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1.0 EXECUTIVE SUMMARY

One in nine Washington residents is a veteran and Washington ranks fifth in the nation in the percentage of veterans in the overall population. The Washington State Department of Veterans Affairs (WDVA) provides assistance, counseling and high-quality long-term nursing care to Washington State veterans and their family members. Washington State has over 100 years of experience caring for veterans and their families.

WDVA currently operates State Veterans Homes for veterans across the State. The three homes – located in Retsil, Orting and Spokane – have a combined skilled nursing licensed bed capacity of 397 long-term care beds. The Federal Veterans Administration (Federal VA) Office of Geriatrics Extended Care finds Washington State has an unmet State Home bed need of 642 beds. WDVA has conducted predesign planning for a new State Veterans Home on the Federal VA campus of the Jonathan M. Wainwright Memorial Medical Center in Walla Walla to provide for the needs of veterans in the surrounding area. The proposed 58,895 gross square foot (GSF) 72-bed facility will provide the unique environment where indigent veterans are treated with the dignity and respect they deserve, in distinctive settings that provide a sense of belonging unique – and critically important – to veterans. Achieving design funding in the 2009-11 biennia is WDVA's number one capital budget request priority. Sixty-five percent of the project costs will be provided by the Federal VA State Home Construction Grant Program.

1.1 Study Purpose & Background

The need for long-term care for veterans will increase dramatically over the next 20 years as the population ages. There is a great need to provide adequate facilities in south central Washington to provide high quality and cost-effective long-term care to the growing and aging veteran population in that geographic area. Data from the three existing State Homes reflect the unique and special needs of these veterans – needs that are very different from those typically found in the nursing home population at large. It is more common to find veteran residents with one or more of the following:

- A significant proportion have a history of primary or secondary psychiatric diagnosis;
- History of substance abuse;
- History of chronic homelessness with the inability to thrive in a community setting; and

- 95% are “medically indigent”, forcing them into community nursing homes or homelessness.

State Home residents are younger, more unstable and much more likely to have psychiatric problems than residents of community nursing homes. Another important characteristic is that the overwhelming majority of State Home residents are male compared to approximately 36% in community nursing homes. Most have alienated all family and the majority has difficulty thriving in community settings.

When veterans are cared for in a State Veterans Home, they are eligible for Federal VA per-diem. This funding pays about 30% of the cost of care, making WDVA the most cost effective care-provider. The same funding is not available to veterans residing in community nursing homes.

The 3 existing State Homes are full without capacity to accept additional residents. In addition, moving a veteran from his/her community for re-location to a State Home may not be desirable. A new State Home in Walla Walla is needed to primarily serve residents from the counties of Asotin, Benton, Columbia, Franklin, Garfield, Walla Walla and Yakima. The 7-county veteran population is estimated at 17,200. This geographic service area is consistent with the patient demographics of the VA Medical Center at Walla Walla which also draws significant workload from northwest Idaho and northern Oregon.

1.2 Project Definition

WDVA envisions a truly innovative state-of-the-art, non-institutional nursing facility that provides veterans with the care environment allowing them to function more independently, with security, peace of mind and improved quality of life. The Federal VA and WDVA are committed to transforming the culture of care in nursing homes built on the notion that in large part, the actual facility design itself contributes to the well-being and positive outcomes of care in such facilities. The transformation of the culture of care focuses on resident-centered care that enhances the resident’s ability to function and live fully until death. The driver of care is the resident with the focus on providing resources around the individual resident instead of taking the resident to the point of care.

The Preferred Alternative for the new Walla Walla Skilled Nursing Facility is a physical and programmatic non-institutional model that creates separate residential houses that are tied together by support spaces. The spaces provided in the program can be grouped into



three major functional categories:

- **Residential Houses:** 6 total houses each including 12 private resident rooms with bathrooms, living, dining and laundry room, kitchen, quiet room and pantry as well as associated linen, housekeeping, equipment and medical supply support spaces and a nursing substation.
- **Neighborhood Support:** 3 total neighborhoods of 2 residential houses each including nursing station, activity/multipurpose space, bathing suites, storage, nursing and activities coordinator office space and conference room.
- **Facility Support:** including physical and occupational therapy, chapel, barber shop, security, administrative staff spaces, medical records along with staff lounge and lockers.

The Residential Houses are the centerpiece of the new Skilled Nursing Facility. Each is basically a self-contained residence, designed like a private home. Twelve residents live in a house, each with his/her own bedroom, bath with shower and locked medicine cabinet. The physical space is meant to be non-institutional, but to be like a home in which the veterans might have lived in their community. The houses include a full kitchen where menus and meals are prepared. Residents will have access to the kitchen and all areas of the house at anytime. Meals are eaten family style in the home's dining room which also functions as an activity space for residents. Residents can participate in meal preparation as desired. The program as now envisioned assumes 5 general houses and 1 specialty house for Alzheimer's patients. This specialty house has the same floor plan as the general house with slighter larger dining and living areas. Outdoor space will be fenced to provide for increased patient security.

The proposed Walla Walla State Veteran Homes requires 38,952 net square feet to achieve the care environment here envisioned in this Predesign. At this level of preliminary analysis, the building efficiency is estimated at approximately 66% which results in an overall building size of 58,895 gross square feet (GSF).

1.3 Proposed Solution

The proposed solution is a new State Veterans Home with 72 skilled nursing beds on the campus of the Federal VA campus of the Jonathan M. Wainwright Memorial Medical Center in Walla Walla to serve the needs of veterans in the surrounding 7-county area. The chosen site on the campus is located on the southeastern corner of the parade grounds, adjacent to Officers' Row and Wainwright Drive. It is approximately 3.75

acres and considers potential relocation of an existing historic house to reinforce the Officers' Row - seven officers' quarters on the south side which are identified on the National Register of Historic Places. The site would allow the Skilled Nursing Facility to directly address the parade grounds and integrate the new structure within the campus setting while remaining apart from the hospital. This separation provides an opportunity to create the desired residential setting for the skilled nursing residents which will be designed to be more in keeping with Officers' Row than the institutional hospital environment.



Figure 1.1 VAMC Campus Aerial View
(Date Unknown)

The majority of the Fort was developed on top of a plateau. This plateau location offers great visibility within the campus and to/from the larger Walla Walla area. The site is visible from the Chestnut Street entry and internally, across the VAMC campus. External views to the south include an expansive territorial view of the Blue Mountains. Figure 1.2 illustrates the program adjacencies and the relationship of the facility to the campus terrain.

WDVA is committed to sustainable development. The new State Veterans Home will pursue several sustainable design strategies including, but not limited to the following characteristics:

- Solar Orientation – maximize south-southeastern exposure for optimal winter daylight exposure; minimize east and west facing facades to avoid solar heat gain during the summer months.
- Views & Daylighting – take advantage of internal campus and regional views; maximize daylight access into the building through clerestory windows in common areas.
- Passive Ventilation – include operable windows, accessible by residents.
- Stormwater Capture – analyze opportunities for rainwater capture for potential re-use.
- Material Selection - prefer regional materials and/or products with high recycled content and durability.

