers, the Village Square and the Cottage Neighborhood. Both have the flexibility to accommodate multiple programmatic needs; they will provide optimum quality of care/quality of life for each veteran and their individual healthcare needs.

The philosophy of the *Village Square* design is to create a community that encourages camaraderie among 10 neighborhoods. The "neighborhoods" are made up of two 10-bed residential living units, "homes," which share some common space used for activities. Community in this sense encompasses all activities and services that are available to residents outside of their residential houses. Our own homes are a perfect analogy for this organization: if you want to play checkers or bake cookies with a family member, you stay home. If you want to go bowling or see a concert, you go into town. Destinations that are easily accessible with a variety of choices are essential to the success of the *Village Square*. The *Village Square* is internal to the community and supports communal activities such as places to dine out, a chapel, library, museum, town square, beauty shop, barber shop, post office, recreation hall, connection to Rehabilitation & Wellness Center, and other gathering spots. Natural daylight is provided by a series of large skylights. The square should be filled with plants and natural daylight.

The main entry of each home has a front porch that connects to the Main Street of the *Village Square*. Each of the 10-bed residential living units is designed as a home in the "Green House" fashion. Each resident has a private bedroom; each bedroom is large enough to enjoy private time and a private accessible bathroom. The kitchens are used to cook food fresh at each meal. Snacks and eating times are flexible. Dining rooms are set up to encourage family-style meals. A shared living room and activity space give the residents continued interaction among fellow residents when desired. A direct connection to outdoor space from each home admits fresh air and encourages outdoor activities. The wonderful vistas of the surrounding countryside can be seen from many rooms.

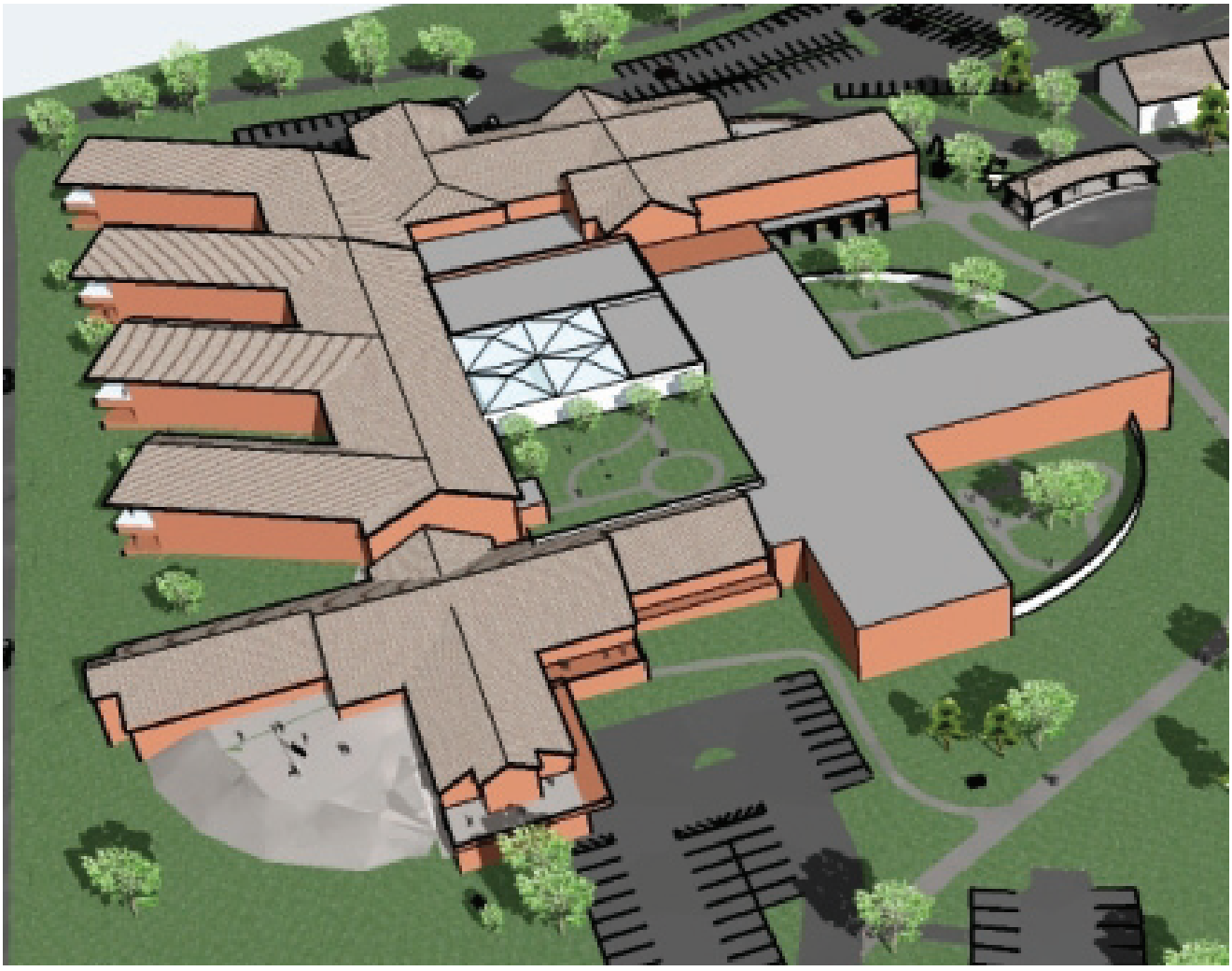
The "Green House" units provide residents with a more familial, homelike environment in which they can spend their evenings and quiet times. Outside these homes, a much more active area is envisioned, where all members of the larger community can come together. Activities will encourage interaction and promote a life filled with meaning and purpose. Food and dining are a very large part of any community, and several dining options are to be offered in the Village Square.

The *Cottage Neighborhood Concept,* to be located in the northeast portion of the campus, will offer a more independent living experience and also provides flexibility in programming options. The cottages themselves will follow the same philosophy as the residential living units within the *Village Square* concept; however, they will include a neighborhood of five cottages with a separate support building. Each stand-alone cottage will be able to be dedicated to more specific programmatic needs. The possibilities could be a Respite Cottage, Hospice Cottage, secure Behavioral Health Cottage, Women's Health, or cottages for veterans with Traumatic Brain Injury, or cottages for certain age groups. Flexibility is the key.

The *Village Square* and the *Cottage Neighborhood* concepts will be linked together through shared outdoor space and could be connected with covered walks. Staffing dedicated to the *Cottages* would be supported by the same clinical staff that supports the *Village Square*. Administrative services and facilities support would also be shared.

“Village Square”

20 Residential Living Units connected to Village Square/Community Center



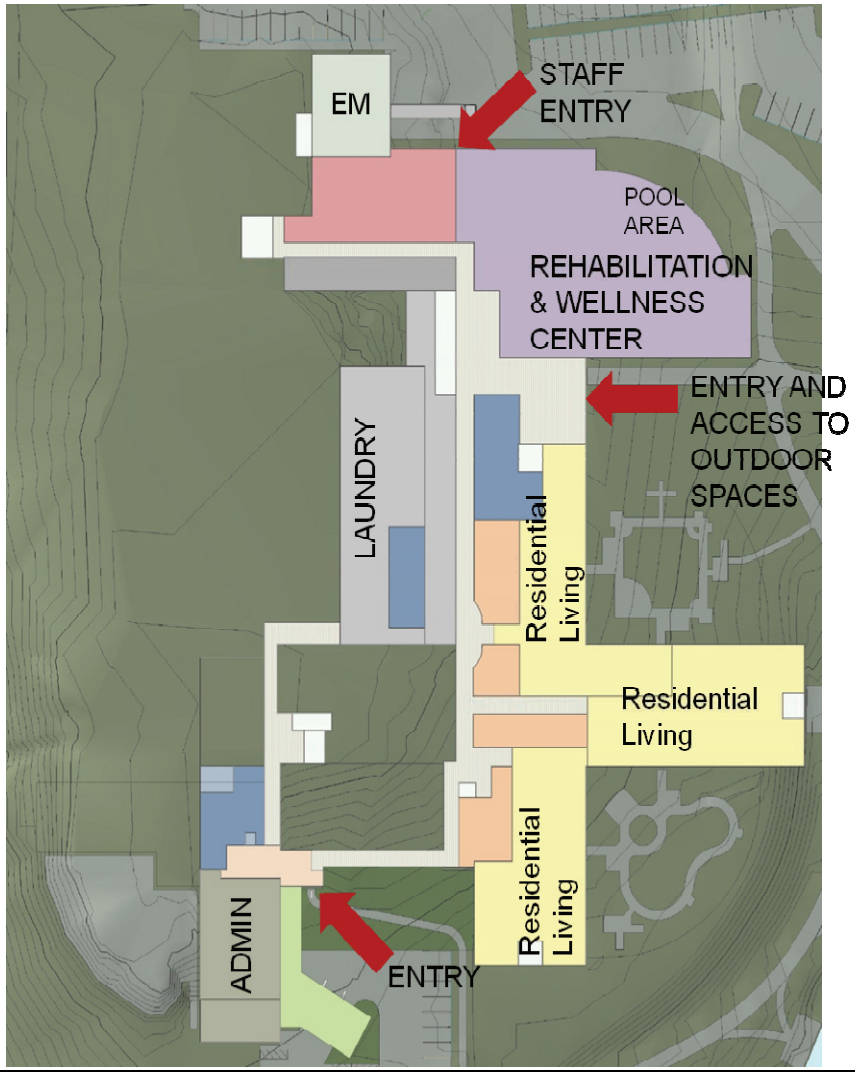
Typical Residential Living Unit within Village Square Neighborhood

Each of the Living Units is a "Home" with 10 private bedrooms with private bathrooms, shared living areas, family style dining, eat-in kitchens, outdoor space, and program space shared with a neighboring Living Unit. There are two bedrooms per Living Unit that are large enough to accommodate the needs of a resident with obesity issues and/or that require specialty equipment. Each bedroom will be equipped with over bed lifts to assist staff with transfers. Housekeeping and Facility Services access the unit from a backdoor to not disturb residents.