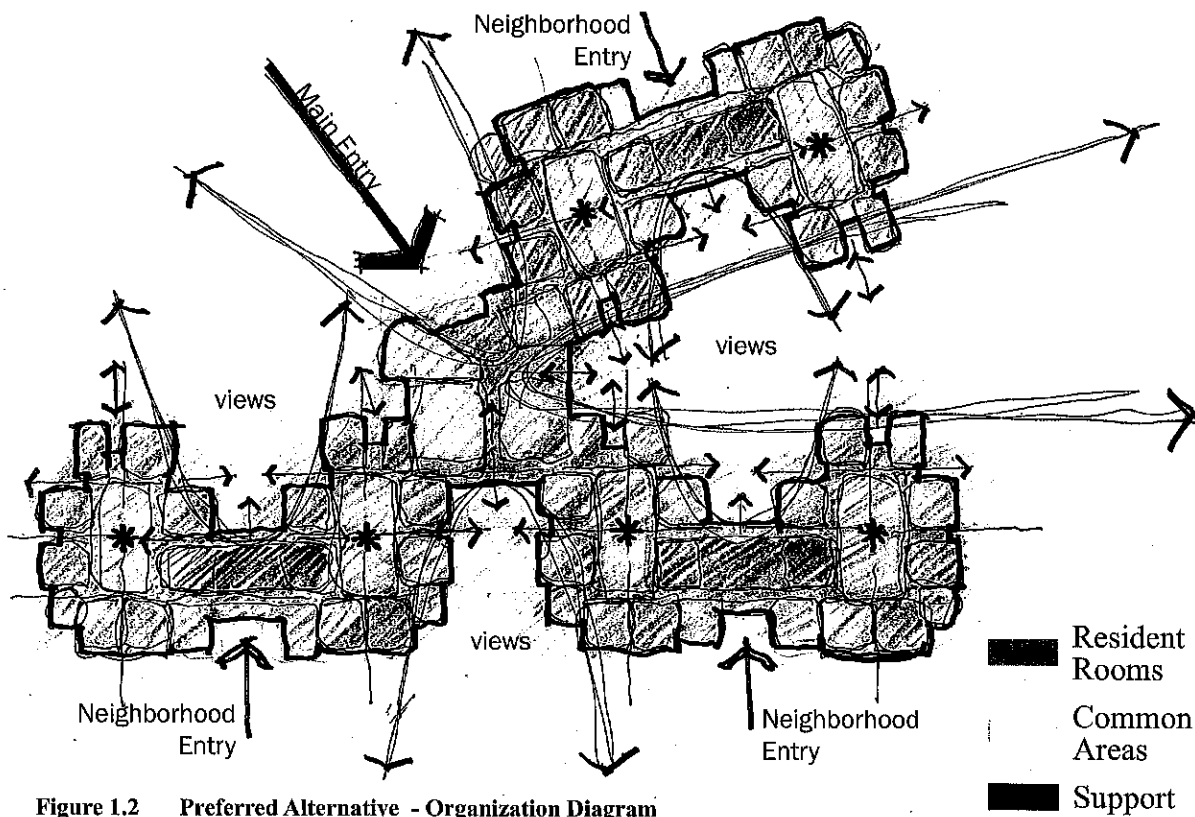


Figure 1.2 Preferred Alternative - Organization Diagram

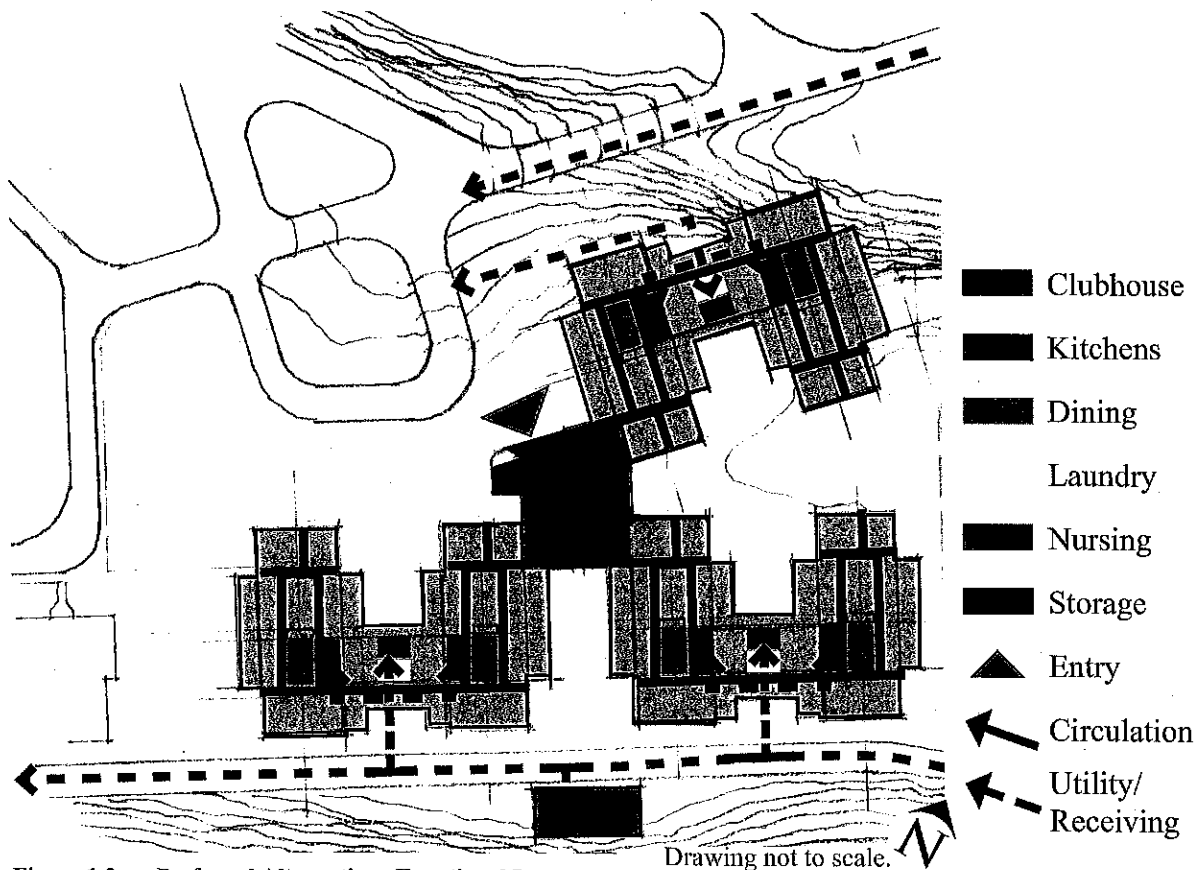


Figure 1.3 Preferred Alternative - Functional Layout

nbbj

WDVA - SKILLED NURSING FACILITY, WALLA WALLA PREDESIGN



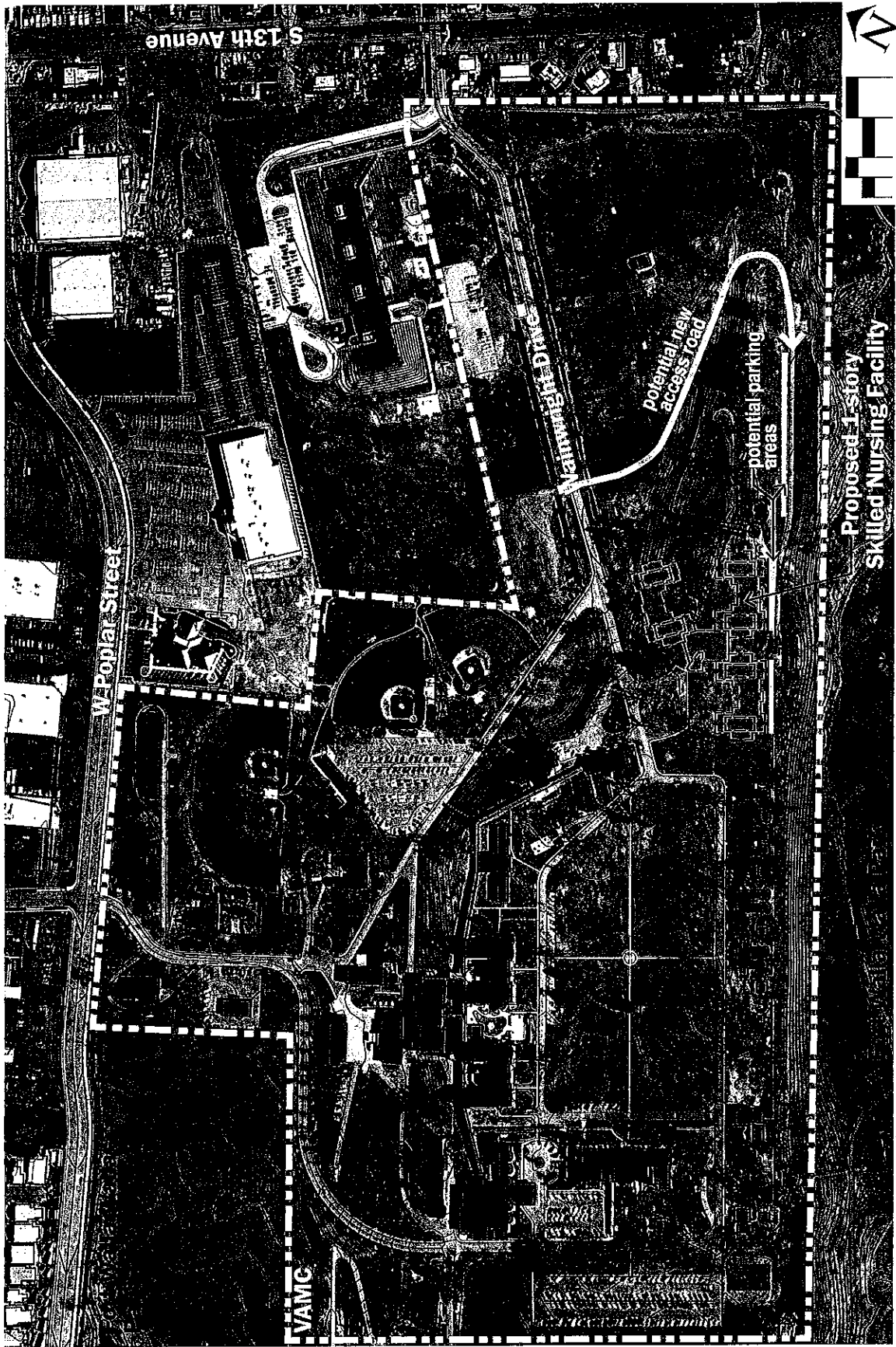


Figure 1.4 VAMC Campus with Preferred Alternative



Through these design strategies and material selections, the new State Home will meet the environmental design criteria of LEED® Silver at a minimum, as defined by the U.S. Green Building Council (Leadership in Energy and Environmental Design).

1.4 Anticipated Costs & Schedule

Pre-design analysis of the Walla Walla Skilled Nursing Facility project budget assessed the potential cost impacts of various sites, resultant building configurations and proposed building systems. Anticipated costs for the Preferred Alternative were estimated in 2008 dollars and escalated based on the project schedule at a rate of 3.5% annually as prescribed by the Office of Financial Management.

Table 1.1 Preferred Alternative Costs

	Alternative #2 - Hybrid 1 (Preferred)
Area (gross square feet)	58,895
Today's MACC/GSF (2008 \$s)	\$339
Today's MACC Total Construction Cost	\$19,972,700
Bid Date MACC/GSF (2012 \$s)	\$377
Bid Date MACC Total Construction Cost	\$22,196,963

Total project costs of the Preferred Alternative were calculated at \$38.7M. Sixty-five percent of the funding for the new State Veterans Home is anticipated through the Federal VA State Home Construction Grant Program; 35% will come from the State Building Construction Account. The project schedule would follow Washington State biennia budget planning and therefore assumed Design in the 2009-11 biennium with construction completed by September of 2012. **The 2009-11 biennium request for Design funding is \$2.35M. With the State of Washington support for the proposed Walla Walla Skilled Nursing Facility, the Federal VA contribution would be \$20,756,983.** The State of Washington contribution in future biennia would be \$11,176,838.

2.0 PROJECT ANALYSIS