The "front" door of each Living Unit is along "Main Street" and gives residents a spot to sit and enjoy the surrounding community. A connection to the Village Square is a major part of this design. Dining options and activities are close by.

Lower Level Plan

- HOME
- SUPPORT
- REHABILITATION & WELLNESS CENTER
- LAUNDRY
- ELEVATOR/STAIR
- ADMIN
- STAFF/KITCHEN SUPPORT
- EMERGENCY MGMNT
- GEOTHERMAL



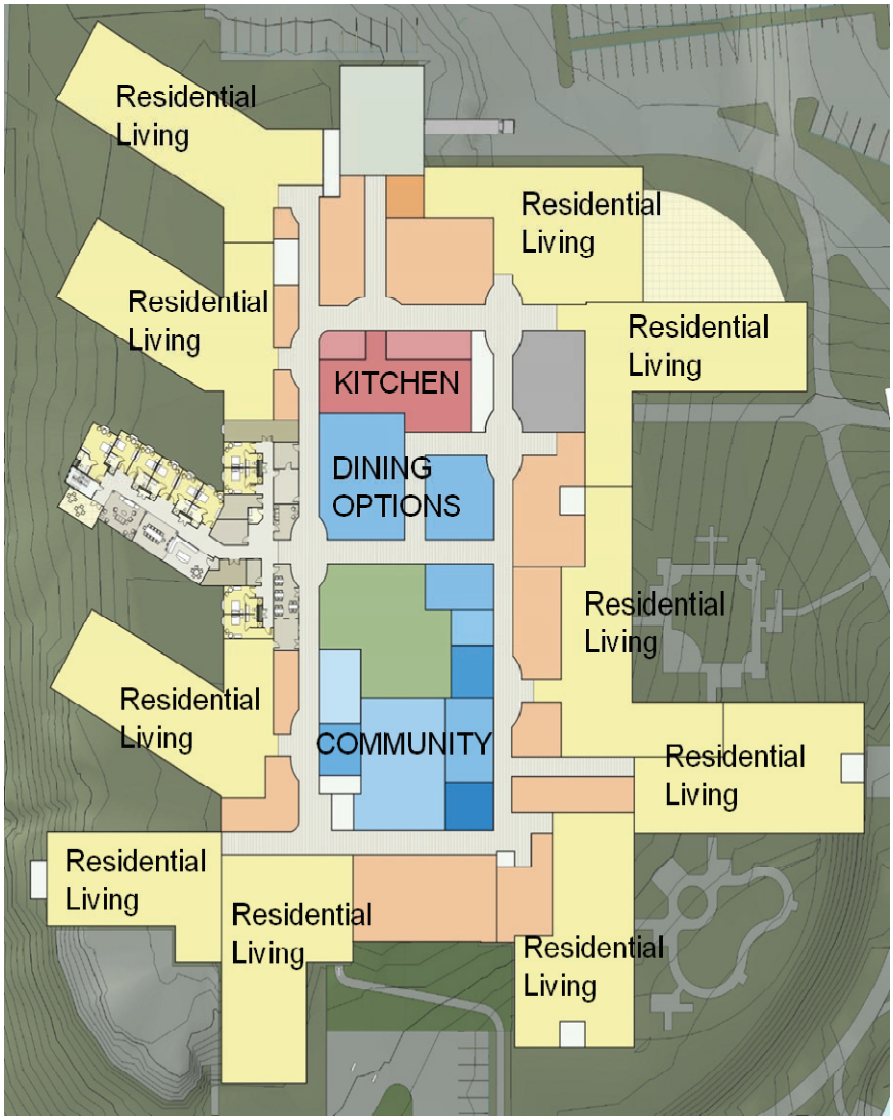
The lower level of the village will include a multitude of functions: Residential living, Rehabilitation & Wellness Center, administrative space and support services such as central laundry and housekeeping. A corridor will be created to connect all elevators to allow support services to access to the upper floors a vertical format versus horizontal one, limiting the need to travel through residents' private spaces.

The Rehabilitation and Wellness Center will be placed to be built without affecting the existing operations of the residential facilities. The placement of the pool minimizes the impact on it during future construction projects.

The entry created with the Rehabilitation & Wellness Center will become the main entrance for the village. Direct access to the grounds and walkways that lead to the Pavilion, the pond, and trails beyond will be from this point.

First Floor Plan

- HOME
- SUPPORT
- KITCHEN/SUPPORT
- COURTYARD
- ELEVATOR/STAIR
- OPEN TO BELOW
- COMMUNITY/DINING

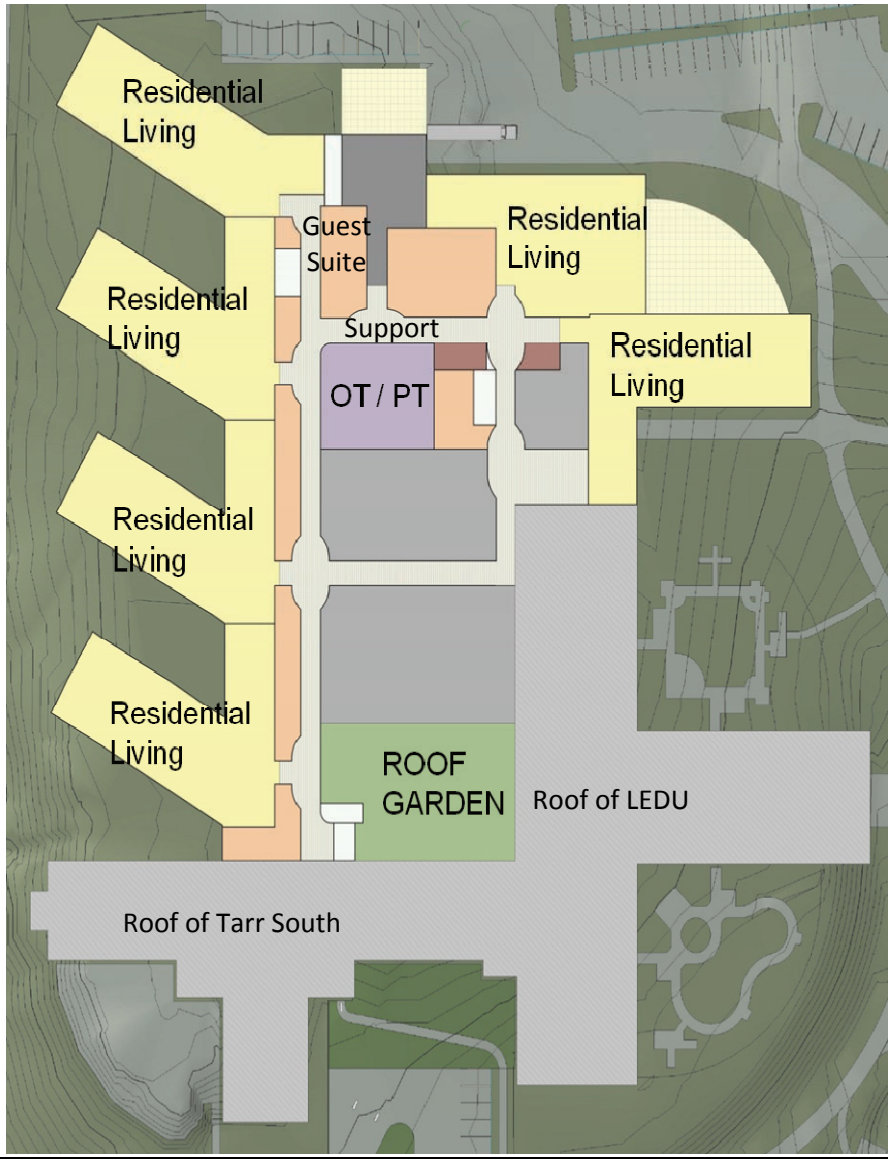


The First floor is the primary level of residential living and the Village Square. A loading dock will be added adjacent to the Multipurpose Emergency Operations Center and used as the main loading dock for food service and building services. The kitchen and dining services along with related support services would be located on this level.

Residential Living units will have front porches along Main Street and direct access to gardens and outdoor spaces.

Second Floor Plan

- HOME
- SUPPORT
- OT/PT
- ROOF GARDEN
- ELEVATOR/STAIR
- OPEN TO BELOW
- GUEST SUITES
- FAMILY



The Second Floor is primarily Residential Living units with front porches overlooking "Main Street" below. Access to outdoor patios from each residential living unit and access to a roof top garden are provided. The roof top garden has views to the southeast Additional OT/PT space is recommended on this level to encourage daily activity. Elevators should be placed to allow easy access to the center of the *Village Square* or the *Commons* and the Rehabilitation and Wellness Center.

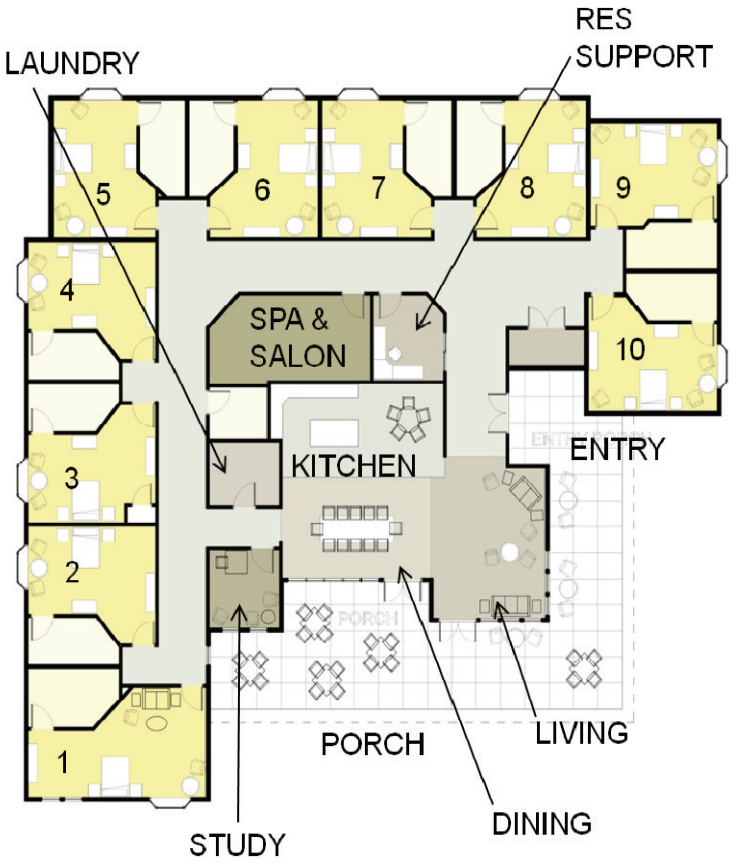
“Cottage Neighborhood” Five 10-bed “Cottages” with Support Building

These five 10-bed cottages are an exciting addition to the greater campus community. Each of these “woodland” cottages is set up as previously described. They will feature open decks and large, screened-in porches with views toward the woods, open fields, and the trout pond.

These cottages can provide specialty services independent of those offered in the Village Square, but can share staffing and support services. The shared support building would accommodate the cottage community as a gathering spot for activities and PT/OT services. These cottages will accommodate special needs of select veterans groups, whether it be Hospice Care, Behavioral Health Services, Women’s Health Services, Respite, or Transitional Living Skills.

The campus central outdoor spaces including the Pavilion, trails, fire pit, and on-site pond are easily accessible from the cottages. Being a part of the bigger campus community but with an independent identity will contribute to the cottages’ success.

The rendering below illustrates an example of a possible cottage design.



Cottages – Possible Floor Plans

Specialized Services

The cottage model floor plan is intended to provide the residents with the feeling of independence while enjoying the support of a real community. The bedrooms are positioned surrounding the shared living and dining spaces, providing easy access to core activities and encouraging self ambulation. Large windows allow views to the outside and bring in natural daylight to each room. Each cottage is designed to have strong connections to the outdoors with surrounding yards secured if programmatically required.

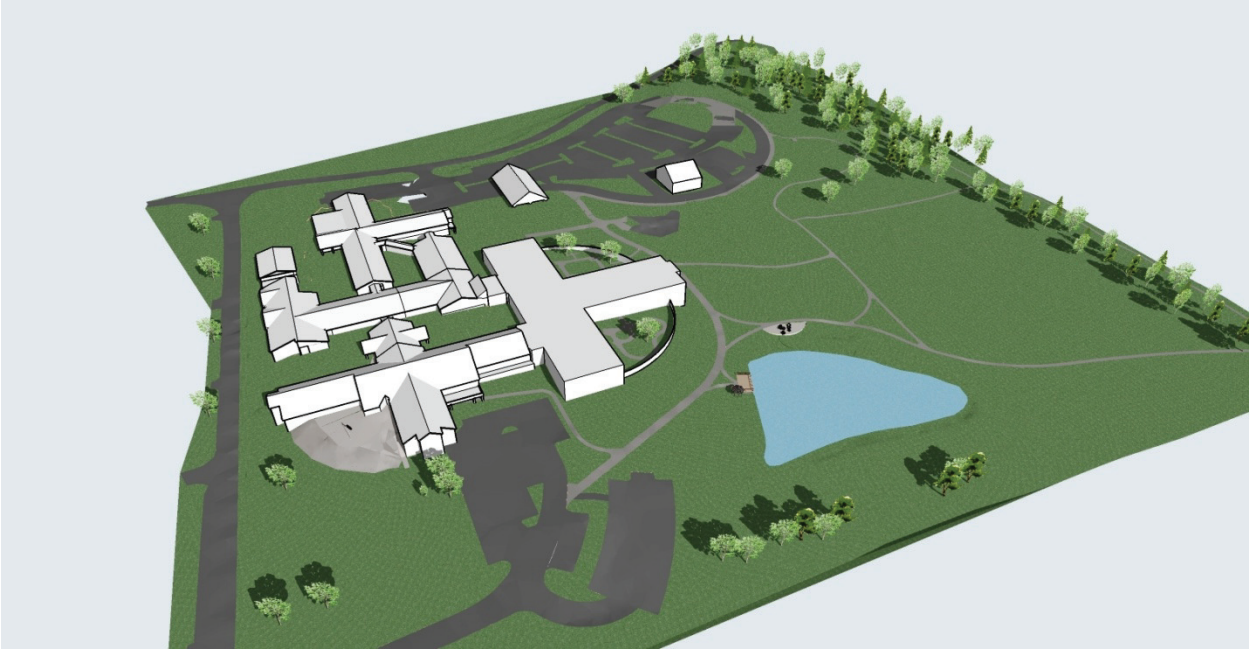
To the extent possible, bedrooms should be decorated by the residents or with their input. Private bathrooms are provided. Each Private room is large enough to have a small sitting area to enjoy private time.

These cottages are designed to accommodate specialized type services, (i.e. polytrauma or hospice services where more staff assistance or equipment are needed) expected to be in the 9,200 sf range. Over each bed would be a lift integrated into structure to assist staff when necessary. A shared support building could alternately be used as the location for extended OT/PT services, related office space, or be provided with a large fireplace to gather around for neighborhood activities or events.

RECOMMENDED IMPLEMENTATION

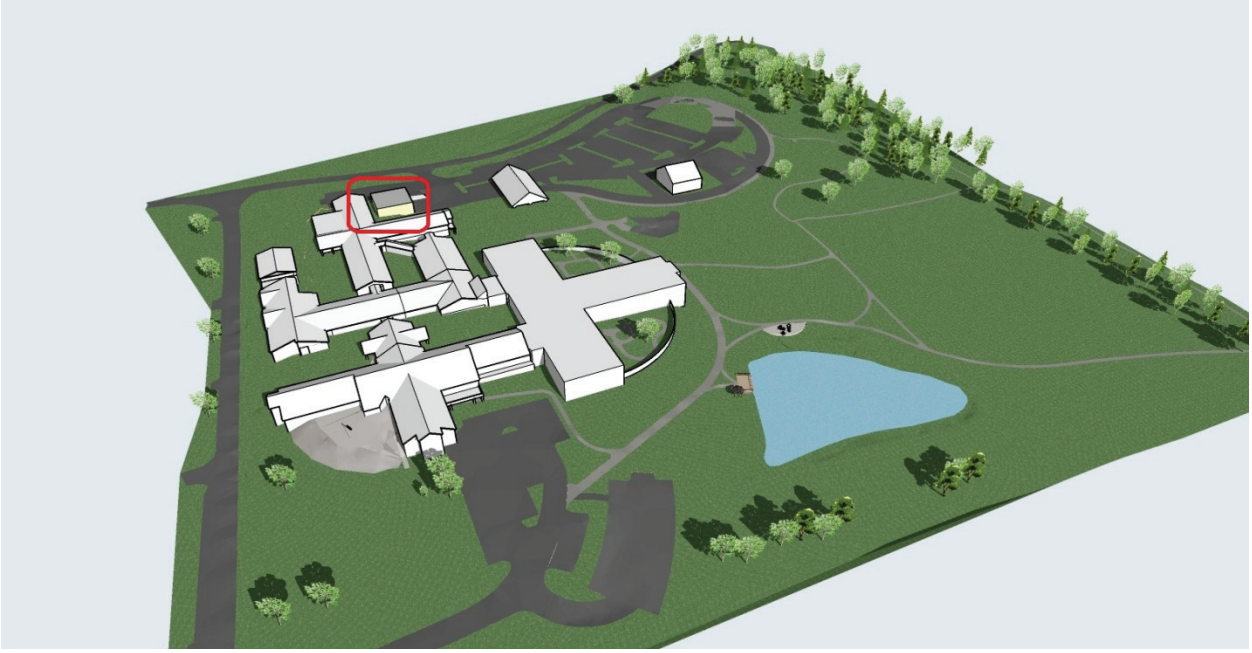
This complex and comprehensive plan requires a strategic implementation to address expected funding cycles, and to minimize the impact on ongoing veterans' services. The following project phasing plan describes the major implementation components.

Existing Campus



Existing campus – 250 beds in traditional - Nursing home configuration - 142 beds are in semi-private rooms with shared toilet rooms between multiple rooms and a shared bathing room for each suite of rooms.