The Washington State Department of Veterans Affairs (WDVA) provides assistance, counseling and high-quality long-term nursing care to Washington State veterans and their family members. Washington State has over 100 years of experience caring for veterans and their families. WDVA manages three State Veterans Homes – located in Orting, Retsil and Spokane - where veterans are treated with the dignity and respect they deserve, in distinctive settings that all provide a sense of belonging unique to veterans. All three homes share a common goal of providing responsive medical and supportive care to veterans who can no longer provide for themselves.

The State Homes provide long-term nursing and domiciliary care to approximately 575 veterans in Washington State – the majority of whom are indigent. The agency also provides a variety of other services to veterans throughout the state, including assistance in obtaining federal veteran entitlements, counseling for Post Traumatic Stress Disorder (PTSD), residential homeless reintegration and fiduciary services for indigent and homeless veterans.

WDVA's mission is "Serving Those Who Served" which translates into providing high quality, cost-effective services needed by veterans in Washington State over the entire "continuum of care" — from the time one first leaves the military until the time he or she dies. WDVA is a national leader in providing quality services for veterans and their families in the State Veterans Homes as well as in the community. A vital part of this mission is the goal of being a leader in coordinating services between myriad providers including WDVA, Federal VA, veteran service organizations and others. The Department's Vision Statement supports its mission:

"Our military veterans and their families can Trust their Washington State Department of Veterans Affairs to:

- *Serve* as their advocate for all VA entitlements;
- Help *Heal* their seen and unseen wounds of war;
- Give *Help* to the homeless;
- Provide quality *Care* in our Veterans Homes; and
- *Honor* veterans in their final resting place."