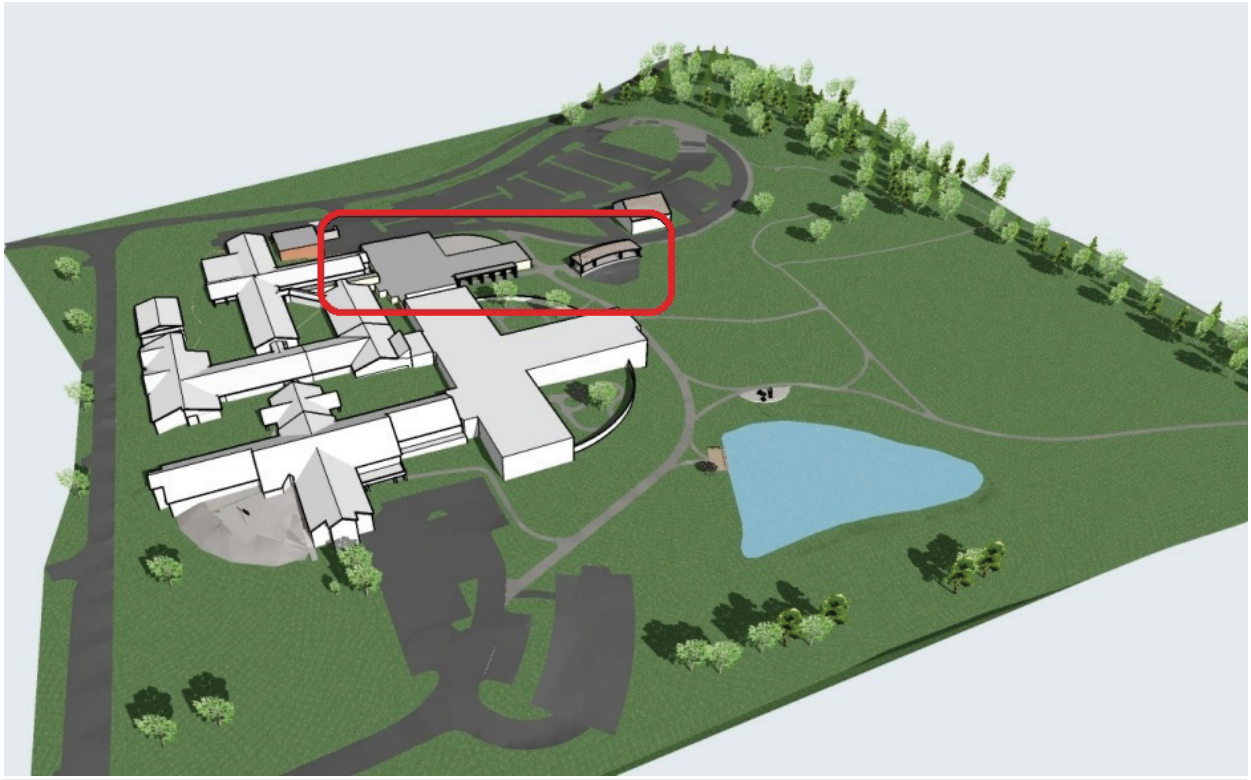
Project 1 - Multipurpose Emergency Operations Center



Beds available during this project: 250 existing total. 142 beds are in semi-private rooms with shared toilet rooms (four residents use one toilet) and a shared bathing room (between one and three bathing rooms per 50 residents) for each unit.

The design of the emergency management building was started in April 2010. Construction is anticipated to begin in the spring of 2011. This building will be used to accommodate several functions including deliveries, storage of bulk supplies, emergency facilities, and staff support space.

Project 2 - Rehabilitation & Wellness Center and Pavilion

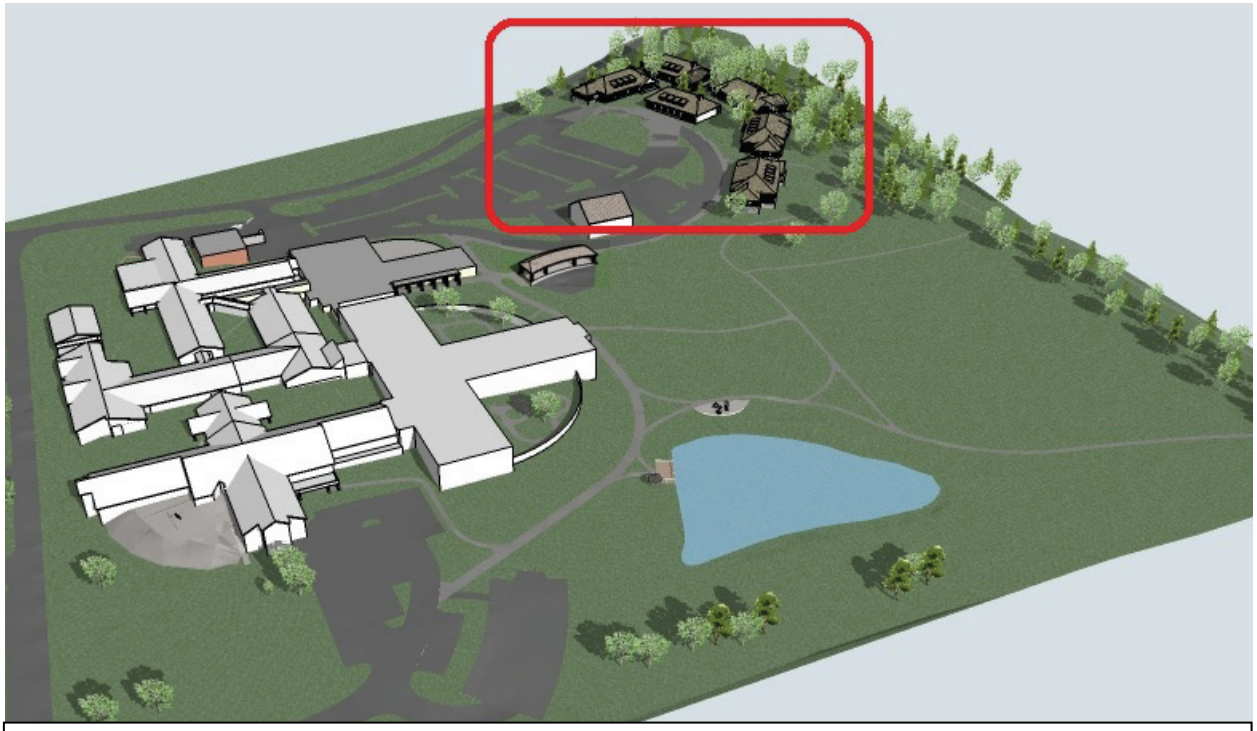


Beds available during Project 2: 250 existing total. 142 beds are in semi-private rooms with shared toilet rooms (four residents use one toilet) and a shared bathing room (between one and three bathing rooms per 50 residents) for each unit.

The existing physical therapy area is severely limited in function due to the lack of space (less than 1100 sf.) Based on identified programmatic needs, the space needed to provide adequate program and support space is approximately 15,000 sf. The construction of the Rehabilitation and Wellness Center will help to meet those needs. Programs to help residents with long-term rehabilitation needs and residents who have a desire for daily wellness exercise will be accommodated. The Rehab/Wellness Center will also be available to staff at times when residents are not using it. This can contribute to staff wellness, retention, and improved morale.

A careful review of the campus infrastructure should be initiated as an integral component of the first major construction phase. This study should include the infrastructure needs of this and future projects. Close coordination of building fire separations and floor levels of future phases will need to be identified as part of the project.
This structural system of this project needs to be designed to accommodate the future construction of the residential living units above. During this project the Pavilion and the American Legion Park will be relocate as planned. This will open up the northern parking area to allow for construction and to upgrade site infrastructure.

Project 3 - Cottages and Infrastructure / Site Upgrades (5 - 10 bed cottages)



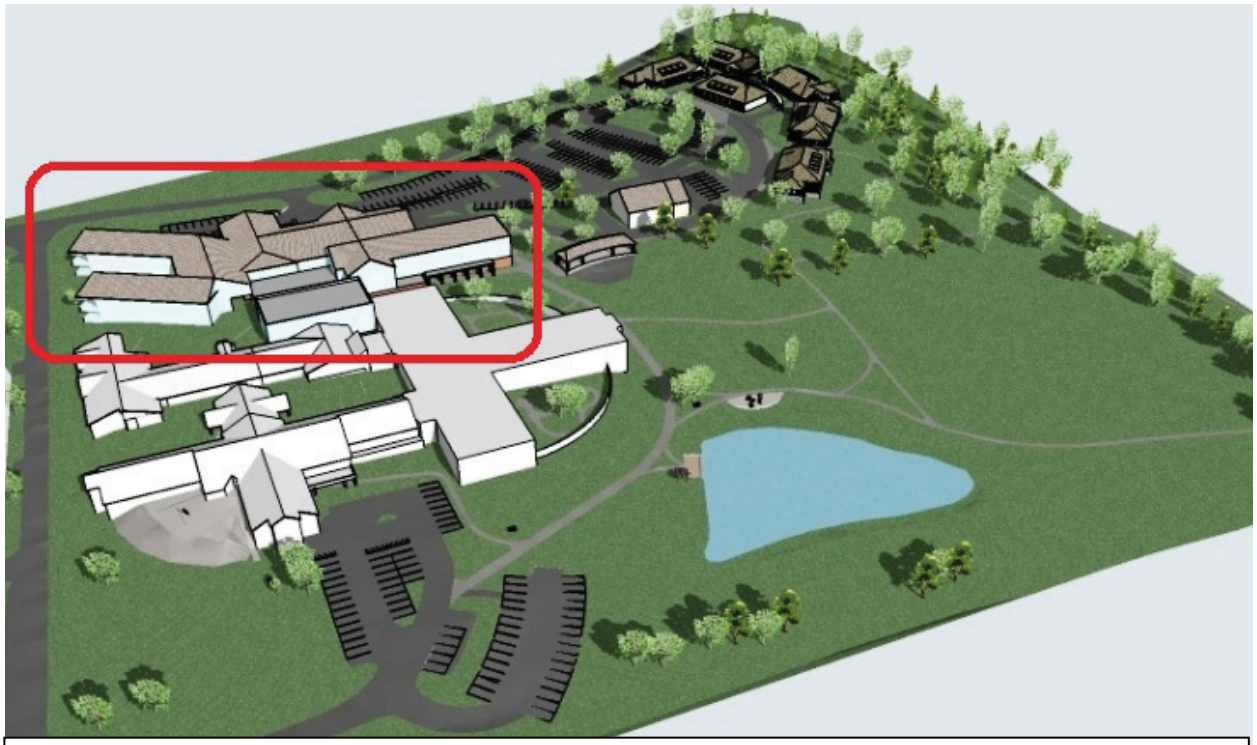
Beds available during Project 3: 250 existing total. 142 beds are in semi-private rooms with shared toilet rooms (four residents use one toilet) and a shared bathing room (between one and three bathing rooms per 50 residents) for each unit.