The proposed Skilled Nursing Facility in Walla Walla, Washington will extend WDVA services to south central Washington veterans.

2.1 Project Goals

The proposed project would construct a 72 bed, state-of-the-art Skilled Nursing Facility on the Federal VA Jonathan M. Wainwright Memorial Medical Center campus (VAMC) on Fort Walla Walla. The facility would achieve the following Strategic Goals of the agency:

1. Improve the Quality of Care and Services for Vulnerable Veterans and Their Families.

- By providing a new facility that assures WDVA can effectively serve the long-term care needs of veterans – a population that will experience extraordinary growth in the older age cohorts, especially those over 85 years of age; and
- By providing a continuum of care that allows veterans to “age in place” through the enhancement of Alzheimer’s, Hospice and Mental Health services and the addition of Respite and Adult Day Care.

2. Maximize Resources to Honor the Nation’s Debt to Veterans.

- By building and operating a cost-effective facility; and
- By providing increased opportunities for partnerships with the Federal VA and other veteran providers in a new facility on a Federal VA campus.

3. Review Core Processes to Anticipate and Influence Future Needs.

- By providing a state-of-the-art facility that can adapt and change, as veteran needs change.

4. Drive a High Performance Culture, by Recruiting, Training, and Retaining the Best Talent that Results in Delivery of High Quality Services.

- By providing a facility that will attract and retain qualified staff in a highly competitive workforce arena.

2.2 Project Background

2.2.A Role and Value of the State Homes

The State Veterans Homes at Orting, Retsil and Spokane provide high-quality and cost effective long-term nursing care to indigent veterans in Washington State.

- As licensed Medicaid and Medicare nursing care facilities, the State Veterans Homes fill an important gap in the Federal VA long-term care system. Federal VA nursing home facilities in Seattle, American Lake, Spokane, and Vancouver mainly provide short-term rehabilitative care. The VA Medical Center at Walla Walla also provided 24 beds of skilled care until October of 2008 when the beds were closed because of facility deficiencies and the residents were dispersed to other nursing homes.
- All three of the State Homes enjoy very high occupancy. Occupancies to date in 2008 are 97% for Retsil, 99% for Orting and 96% for Spokane. In comparison, the average occupancy rate for private nursing homes in Washington State for 2007 was approximately 86%.
- Despite providing Federal VA-mandated services such as full-time physicians and nurse practitioners, in-house mental health and full-service pharmacy, and drug and alcohol counseling, the net cost to the state (currently \$44 per day) for providing Medicaid-eligible nursing care at a State Veterans Home is less than the cost to the state for providing long-term care in a community nursing home (currently averages \$53 per day).¹

This cost savings reflects the availability of Federal VA funding that offsets the cost of care at the State Veterans Homes, but which is not available for community nursing homes. Since the Homes were converted to licensed Medicaid nursing facilities in the early 1990's, the percentage of Washington State funding for State Veterans Homes operations has declined from (1993-95 Biennium) to 15.7% (2008). The current Federal VA per diem is \$74.42/day.

1. WDVA is in the process of updating these numbers which were done in 2000. They have been updated for this document using the regional Consumer Price Index thru the 3rd Quarter of 2008.

2.2.B Existing State Homes

WDVA currently operates 3 State Homes:

- The Washington Soldiers Home (Orting) was the first State Home for Washington State veterans when established in 1891 on 182 acres in the Puyallup Valley. The Home provides both skilled nursing and assisted-living care in Orting, Washington. The campus consists of 19 buildings totaling 159,439 square feet. There are 97 skilled nursing beds on the Orting campus located in 2 buildings constructed in 1960 and 1977. While the buildings are well-maintained, the design precludes the non-institutional character of the new Retsil facility.
- The Washington Veterans Home (Retsil), established in 1910, is located on 31 acres of land in Retsil (near Port Orchard) and provides both skilled nursing and assisted-living care. In 2005, a 240-bed replacement skilled nursing facility was completed. The new Home is a state-of-the-art, non-institutional facility providing a “Resident Centered Care” concept that focuses resources around the individual resident. All primary services for a resident are available within a forty-bed “neighborhood.” Double rooms are designed to maximize the privacy of each resident and the overall facility design fosters a sense of independence, dignity and control which are critical to the residents’ quality of life.
- In 2001, the State purchased an existing nursing home in Spokane. The 100-bed nursing facility offers long-term nursing care for veterans in Eastern Washington. The facility has a newly renovated kitchen and expanded dining room. The design of this facility also precludes the non-institutional character of Retsil.

All Washington State Veterans Homes are Medicare and Medicaid certified facilities. To be eligible for admission, applicants must meet the following criteria:

- A Veteran discharged under honorable conditions;
- Washington State residency; and
- Certain financial guidelines.

2.2.C Federal VA State Home Program Veteran Long-Term Care Needs

Following the Civil War, a large number of indigent and disabled veterans were no longer able to earn their own livelihood and needed care. While the Federal Government operated national homes for disabled union volunteer soldiers, the total number of veterans needing care was overwhelming. In recognition of this need, and the debt that



a grateful nation owed its defenders, a number of states independently established State Veterans Homes to help care for those who had borne the battle. The first State Veterans Home was established in Rocky Hill, Connecticut in 1864.

State Veterans Homes are one of the largest long-term care providers in the United States. During the 2005 fiscal year, State Veterans Homes furnished 6,852,875 days of nursing home care and 1,477,885 days of domiciliary care. As of February 13, 2006, there were 133 State Veterans Homes in 49 states and Puerto Rico with 30,255 total beds.

The State Veterans Homes at Retsil, Orting and Spokane are part of the State Home program administered and funded by the U.S. Department of Veterans Administration (Federal VA). State homes that meet Federal VA standards receive federal per diem payments (currently about \$75 per day for nursing care) for each eligible veteran cared for in the facility. Residents contribute toward their cost of care as their resources allow.

In addition, Federal VA is authorized to provide up to 65% of the cost of acquisition, construction or renovation of nursing and domiciliary buildings that meet their standards and regulations. A State home is owned and operated by a State. Federal VA assures Congress that State homes provide quality care through inspections, audits and reconciliation of records conducted by the Federal VA medical center of jurisdiction.

Over the past several years Federal VA has focused on expanding long-term care services. The service expansion includes alternatives to nursing home care such as assisted living, adult day care, respite and hospice care and other less costly and non-institutional options. The long-term care focus for the Federal VA in the past few years has also emphasized the critical importance of non-institutional environments to the health, well-being and quality of life for veterans.

2.3 Prior Planning

2.3.A Previous Action Taken/Legislative or Executive Intent

The *WDVA Strategic Plan 2009-2013* addresses the need for long-term care services. The existing homes in Orting, Retsil and Spokane provide long-term health care for honorably discharged veterans. Residents are typically disabled, indigent or imminently indigent due to the high cost of long-term care. The homes provide health and psychosocial services using interdisciplinary teams composed of nursing, rehabilitative

therapies, therapeutic activities, social services, medical and administrative staff. When veterans are cared for in a State Veterans Home, they are eligible for Federal VA funding. This funding pays about 30% of the cost of care, making WDVA the most cost effective care-provider. The same funding is not available to veterans residing in community nursing homes. This service contributes to the Governor's Priority of Government of *Improving the security of Washington's vulnerable children and adults.*

In response to this priority, WDVA requested and received funding for completion of a predesign feasibility study for the construction of a State Veterans Home on the campus of the Jonathan M. Wainwright VA Memorial Medical Center in Walla Walla to provide for the needs of veterans in the central Washington area.

2.4 Problem Statement - The Need for a State Home in Walla Walla

The need for long-term care for veterans will increase dramatically over the next 20 years as the population ages. There is a great need to provide adequate facilities in south central Washington to provide high quality and cost-effective long-term care to the growing and aging veteran population in that geographic area. While WDVA currently operates three homes with a combined licensed bed capacity of 397 long-term care beds in Western and Eastern Washington, **the Federal VA Office of Geriatrics Extended Care finds Washington State has an unmet State Home VA bed need of 642 VA funded long-term care beds.**

2.4.A Veteran Demographics

There are approximately 641,000 veterans residing in Washington State. One resident out of every nine is a veteran. Washington ranks fifth in the nation in the percentage of veterans in the overall population. Veteran population estimates and projections developed by the Federal VA Office of the Actuary, Office of Policy and Planning reveal the following:

- The overall veteran population is expected to decline by around 20% between 2000 and 2020, as the number of veteran deaths will exceed the number of new veterans separating from the military. The number of elderly veterans however, is projected to grow. The veteran population aged 65 and over is expected to increase by 10% over the next twenty years, from 200,000 to 220,000, while the population aged 85 and over is projected to grow by 220%, from 8,400 to 27,100. Between 2000 and 2020, the percentage

of adult male veterans in Washington State aged 85 and over will increase from 30% to 55% of the total adult male population.

- Several unique characteristics impact service needs for veterans aged 85 and over including an increase in those suffering from dementia, the presence of wartime disabilities - both physical and mental and an increase in those considered medically indigent.
- The number of female veterans will also increase over the next twenty years. The total female veteran population will increase by 27% between 2000 and 2020, from 41,000 to 52,000, while the female population aged 65 and over will grow by 50%, from 8,000 to 12,000.
- Approximately 50% of the veteran population in Washington State lives in the three Central Puget Sound counties of King, Pierce and Snohomish.
- Of the 200,000 veterans aged 65 and over in Washington State, approximately 22,500 (or 11%) are considered indigent (with priority for State Home admittance) with annual household incomes under \$15,000. The number of indigent veterans aged 65 and over will increase to approximately 25,000 by the year 2020.

The new Walla Walla Home will primarily serve residents from the counties of Asotin, Benton, Columbia, Franklin, Garfield, Walla Walla and Yakima. The 7-county population is estimated at 17,200 veterans. This geographic service area is consistent with the patient demographics of the VA Medical Center at Walla Walla which also draws significant workload from northwest Idaho and northern Oregon.



Figure 2.1 Walla Walla Geographic Service Area

2.4.B Veteran Long-Term Care Needs

The Washington State Veterans Homes provide unique environments where veterans are treated with the dignity and respect they deserve, in distinctive settings that all provide a sense of belonging unique – and critically important – to veterans. All three homes share a common goal of providing responsive medical and supportive care to veterans who can no longer provide for themselves. Data from the three State Homes reflect the unique and special needs of these veterans – needs that are very different from those typically found in the nursing home population at large:

- A significant proportion have a history of primary or secondary psychiatric diagnosis;
- A history of substance abuse;
- A history of chronic homelessness with the inability to thrive in a community setting;
- A history of frail and elderly caretakers who are no longer able to sustain the increasing 24/7 care demands;
- Veterans' choice of a veterans home is consistent with their desire to be among their cohort where they get peer support and receive care in an environment that recognizes their military service experience; and
- 95% are “medically indigent”, forcing them into community nursing homes or homelessness.

Other comparisons of residents of State Homes those of community nursing homes are summarized in Table 2.1.

Table 2.1 Characteristics of Nursing Home Residents, 2007

	Retsil	Orting	Spokane	Community Nursing Homes
Male	93.0%	86.5%	90.0%	35.6%
Female	7.0%	13.8%	9.7%	64.4%
Under 25 years of age	0.0%	0.0%	0.0%	0.3%
25-54 years of age	6.0%	6.8%	3.0%	7.5%
55-64 years of age	17.0%	21.9%	9.0%	7.8%
65-74 years of age	19.0%	15.7%	8.0%	13.4%
75-84 years of age	36.0%	37.1%	44%	32.1%
84 and Older	22.0%	18.5%	35.8%	38.9%
Conditions/diseases that make residents unstable	98.8%	93%	85%	57.1%
Psychiatric Diagnosis	56.0%	80%	5%	10.5%

Source: WDVA

In summary, State Home residents are younger, more unstable and much more likely to have psychiatric problems than residents of community nursing homes. Another important characteristic is that the overwhelming majority of State Home residents are male compared to approximately 36% in community nursing homes. Most have alienated all family and the majority has difficulty thriving in community settings.

2.4.C State of Washington Nursing Home Bed Need Methodology

While State Veterans Homes are not bound by State Certificate of Need requirements, it is important to understand the service area skilled nursing care bed supply and demand. 2007 utilization in the 7-county geographic service area is shown in Table 2.2

Table 2.2 2007 Nursing Home Utilization in the Walla Walla Service Area

County	Patient Days	Beds	Available Days	% Occupancy
Asotin	27,612	90	32,850	84%
Benton	112,528	373	136,145	83%
Columbia	11,180	34	12,410	90%
Franklin	35,387	125	45,625	78%
Garfield	6,524	20	7,300	89%
Walla Walla	121,685	476	173,740	70%
Yakima	338,392	1,046	381,790	89%
TOTAL	653,308	2,164	789,860	83%

Source: 2007 Medicaid Cost Report

There were a total of 2,164 licensed beds in the area with an average occupancy of 83%.

In November 2008, the State of Washington revised its methodology for determining skilled nursing bed need. The analysis of need had been based on the population 65+ years old. The new methodology is based on 70+ years of age. This change recognizes that people are living longer, healthier and more productive lives and that the need for skilled care is more often reduced or delayed. Tables 2.3 and 2.4 compare the results of the two methodologies.