Project 3 includes the construction of the five 10-bed "Green House" style cottages and support building. The cottages will be constructed in the northeast corner of the campus. The project will serve several purposes;

1. During future projects that involve demolition of existing beds, these 50 beds help to keep the available beds at the desired census of 250.
2. With these cottages being designed in the Green House concept the services that can be offered by NHVH can be greatly expanded. Specialty programs such as respite, hospice care, behavioral health, and specialized care for women veterans are just a few. Younger veterans with TBI, PTSD or polytrauma who need interim assistance in daily living between rehabilitation services and going back to their communities may benefit from this format of service.
3. These five homes will give NHVH an opportunity to implement the new *Green House* programming model and analyze staffing/programming issues prior to the construction of the remaining 200 beds.

The site infrastructure work related to this project includes the remaining portions not completed in Project 2. Ultimately by the completion of Project 3, all utility upgrades, 50% of all walking trails, and the majority of all parking will be completed. The increased parking provides space for construction staging and parking.

Project 4 - Food Service & Residential Living (80 beds)



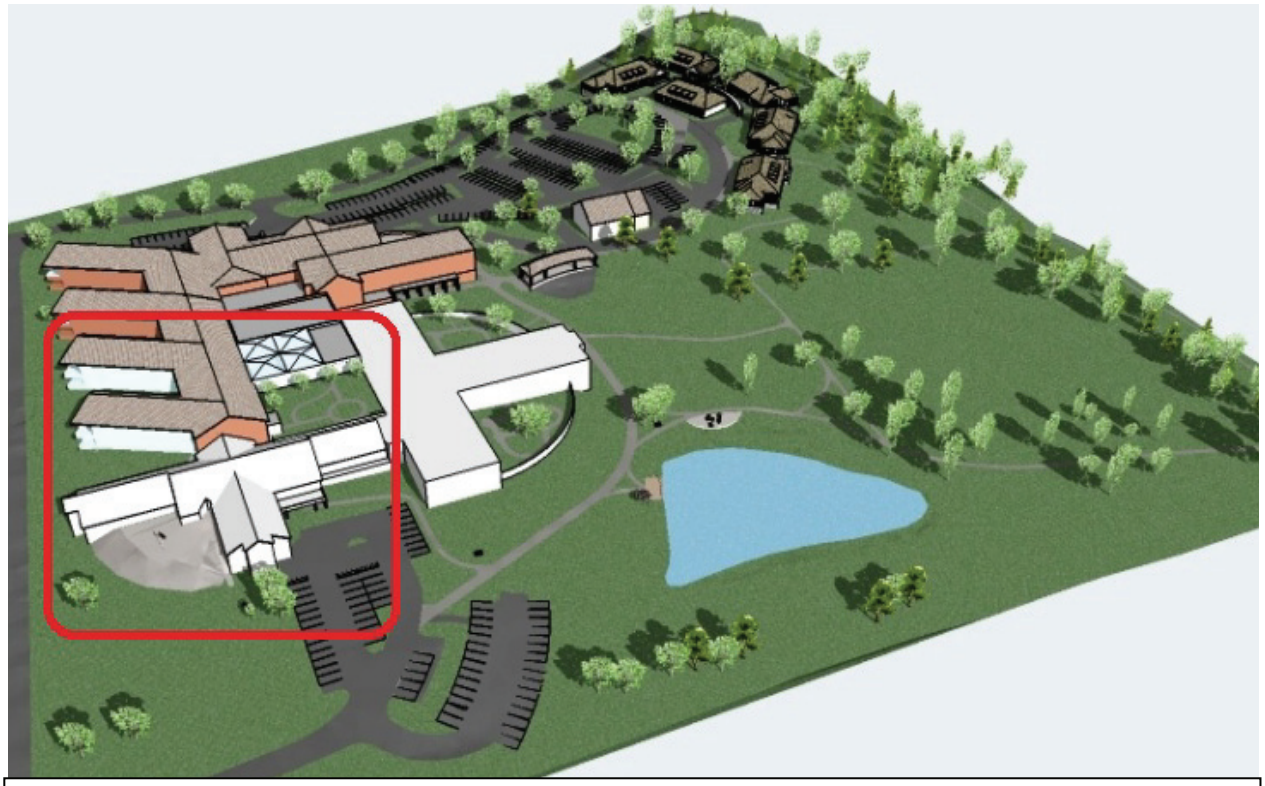
Beds available during Project 4: 246 -248 beds total - 50 beds in cottages created in Project 3, 50 beds in Tarr North, 52 beds in Tarr South and 96 existing beds in LEDU for a total number of 248 available beds. (There will be a need to relocate 4-6 beds from the northwest corner of both floors of LEDU in order to accommodate construction and a new connection to Village Square.)

Project 4 will be the most involved project of the Master Plan: Coordination and construction phasing during the planning stages of design will be critical to the implementation of this project. Consideration of the following items should be considered:

1. The project includes building residential living units over the Rehabilitation and Wellness Center, a new kitchen and the first section of the Village Square's common areas.
2. Phasing of the project will need to maintain the existing kitchen, while the new one is constructed.
3. The laundry and housekeeping departments may need to be temporarily relocated. Consideration should be given to outsourcing laundry on a temporary basis.
4. The Geothermal mechanical space located on the lower level of Welch is intended to stay in its current location, however at the time of design the cost benefits of relocating versus maintaining in-place should be evaluated.

Upon completion of this project, there will be eight new 10-bed residential living units. The new central kitchen that will support the residential living areas, provide dining choices in the *Village Square* complex, and continue to provide food for the existing units will be completed.

Project 5 Residential Living & Community Center & Tarr South (60 beds)



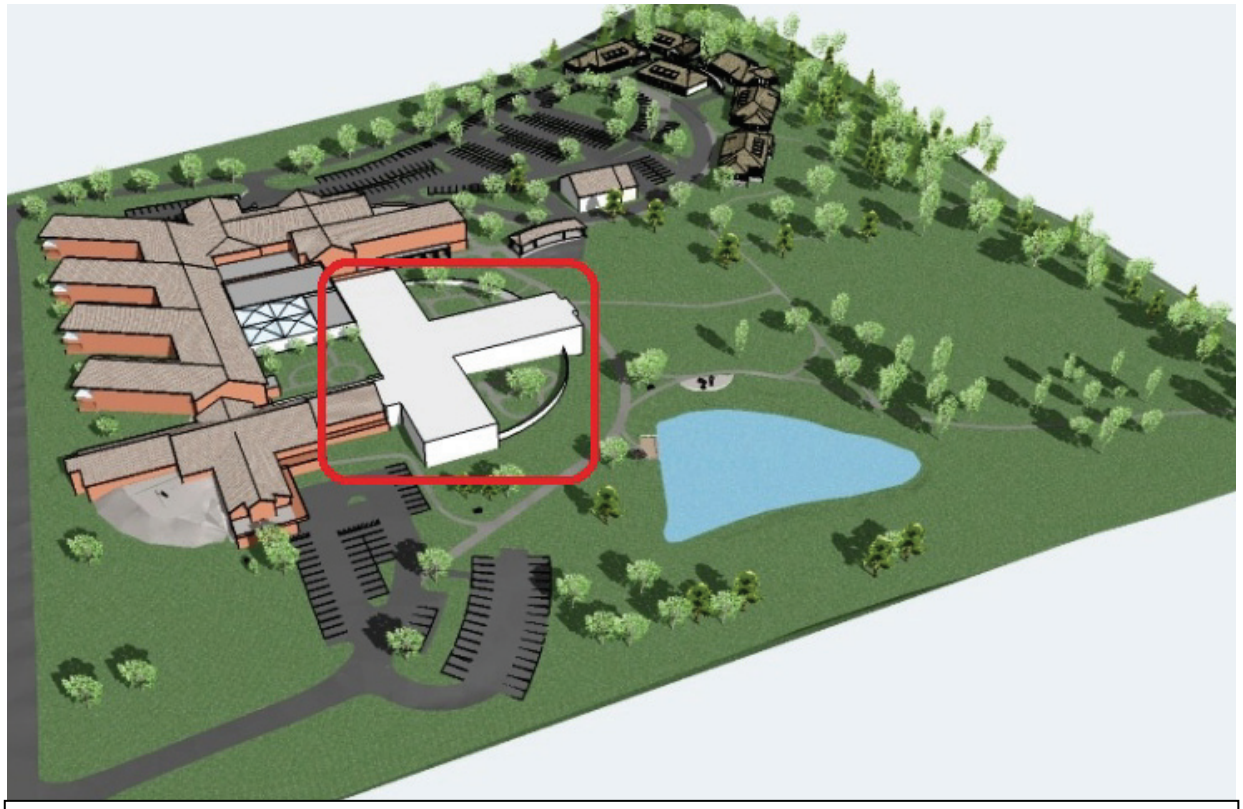
Beds available during Project 5: 226 beds total - 50 beds in cottages created in Project 3, 80 beds created in Project 4 and 96 existing beds in LEDU for a total number of 226 available beds.

Project 5 – This is a combination of new construction and renovation. Tarr North is demolished and Tarr South is renovated. The existing dining/gathering rooms located on the main level of Tarr North will be demolished during this project, but the newly-constructed Village Square Commons will have space available to serve this function. The activities spaces that are now located on Main Street of Tarr North will also be replaced with new spaces. Again, phasing and coordination of programs will need to be carefully orchestrated.

While Tarr South is being renovated, relocating Administrative Services and the main entrance of the Veterans Home to the Rehabilitation and Wellness Center entrance should be considered. There will be ample parking and interior accessibility to all active programs from this entrance.

Upon completion of Project 5 there will be 60 new beds in private rooms, with private bathrooms. The Administrative wing will have a facelift with a small addition. The remaining portion of the Village Square Commons that will house functions such as barber shop, beauty salon, recreation center, chapel, and more will be available. The main entrance will be reworked to allow the covered drop-off to function without impeding the parking lot traffic pattern. New parking and better access to trails and the pond will be completed.

Project 6 - LEDU Renovations – 6 Residential Living Units (60 beds)



Beds available during Project 6 of construction – 190 beds total - 50 beds in cottages project 3, 80 in residential living created in project 4, 60 beds in residential living created in project 5. During this project in order to keep the available beds to a maximum, renovations to LEDU are recommended to be completed in phases.

Project 6 is a reconfiguration of the existing units within LEDU to provide six 10-bed residential living units. This project can be phased to allow a minimum of 250 beds available on the campus. Because this building was completed in 2003 the recommendation is to review the condition of the building at a later date to evaluate the condition of the structure, and then determine the cost benefits of renovations versus new construction.

Assuming that project 6 is executed as a renovation project, there will be 6 ten bed residential living units in the "Green House" concept within the existing footprint. There will be direct connection to the Village Square complex and appropriate access to the outdoors.

This would complete the Campus portion of the Master Plan.

Tilton Campus with Master Plan complete

Upon completion there will be twenty 10-bed homes in the Village Square complex and five 10-bed Cottages in a neighborhood configuration for a total of 250 beds. All homes will take advantage of the beautiful views, and outdoor activities will be extended to the take full advantage of the property's potential.

Project 7 – Satellite Community-Based Residential Long Term Care Services for New Hampshire Veterans

New Hampshire Veterans Long Term Care Residential Services are currently centralized at the NHVH Tilton campus. The USDVA is currently encouraging service models that allow veterans and their families to receive some or all of the available services close to home. The concept is to provide services in the communities where they are needed, allowing veterans the opportunity to stay close to family members and remain a part of their community.

Community-based services in NH could take several forms. There could be a satellite campus, a series of cottages in one community, or several cottages demographically distributed across the state. The operational cost related to this model could have a significant impact on the annual budget of the Home and would need to be investigated. If it is a "Green House" style cottage, staffed with a shahbaz (caretaker) who is crossed-trained to run the program, and clinical staff comes from off-site, then the on-campus Cottage neighborhoods will be helpful in estimating financial and programmatic needs.

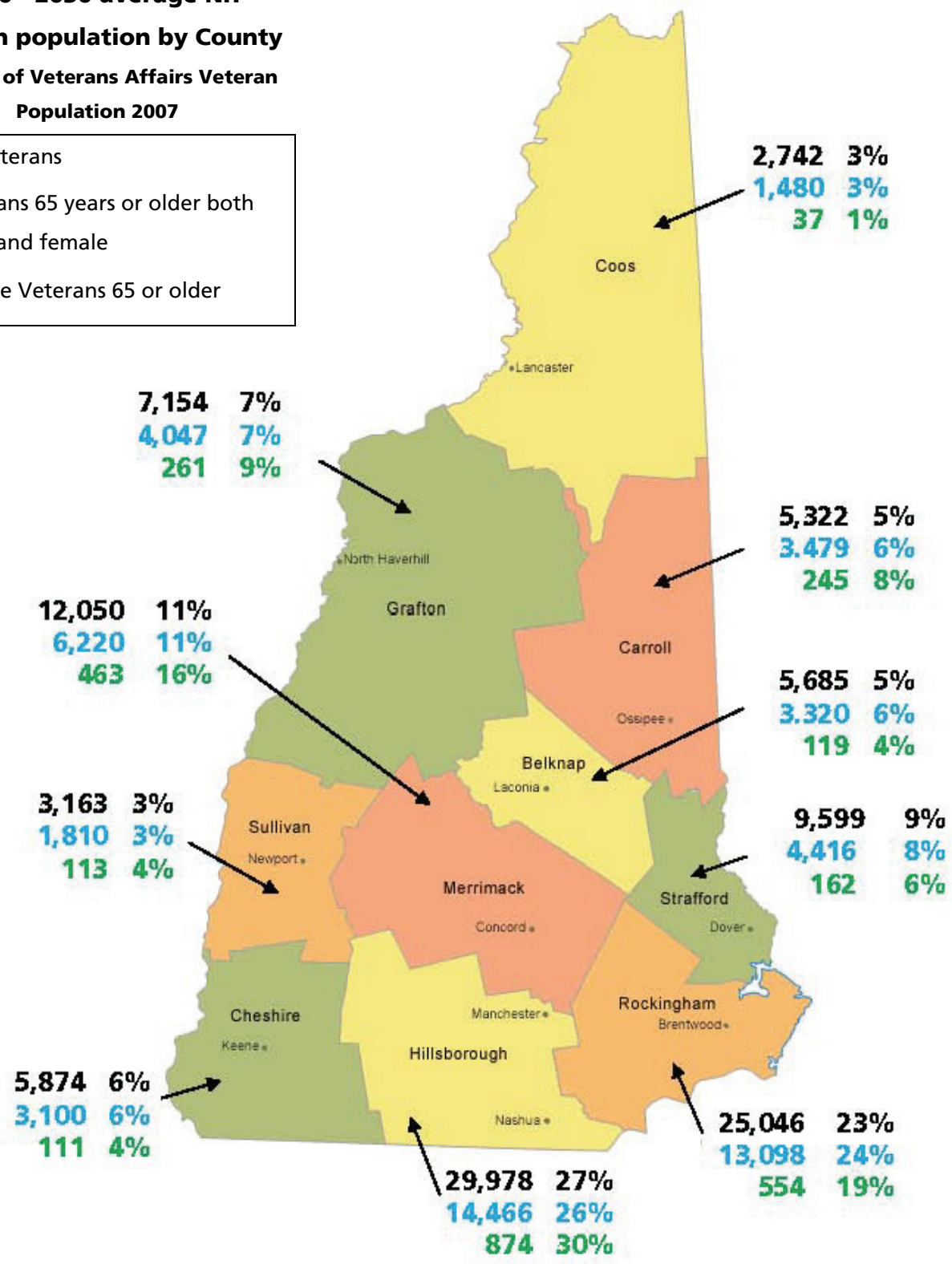
To determine where this service would have the greatest impact, a market study is required. If population alone is to be the determining factor then according to NH Employment Security Economic and Labor Market Information Bureau, in 2007 10.1% of New Hampshire's population were veterans. Strictly looking at population numbers, the locations for services would be Hillsborough or Rockingham counties. If the choice of locations is to be determined by the county that has the largest share of its population identified as veterans, it would be Carroll with 13.3% of its population veterans. More research is needed because other, more complex factors (availability of other long-term care options, per capita wealth of veterans in different counties, increased operating expenses, etc.) will have to be analyzed before off-campus satellite locations are a viable option.

The distribution of veterans throughout New Hampshire is expected to stay proportionally consistent over the next 30 years, with numbers peaking in 2014.

2010 - 2030 average NH Veteran population by County

US Dept of Veterans Affairs Veteran Population 2007

All Veterans
Veterans 65 years or older both male and female
Female Veterans 65 or older



NOTES:

PRELIMINARY *CONSTRUCTION* COST ESTIMATE

(Based on 2011 construction dollars and includes a 15% contingency)

Project 1 Multi-purpose Emergency Operations Center (currently under construction)	**$ 1,000,000**
Project 2 Rehabilitation Center & Support Services	**$ 7,813,119**
Project 3 (5) Cottages 50 Beds & infrastructure	**$ 13,888,435**
Project 4 Food Service /Dining options/Community Center and 80 beds	**$27,304,226**
Project 5 Residential Living Spaces & Community Center & Tarr South Rehab	**$17,510,245**
Project 6 LEDU - Renovations	**$ 13,917,783**
TOTAL OF PRELIMINARY ***CONSTRUCTION COST*** *for on campus construction* (each project includes 15% construction contingency)	**$81,433,808**
Project 7 Community Based Option (per 10 bed Home) Based on 7,000 sf home at $200 per ft construction cost and $500,000 site cost allowance	**$2,347,600**
Additional Soft Cost – Initial Surveys, Architectural/Engineering Fees, Administrative Cost, Permits, Testing, Furniture and Equipment	**Plus 15% to 20% of construction cost**

PRELIMINARY *PROJECT* COST ESTIMATE

Approximate funding that would be required from State of New Hampshire *Proposed projects cost includes anticipated construction and soft cost such as Architect/Engineering fees and Furniture & Equipment*

Project 1
$$$ already committed

Project 1 Multi purpose Building (already in design)

	$1,000,000	project cost provided by NHVH

Project 2
NH's required commitment
$2,870,132

Project 2 Rehabilitation Center & Support Services

$	6,794,017	construction cost
	15%	construction contingency
$	1,019,103	
$	7,813,119	
	18%	soft cost additional to construction cost
$	1,406,361	anticipated soft cost
$	**8,200,378**	Project cost
	65%	percent paid by VA
$	5,330,246	amount paid by VA
$	2,870,132	NH responsibility for entire project

Project 3
NH's required commitment
$5,735,924

Project 3 Cottages - 50 beds on Tilton Campus

$	12,076,900	construction cost
	15%	construction contingency
$	1,811,535	
$	13,888,435	Anticipated construction cost
	18%	soft cost additional to construction cost
$	2,499,918	anticipated soft cost
$	**16,388,353**	Project cost
	65%	percent paid by VA
$	10,652,430	amount paid by VA
$	5,735,924	NH responsibility for entire project

Project 4
NH's required commitment
$11,276,645

Project 4 Food Service/Dining options /Community Center and 80 beds

	$23,742,805	construction cost
	15%	construction contingency
$	3,561,421	
$	27,304,226	Anticipated construction cost
	18%	soft cost additional to construction cost
$	4,914,761	anticipated soft cost
$	**32,218,986**	Project cost
	65%	percent paid by VA
$	20,942,341	amount paid by VA
$	11,276,645	NH responsibility for entire project

Project 5
NH's required commitment
$7,231,731

Project 5 Residential Living 40 beds and Community Center and Tarr South renovations

	$15,226,300	construction cost
	15%	construction contingency
$	2,283,945	
$	17,510,245	Anticipated construction cost
	18%	soft cost additional to construction cost
$	3,151,844	anticipated soft cost
$	**20,662,089**	Project cost
	65%	percent paid by VA
$	13,430,358	amount paid by VA
$	7,231,731	NH responsibility for entire project

Project 6
To be reviewed at later date

Project 6 Renovations to LEDU

Future consideration - program and services to be reviewed at a later date.