**Table 2.3 Service Area Nursing Home Bed Projections Total Population 65+
(includes Veterans)**

	2007			2010		
	Beds Required	Beds Available	Beds Over/Under	Beds Required	Beds Available	Beds Over/Under
Asotin	147	194	47	155	194	39
Benton	664	400	(264)	707	400	(307)
Columbia	31	54	23	33	54	21
Franklin	172	125	(47)	177	125	(52)
Garfield	20	36	16	20	36	16
Walla Walla	314	396	82	317	396	79
Yakima	1,006	1,173	167	1,036	1,173	137
TOTAL	2,354	2,378	24	2,445	2,378	(67)

	2020			2030		
	Beds Required	Beds Available	Beds Over/Under	Beds Required	Beds Available	Beds Over/Under
Asotin	189	194	5	228	194	(34)
Benton	1,085	400	(685)	1,398	400	(998)
Columbia	41	54	13	47	54	7
Franklin	295	125	(170)	407	125	(282)
Garfield	25	36	11	30	36	6
Walla Walla	400	396	(4)	473	396	(77)
Yakima	1342	1,173	(173)	1,652	1,173	(479)
TOTAL	3,377	2,378	(999)	4,234	2,378	(1,856)

Note 1: Bed requirement assumes current methodology of 40 beds/1000 population 65+.
 Note 2: Beds Over/Under is based on the number of beds available in 2008.

**Table 2.4 Service Area Nursing Home Bed Projections Total Population 70+
(includes Veterans)**

	2007			2010		
	Beds Required	Beds Available	Beds Over/Under	Beds Required	Beds Available	Beds Over/Under
Asotin	101	194	93	109	194	85
Benton	420	400	(20)	498	400	(98)
Columbia	23	54	31	23	54	31
Franklin	120	125	(5)	138	125	(13)
Garfield	14	36	22	15	36	21
Walla Walla	255	396	141	234	396	162
Yakima	740	1,173	433	738	1,173	435
TOTAL	1,672	2,378	706	1,755	2,378	623

	2020			2030		
	Beds Required	Beds Available	Beds Over/Under	Beds Required	Beds Available	Beds Over/Under
Asotin	133	194	61	170	194	24
Benton	703	400	(303)	1,001	400	(601)
Columbia	29	54	25	35	54	19
Franklin	184	125	(59)	271	125	(146)
Garfield	16	36	20	22	36	14
Walla Walla	272	396	124	347	396	49
Yakima	902	1,173	271	1,175	1,173	(2)
TOTAL	2,239	2,378	139	3,021	2,378	(643)

Note 1: Bed requirement assumes current methodology of 40 beds/1000 population 70+.

Note 2: Beds Over/Under is based on the number of beds available in 2008.

The difference in the results is significant. Use of the 65+ population variable results in a need for nearly 70 additional beds in the service area by 2010 and close to 1,900 by 2030. The 70+ methodology shows the service area as over-bedded until 2030 when nearly 650 beds would be required.

As discussed above, veterans in the State Homes have unique and special needs that are very different from those typically found in the nursing home population at large and the age distribution of residents is different. According to the Department of Health, the average age of nursing home residents in the Washington is 79.9 years; the average age of residents in the 3 State Homes is 75.4.



Because of the unique needs of veterans and the significant quality of life benefits that can be achieved in an environment with other veterans and where service is honored, an analysis of specific needs of veterans in the service area is required. Application of the 65+ methodology (which is consistent with the Federal VA bed need methodology) to the veteran population is the more reasonable approach. The results of that analysis are displayed in Table 2.5.

Table 2.5 Service Area Nursing Homes Bed Requirements - Veterans 65+

	2007				2010			
	Total	% 65+	Number 65+	Number Beds	Total	% 65+	Number 65+	Number Beds
Washington, Statewide	643,302	34.6%	222,400	-	632,210	37.4%	236,152	-
Asotin	2,345	40.9%	958	38	2,320	42.1%	977	39
Benton	15,159	38.4%	5,820	233	15,272	43.3%	6,607	264
Columbia	449	43.7%	196	8	415	46.5%	193	8
Franklin	3,490	31.8%	1,109	44	3,316	33.5%	1,110	44
Garfield	244	57.0%	139	6	234	60.7%	142	6
Walla Walla	4,749	47.4%	2,253	90	4,570	50.8%	2,323	93
Yakima	17,264	42.3%	7,295	292	16,966	45.8%	7,762	310
2007 TOTAL BEDS				711	2010 TOTAL BEDS			765

	2020				2030			
	Total	% 65+	Number 65+	Number Beds	Total	% 65+	Number 65+	Number Beds
Washington, Statewide	562,932	46.8%	263,731	-	486,673	49.6%	241,610	-
Asotin	2,010	49.3%	990	40	1,782	55.7%	992	38
Benton	14,246	54.9%	7,820	313	12,333	56.7%	6,992	233
Columbia	299	56.2%	168	7	214	55.6%	119	8
Franklin	2,907	41.8%	1,214	49	2,514	42.4%	1,065	44
Garfield	187	68.4%	128	5	138	73.9%	102	6
Walla Walla	4,176	60.0%	2,505	100	3,674	63.9%	2,349	90
Yakima	14,622	52.4%	7,664	307	12,320	52.6%	6,478	292
2020 TOTAL BEDS				820	2030 TOTAL BEDS			724

Source: Population statistics from the Office of the Actuary, Office of Policy & Planning and Federal VA.

A review of utilization statistics from the VAMC at Walla Walla show that an average daily census of 31 veterans were in nursing care beds prior to the closing of the unit in October, 2008. Twenty-four residents were in Medical Center beds and 8 were in community nursing homes. These numbers represent only a portion of area veterans receiving or needing skilled care as they only account for those currently enrolled in the VA system.

2.5 Proposed Solution

As here defined and described in this Predesign document, the new Skilled Nursing Facility at Walla Walla will provide 72 beds and 58,895 gross square feet. The detailed space program is provided in the Appendix.

The proposed building will provide a state-of-the-art, non-institutional nursing facility that provides veterans with the care environment that allows them to function more independently, provides security and peace of mind and improves the quality of life. The project will enhance WDVA's ability to fulfill its Mission and contribute to the Governor's Priority of Government of *Improving the security of Washington's vulnerable children and adults*.

2.5.A Potential Alternatives

A number of alternatives for meeting the skilled nursing needs of veterans in the geographic service area were considered in this Predesign study. Three alternatives were ruled out early in the analysis as they are not feasible, did not achieve the aforementioned WDVA goals and were not cost-effective. The alternatives considered were:

- **Continue with the Existing Situation/No Action** - In this alternative, veterans would continue to be cared for in existing facilities or travel far from their community for care in one of the other 3 State Homes. For those indigent veterans living in community nursing homes, the State would lose the significant per diem support provided by the Federal VA. This per diem is only available to residents of State Homes. The 3 existing State Homes are full without capacity to take additional residents. In addition, moving a veteran out of his/her community for re-location to a

State Home may not be desirable.

- **Buy an Existing Nursing Home** - This alternative was also eliminated early in the analysis because it is not a viable option. Because of the special needs and unique characteristics of veterans requiring nursing care, the WDVA would be unable to create a supportive nursing environment without extensive renovation – tantamount to new construction.
- **Build New (Preferred Alternative)** - This alternative would construct a 58,895 square foot Skilled Nursing Facility on the Federal VA campus of Jonathan M. Wainwright Memorial Medical Center in Walla Walla to provide for the needs of veterans in the surrounding area.