APPENDIX A

REFERENCES

United States Department of Veterans Affairs
Office of Construction & Facilities Management
VA Space Planning Criteria (106) March 2008 (SEPS Version 1.6) Nursing Home Series

United States Department of Veterans Affairs
Geriatric Research Education and Clinical Centers

National Association of State Veterans Homes
2010 NASSVH Winter Conference Dennis Hancher's presentation on Small Houses in State Home Program

New Hampshire Veterans Home
http://www.nh.gov/veterans/index.html

New Hampshire Veterans Affairs – Home Page *http://www.nh.gov/veterans/index.html*

NH Employment Security Economic and Labor Market Information Bureau

American Institute of America (AIA) *Design for the Aging*

American Institute of America (AIA) *Private Bedrooms in Nursing Homes: Benefits, Disadvantages, and Costs*

SAGE - Society for the Advancement of Gerontological Environments
http://www.sagefederation.org/

Advance for Long-Term Care Management – May/June 2010 *Aquatics at Work*

Ideas Institute – *Home is Where the Heart Is: Designing Home-like Settings*
http://www.ideasinstitute.org/article_021103_c.asp

Call to Action - Health Reform 2009, 11/12/08 *Senate Finance Committee names Green House® Project as a program that should be piloted.*

Long-Term Living 08/01/2009 - *Managing Alzheimer's in the Green House*

The Long-Term Living Magazine 10/19/2010 *Fitness equipment's dramatic effect on reducing incontinence*

Lancaster Pollard – The Capital Issue – Senior Living - Summer 2010
The Financial Viability of Building and Operating Household Projects

Endnotes

[1] Department of Veterans Affairs – Rehabilitation Research & Development Services - *Journal of Rehabilitation Research & Development Volume 46 Number 6, 2009 pages 879-892* Families of patients with polytrauma: Understanding the evidence and charting a new research agenda

[2] *Brain& Spinal Cord .org*
Resources & Information for Brain & Spinal Cord Injury Survivors
Acute Treatment for TBI

[3] "Aging in place" refers to living where you have lived for years, typically not in a health care environment, using products, services, and conveniences which allow you to remain home as circumstances change. In other words, you continue to live in the home of your choice safely and independently as you get older. Definition provided by *Aginginplace.com*

[4] Eden Alternative
http://www.edenalt.org/

[5] Green House *Green House® Life - It's a Home*

> **http://www.ncbcapitalimpact.org** THE GREEN HOUSE® model creates a small intentional community for a group of elders and staff. A radical departure from traditional skilled nursing homes and assisted living facilities, The Green House model alters facility size, interior design, staffing patterns, and methods of delivering skilled professional services. Developed by Dr. William Thomas and rooted in the tradition of the Eden Alternative, a model for cultural change within nursing facilities, The Green House model is intended to de-institutionalize long-term care by eliminating large nursing facilities and creating habilitative, social settings.
>
> The Green House residence is designed to be a home for six to ten elders. It blends architecturally with neighboring homes, includes vibrant outdoor space, and utilizes aesthetically appealing interior features. Each elder has a private room or unit with a private bathroom. Elders' rooms receive high levels of sunlight and are situated around the hearth, an open kitchen and dining area. While adhering to all codes required by regulations, Green House homes look and feel like a home, and contain few medical signposts.
>
> *Warm:* Warmth is created by the floor plan, decor, furnishings, and the people.
> *Smart:* Use of cost effective, smart technology-computers, wireless pagers, electronic ceiling lifts, and adaptive devices.
> *Green:* Sunlight, plants, and access to outdoor spaces.
>
> Each elder enjoys a private room or unit with a private bath which they decorate with their own belongings. There is easy access to all areas of the house including the kitchen and laundry, outdoor garden and patio. Safety features are built into the house to minimize injury. The small size of The Green House home promotes less use of wheelchairs. The elder is free from the limitations of an institutional schedule and lives a comfortable daily life - sleeping, eating, and engaging in activities as they choose. Meals are prepared in the open kitchen and served at a large dining table where staff, elders and visitors enjoy pleasant dining. This is characterized by good fresh food, a well set table often with music and flowers, and good conversation with people who care about one another.

[6] Gerontology society of America The Gerontologist**,** Volume 47, Issue 2 Pp. 169-183

[7] "*Envisioning your future in a nursing home*" *for additional information on single vs semi-private rooms."* Original research by Margaret P. Calkins, Ph.D. President, IDEAS Inc. Board Chair, IDEAS Institute Founding member and Board Member, SAGE

[8] The Gerontological Society of America –
Exploring the Cost and Value of Private Versus Shared Bedrooms in Nursing Homes
Written by: Margaret Calkins, PhD, and Christine Cassella

[9] NH employment security formally NH Employment Security February 2009 publication:
https://www.nh.gov/nhes/elmi/pdfzip/specialpub/infocus/Veterans2009.pdf

[10] USDVA Office of Policy and Planning Distribution Revised and Updated September 2007 *Women and USDVA Women – Veterans: Past, Present and Future*

[11] http://www.ptsd.va.gov/professional/pages/traumatic-brain-injury-ptsd.asp

[11] The United States Department of Veterans Affairs

[12] American Association for Geriatric Psychiatry - *AAGP Legislative and Regulatory Agenda 2009-2010 "Aging Matters"*

GLOSSARY

Alzheimer's Disease http://www.alz.org/alzheimers_disease_what_is_alzheimers.asp

Alzheimer's is a brain disease that causes problems with memory, thinking and behavior. Symptoms usually develop slowly and get worse over time, becoming severe enough to interfere with daily tasks.

Alzheimer's is a progressive disease, where symptoms gradually worsen over a number of years. In its early stages, memory loss is mild, but with late-stage Alzheimer's, individuals lose the ability to carry on a conversation and respond to their environment. Alzheimer's is the sixth leading cause of death in the United States. Those with Alzheimer's live an average of eight years after their symptoms become noticeable to others, but survival can range from three to 20 years, depending on age and other health conditions. Stages of Alzheimer's Disease:

Stage 1: No impairment
Stage 2: Very mild decline
Stage 3: Mild decline
Stage 4: Moderate decline
Stage 5: Moderately severe decline
Stage 6: Severe decline
Stage 7: Very severe decline

Concussion http://www.ncbi.nlm.nih.gov/pubmedhealth/PMH0001802

Concussion is a brain injury that may result in a bad headache, altered levels of alertness, or **unconsciousness**. It temporarily interferes with the way your brain works, and it can affect memory, judgment, reflexes, speech, balance, coordination, and sleep patterns. There are more than a million cases of concussion each year in the United States. A concussion may result when the head hits an object or a moving object strikes the head. A concussion can result from a fall, sports activities, and car accidents. Significant movement of the brain (jarring) in any direction can cause unconsciousness. How long a person remains unconscious may indicate the severity of the concussion.

Is concussion different from mild TBI?
http://wrair-www.army.mil/images/MildTBI.pdf
The term "concussion" refers to exactly the same thing as the term "mild TBI". This is confusing because the term "TBI" also includes moderate and severe brain injuries where

there is obvious damage to the brain caused, for example, by a penetrating wound or skull fracture.

Dementia

- A serious loss of **cognitive** ability in a previously unimpaired person, beyond what might be expected from normal **aging**. It may be static, the result of a unique global brain injury, or progressive, resulting in long-term decline due to damage or **disease** in the body. Although dementia is far more common in the **geriatric** population, it may occur in any stage of adulthood.

http://en.wikipedia.org/wiki/Dementia

- Deterioration of intellectual faculties, such as memory, concentration, and judgment, resulting from an organic disease or a disorder of the brain. It is sometimes accompanied by emotional disturbance and personality changes.
Read more: **http://www.answers.com/topic/dementia#ixzz1Cu5zA5Fv**

- What Causes Dementia?

There are several things that could cause dementia:

- Diseases that cause degeneration or loss of nerve cells in the brain such as Alzheimer's, Parkinson's and Huntington's.
- Diseases that affect **blood** vessels, such as **stroke**, which can cause a disorder known as multi-infarct dementia.
- Toxic reactions, like excessive alcohol or drug use.
- Nutritional deficiencies, like vitamin B12 and folate deficiency.
- Infections that affect the brain and spinal cord, such as **AIDS** dementia complex and Creutzfeldt-Jakob disease.
- Certain types of hydrocephalus, an accumulation of fluid in the brain that can result from developmental abnormalities, infections, injury, or **brain tumors**.
- **Head injury** -- either a single severe head injury or longer term smaller injuries, like in boxers.
- Illnesses other than in the brain, such as **kidney**, **liver**, and **lung diseases**, can all lead to dementia.
- **Alzheimer's disease causes** 50% to 60% of all dementias. But researchers have found that two nervous diseases, which were originally incorrectly diagnosed as Alzheimer's, are emerging as major causes of dementia: Lewy body disease and **Pick's disease**.

http://www.webmd.com/alzheimers/guide/alzheimers-dementia

Eden Alternative

http://www.edenalt.org/

The Eden Alternative is an international not-for-profit organization dedicated to transforming care environments into habitats for human beings that promote quality of life for all involved. It is a powerful tool for inspiring well-being for Elders and those who collaborate with them as Care Partners.
The Eden Alternative's principle-based philosophy empowers Care Partners to transform institutional approaches to care into the creation of a community where life is worth living. Led by our internationally-recognized founder, Dr. William Thomas, we apply our 15 years of experience to guiding organizations through the journey of culture change.

http://www.ncbdc.org/default.aspx?id=508

Eden Alternative: Is a specific culture change model for improving the physical environment and altering the organizational structure to improve residents' care, with the goal of providing a home like environment with control in the hands of the residents, all within the current nursing home environment.

Green House

http://www.thegreenhouseproject.org/mission

THE GREEN HOUSE® Project Team and NCB Capital Impact have embarked on a new phase in the growth and development of a radically new and innovative approach to long-term, skilled nursing care.

Vision

- We envision homes in every community where elders and others enjoy excellent quality of life and quality of care; where they, their families, and the staff engage in meaningful relationships built on equality, empowerment, and mutual respect; where people want to live and work; and where all are protected, sustained, and nurtured without regard to the ability to pay.

Mission

- We partner with organizations, advocates, and communities to lead the transformation of institutional long-term care by creating viable homes that spread THE GREEN HOUSE® Project vision – demonstrating more powerful, meaningful, and satisfying lives, work, and relationships.

Goals

- The Green House model is a de-institutionalization effort designed to restore individuals to a home in the community by combining small homes with the full range of personal care and clinical services expected in high-quality nursing homes.

http://www.ncbdc.org/default.aspx?id=508

The Green House Project: Is a specific approach to changing the nursing home culture and environment. The Green House model focuses on deinstitutionalizing elders, moving to a small house setting, changing the organizational structure, and providing sustainable skilled nursing care in a truly home like environment and with a philosophy that supports continued growth, engagement and meaning for elders.

Military Sexual Trauma

http://helpforveterans.blogspot.com/2009/06/definition.html

The U.S. Department of Veterans Affairs (VA) defines military sexual trauma (MST) as sexual harassment that is threatening or physical assault of a sexual nature. These traumas occur when a person is in the military. The location, the genders of the people involved, and their relationship do not matter.

Sexual harassment may include:
* A put-down of your gender.
* Flirting when you've made clear it's not welcome.
* Sexual comments or gestures about your body or lifestyle.
* Pressure for sexual favors.

Sexual assault can be any sort of activity that you don't want. It doesn't have to be physical. Sexual threats or bullying are sexual assault. Rape is not the only type of sexual assault. Sexual assault is any unwanted sexual act, including touching or grabbing.

People who have been sexually assaulted often feel that no one can help, that they have no power, and that it may happen again. People may tell you or indicate that it was your fault or that you just need to get over it. Your military experience may make these feelings more intense. This is because the person responsible or his or her colleagues:

* May work with and live close to you.
* May have some control over your needs, such as medical care.
* May have some control over your promotions and career.

The bonding within your unit can make it hard to report your assault. You may feel torn between loyalty to your unit and to yourself, and you may feel you need to keep quiet for the good of the group. You may feel forced to choose between your military career and continued contact with the person who assaulted you.

http://www.publichealth.va.gov/womenshealth/trauma.asp

Both women and men can experience sexual harassment or sexual assault during their military service. VA refers to these experiences as military sexual trauma, or MST. Like other types of trauma, MST can negatively impact a person's mental and physical health, even many years later. Some problems associated with MST include:

- Disturbing memories or nightmares
- Difficulty feeling safe
- Feelings of depression or numbness
- Problems with alcohol or other drugs
- Feeling isolated from other people
- Problems with anger or irritability
- Problems with sleep
- Physical health problems

Polytrauma

http://en.wikipedia.org/wiki/Polytrauma

Polytrauma or multiple trauma is a medical term describing the condition of a person who has been subjected to multiple **traumatic injuries**, such as a serious head injury in addition to a serious burn. It is defined via an **Injury Severity Score** ISS >=17.[1] The term has become common among **US military** doctors in describing the seriously injured soldiers returning from ***Operation Iraqi Freedom*** (**Iraq**) and ***Operation Enduring Freedom*** (**Afghanistan**). The term however is generic, and has been in use for a long time for any case involving multiple traumata.

Polytrauma care (http://www.polytrauma.va.gov/) is for Veterans and returning Servicemembers with injuries to more than one physical region or organ system, one of which may be life threatening, and which results in physical, cognitive, psychological, or psychosocial impairments and functional disability. Some examples of Polytrauma include:

- Traumatic Brain Injury (TBI)
- Hearing Loss
- Amputations
- Fractures
- Burns
- Visual Impairment

PTSD (Post Traumatic Stress Disorder)

http://www.nimh.nih.gov/health/topics/post-traumatic-stress-disorder-ptsd/index.shtml

Post-Traumatic Stress Disorder, PTSD, is an anxiety disorder that can develop after exposure to a terrifying event or ordeal in which grave physical harm occurred or was threatened. Traumatic events that may trigger PTSD include violent personal assaults,

natural or human-caused disasters, accidents, or military combat. People with PTSD have persistent frightening thoughts and memories of their ordeal and feel emotionally numb, especially with people they were once close to. They may experience sleep problems, feel detached or numb, or be easily startled.

http://www.ptsd.va.gov/

The National Center for PTSD has an extensive website on PTSD.

Shahbaz, Shahbazim

http://www.ncbdc.org/default.aspx?id=508

The direct care workers in a Green House® project are universal workers, called Shahbazim, with core training as Certified Nursing Assistants. They typically receive about 120 additional hours of specialized training in preparation to take on their new roles. The curriculum covers The Green House philosophy of care, policies and procedures for their specific project, communications skills, culinary training and safe food handling, and certification in first aid and CPR.

The Shahbazim in each house form a self-managed work team that provides 24-hour care to 7-10 elders at a staffing ratio of four hours per elder per day. They are responsible for a variety of tasks, including: menu planning and daily meal preparation, laundry and light housekeeping, personal care, and communications with the clinical team, families, and the community.

A Clinical Team will provide skilled care for the residents as required in the care plan.

- The Shahbazim, by developing close relationships with elders, will provide the Clinical Team with valuable information to assist in the development of the care plan.
- The Clinical Team is comprised of a Medical Director, Director of Nursing, nurses, therapists, social workers, dietician, and activities coordinator.
- Typically, one nurse will support two to three Green House® homes (20-30 residents) depending on the elders' needs and time of day.
- Licensed nurses are available to and responsible for clinical care in Green House® homes on a 24-hour basis. At any time, if a nurse is not in a home and is needed, he or she is available to Shahbazim and elders via emergency pager and other communications technologies.

Traumatic Brain Injury

- TraumaticBrainInjury.Com website: http://www.traumaticbraininjury.com/

- Traumatic Brain Injury in Theater: When Blasts Damage the Brain by Al Granberg, Special to ProPublica, and Krista Kjellman Schmidt, ProPublica
http://www.propublica.org/special/tbi-in-combat

- Chiarelli expects increase in behavioral health needs

WASHINGTON; Army News Service, Feb. 1, 2011 -- The Army's vice chief of staff said with the drawdown in Iraq and eventually in Afghanistan, the country could expect to see an increase in the number of Soldiers suffering from depression, anxiety, Traumatic Brain Injury and post-traumatic stress.

http://www.army.mil/-news/2011/02/02/51178-chiarelli-expects-increase-in-behavioral-health-needs/

- Brain injuries become more prevalent for combat veterans

Roadside bombs and other explosives have injured the brains of almost a fifth of veterans returning from Iraq and Afghanistan.

Wednesday, September 16, 2009

http://www.columbiamissourian.com/stories/2009/09/16/increase-traumatic-brain-injury-returning-veterans/

- Invisible Wounds of War

Psychological and Cognitive Injuries, Their Consequences, and Services to Assist Recovery (2008) 499 pages

Published by the **RAND Corporation**'s Center for Military Health Policy Research

http://www.rand.org/pubs/monographs/2008/RAND_MG720.pdf

http://www.rand.org/multi/military/veterans.html

The summary is 66 pages. It is online at:
http://www.rand.org/content/dam/rand/pubs/monographs/2008/RAND_MG720.1.pdf

Terri Tanielan and Lisa H. Jaycox, Editors

Since October 2001, approximately 1.64 million U.S. troops have been deployed for Operations Enduring Freedom and Iraqi Freedom (OEF/OIF) in Afghanistan and Iraq. Early evidence suggests that the psychological toll of these deployments—many involving

prolonged exposure to combat-related stress over multiple rotations—may be disproportionately high compared with the physical injuries of combat. In the face of mounting public concern over post-deployment health care issues confronting OEF/OIF veterans, several task forces, independent review groups, and a President's Commission have been convened to examine the care of the war wounded and make recommendations.

Concerns have been most recently centered on two combat-related injuries in particular: post-traumatic stress disorder and traumatic brain injury. Many recent reports have referred to these as the signature wounds of the Afghanistan and Iraq conflicts. With the increasing incidence of suicide and suicide attempts among returning veterans, concern about depression is also on the rise.

This 2008 study by the **RAND Corporation**'s Center for Military Health Policy Research found that 19 percent of returning veterans reported some form of traumatic brain injury. RAND estimates that 1.64 million Americans have served in Iraq and Afghanistan since 2001, which means that 19 percent equates to a staggering figure of approximately 320,000 servicemen and women. According to RAND, the one-year costs for service members who have accessed the health care system for treating mild traumatic brain injury ranged from $27,259 to $32,759, and cases involving moderate or severe cases ranged from $268,902 to $408,519 in 2005.