Three “Build New” conceptual alternatives and two sites were evaluated during the Predesign phase. The conceptual alternatives tested different programmatic and operational strategies as discussed in Section 3.0. See Section 4.0 for further discussion of the sites considered.

2.6 Planning Process

Stakeholders with interest in the project include the State of Washington, the Washington Department of Veterans Affairs, veterans service organizations, the Wainwright VA Medical Center and the City of Walla Walla . All of these stakeholders have been actively engaged during the planning for the project.

Thirty-five percent of the project funding for the new Skilled Nursing Facility at Walla Walla is anticipated through the State Building Construction Account. Sixty-five percent of the project funding will come from the U.S. Department of Veterans Affairs State Home Construction Grant Program. The project schedule would follow State biennia budget planning and therefore assumed Design in the 2009-11 biennium with construction to occur July 2011 through January 2013. The proposed method of implementation is design-bid-build and cost estimates are based on this delivery method.

The Department of General Administration (GA) will oversee the design and construction of this project. The Owner’s Representative from WDVA will provide internal oversight of the project with review and approval by the Department’s Executive Team.

2.7 Project Description and Scope

For further information regarding the proposed project, please contact the WDVA.

Agency Name: Washington Department of Veterans Affairs
Agency Code: 305
Project Number: 08-2-008
Project Title: Walla Walla Nursing Facility
Agency Contact: Gary Condra
Chief Financial Officer
Washington Department of Veterans Affairs
(360) 725-2202
Email: garyc@dva.wa.gov



3.0 PROGRAM ANALYSIS

Studies have shown that the physical environment strongly influences the quality of life of the frail elderly and those suffering from Alzheimer's and other dementia. Too often, long-term care settings resemble acute care – neither adapted for care of the frail elderly nor appropriate for those with the cognitive impairments that result from dementia. These settings often speak to illness rather than living, dependence and lack of control rather than choices and the ability to influence one's environment, and about dying and the end of life rather than the normal processes of aging. Well-designed physical environments – those that maintain the resident's ability to function as much as possible, in a familiar setting with the familiar comforts of home, in ways that encourage confidence and independence – can enhance the ability to function and greatly improve the quality of life.

Of special concern are the needs of Alzheimer's patients. Nineteen percent of those 75 to 84 years of age have Alzheimer's and the disease affects nearly half of those 85 or older. (*Newsweek*, January 31, 2000) Almost all of these people are likely to reside in a residential care setting or a nursing home during the course of their illness. Those in the beginning and middle stages of Alzheimer's are made especially vulnerable by environments that inhibit movement, stimulation and a sense of personal safety. The presence of glare, odor, noise and lack of access to safe and secure outside areas are especially unsettling for those in the later stages of the disease. Given the significant increase in the percentage of Washington State veterans 85 years and older between 2000 and 2020, it is clear that a new facility must provide the best environment possible for veterans with Alzheimer's and dementia. (This discussion is based, in part, on Designing for Alzheimer's Disease, Elizabeth C. Brawley, John Wiley & Sons, 1997)¹

3.1 Federal VA Nursing Care Direction

3.1.A Evolution

As discussed above, design layouts for nursing homes were historically derived from hospital design models with the understanding that care mimicked hospital care but was

1. This discussion is taken from the "Skilled Nursing Facility Report"; August 31, 2000; Washington Department of Veterans Affairs in association with NBBJ.

less intense. There was little to no clarity about the possibility of engaging the resident in life as fully as possible. Recognizing this, the main goal of the Retsil Skilled Nursing Facility design (construction completed in 2005) was to create a non-institutional, home-like environment that allowed residents to function more independently, provided security and peace of mind and improved quality of life. Working within the strict Federal VA space guidelines in place at the time of design, WDVA was able to provide double rooms that function as singles, maximize outdoor space for both residents and staff and balance the respect for privacy with the need for socialization.

Since that time, the Federal VA approach to nursing care has evolved even beyond what was achieved at Retsil – from a hospital focused model to one that is resident-centered and home-like. The Agency is in process of updating its nursing home design guidelines to reflect the current thinking. VA is committed to transforming the culture of care in nursing homes built on the notion that in large part, the actual facility design itself contributes to the well-being and positive outcomes of care in such facilities. The transformation of the culture of care focuses on resident-centered care that enhances the resident’s ability to function and live fully until death. The driver of care is the resident with the focus on providing resources around the individual resident instead of taking the resident to the point of care.

3.1.B The Green House® Project Model of Care

The further evolution of the Federal VA approach to nursing home care can be seen in the Agency’s support of the Green House® Project mission, vision and model of care. Federal VA is encouraging both VA Medical Centers and the State Homes to give serious consideration to the concept as they plan for new nursing home beds. As described on the organization’s web site:

“The Green House® model creates a small intentional community for a group of elders and staff. It is a place that focuses on life, and its heart is found in the relationships that flourish there. 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. Its primary purpose is to serve as a place where elders can receive assistance and support with activities of daily living and clinical care, without the assistance and care becoming the focus of their existence. 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.

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."

The architectural model of the Green House® typically takes the physical form of a small residential subdivision although there are a few high rise projects that share only a common lobby. While the Federal VA will not mandate the physical organization, they are committed to creating what they are calling "Community Living Centers" (CLC) with the cultural and physical environments that will provide non-institutional settings and enhanced quality of life. Those Federal VA facilities and State Homes currently in design or under construction range from those that completely incorporate the Green House® model (including affiliation with the organization) to hybrids incorporating a variety of physical and programmatic aspects.

Table 3.1 on the following page is a comparison from the *Green House® Project Guidebook* (4/2008) that outlines philosophical differences between traditional nursing homes and the Green House® concept.

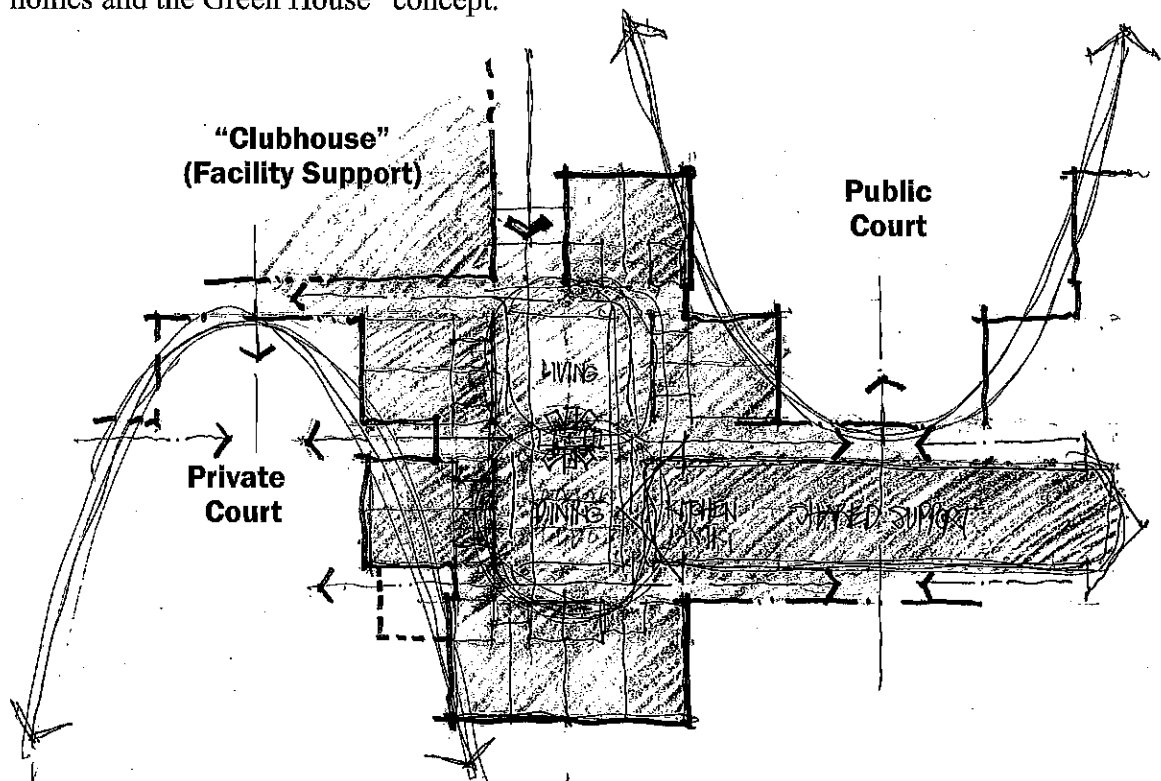


Figure 3.1 Conceptual Diagram of Green House®

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Table 3.1 Comparison of Traditional Nursing Homes and the Green House® Long-term Care Residence (Source: *Green House® Project Guidebook*)

	Traditional Nursing Home	The Green House® Long-term Care Residence
Size	Usually 120 ⁺ beds divided into 20-40 bed units	7-10 elders
Philosophy	Medical model emphasizing provision of clinical services to patients	Habilitative model emphasizing intentional communities that prioritize elders' quality of life
Organization	Hierarchy - nurses control unit activity	Flattened bureaucracy - empowerment of direct care staff, nurses visit the house to provide skilled services
Decision Making	Decisions made by the organizational leadership	Decisions made by elders or person closest to elders as often as feasible, House Councils plan menus, activities and house routines
Privacy	Typically shared bedrooms and bathrooms	Private bedrooms and bathrooms
Access	Space belongs to the institution; elders have access to their room and public areas but many spaces are off-limits	Space belongs to the elders and they may access all areas of the house
Outdoor Space	Often challenging to access, particularly without assistance or supervision	Easy access, fenced, shaded and in full view of the hearth and kitchen to allow observation by staff and open access
Living Areas	Lounges and dining rooms usually at the end of long corridors	Central hearth with an adjacent open kitchen and dining area, bedrooms open to the hearth
Kitchen	Off-limits to elders and visitors	Elders and visitors have access and may participate in cooking activities
Nurses Station	In the center of most units	Medication and supply cabinets in each room; nurses visit rooms to administer medications and treatments. Office/ study provides space for administrative tasks such as record maintenance
Dining	Large dining rooms with many elders, separate "feeder" tables	One dining table providing a focal point for community meals
Staffing	Departmental with segmented tasks/ specialized tasks	Shahbaz is a universal worker providing direct care, laundry, housekeeping and cooking services
Visitors	Limited ability to participate	Participate in meals and other activities, prepare snacks in the kitchen and hold family celebrations in the Green House residence

3.2 Assumptions

As part of the initial programming effort, the study team reviewed the program and facility characteristics that guided the design of the Retsil facility. It was determined that those characteristics were still very relevant and were consistent with the evolution of the Federal VA direction on Community Living Centers to create care environments that allow residents to function more independently in a non-institutional setting, provide security and peace of mind and improve quality of life. These characteristics provided the basis for the following Design Precepts for the new Walla Walla Skilled Nursing Facility.

1. Create a state-of-the-art facility.

- Appropriate relationships among and between spaces
- Adequate space for all identified services and functions
- Rooms that will adapt to changing needs of the future
- Plan for technology to accommodate future communication systems
- Maximize operational efficiencies
- Provide the optimal environment for residents and staff

2. Provide a non-institutional facility that fosters aging in place.

- Homelike environment that accommodates various degrees of independence
- Include the needs of family members in the design of the facility
- Optimize natural daylight and recessed lighting
- Be respectful of resident's routines; offer choices
- Decentralize services such as dining and restorative care
- Special care programs receive support for special needs (Alzheimer's, Hospice)
- Shower and tub facilities to accommodate varying independence levels
- Climate controlled areas that respond to resident needs
- Soothing colors and attention to noise control
- Ability to incorporate "non-traditional" therapies, such as Intergenerational, Pet, Horticulture, which have been shown to improve the quality of life for this population

3. Balance respect for privacy with need for socialization.

- Public spaces created for small gatherings as well as large gatherings
- Areas created for meditation and reflection

4. Design outdoor spaces that enhance the quality of life for residents and staff.

- Gardens and private spaces that are wheelchair accessible
- Areas designed for recreation and celebration of service to country
- Multiple areas protected from the elements and secure areas for Alzheimer's patients

5. Build a facility that attracts and retains staff.

- Secure environment with adequate parking
- Support spaces on units to perform jobs more effectively and efficiently
- Spaces for storage of personal items and areas of respite during working hours
- Appropriate spaces for a full array of medical, dental and rehab services
- Appropriate storage for all equipment in appropriate spaces

These assumptions guided the program and facility requirements for the new 72-bed Skilled Nursing Facility in Walla Walla.

3.3 Space Requirements

A summary of the Skilled Nursing Facility space requirements is presented in Table 3.2. The detailed program can be found in Appendix B. Net requirements for program spaces were calculated according to *Chapter 106: Veterans Health Administration – Community Living Center (CLC) VA space planning guidelines*, Green House® guidelines and extensive team experience at Retsil and other nursing facilities.

**Table 3.2 Summary Space Program
for the Walla Walla Skilled Nursing Facility**

Program/Function	Assignable Square Feet (ASF)
RESIDENTIAL: 6 HOUSES	
General Residential House: Resident Areas	
5 Resident Houses @ 12 residents per house	21,100
Residential House Support Areas (General, Specialty or Combined)	1,700
Specialty Residential House: Resident Areas	
1 Resident House @ 12 residents per house	4,320
Residential House Support Areas (General, Specialty or Combined)	340
SUBTOTAL - 6 Residential Houses	27,460
NEIGHBORHOOD: 3 NEIGHBORHOODS (2 Houses each)	
Patient Areas	1,740
Support Areas	2,400
Staff & Administrative Areas	1,520
SUBTOTAL - 3 Neighborhoods	5,660
FACILITY SUPPORT	
Therapeutic Areas	870
Resident Support Areas	2,588
Staff & Administrative Areas	1,984
Staff Lockers, Lounge & Toilets	390
SUBTOTAL Facility Support	5,832
GRAND TOTAL (ASF)	
	38,952 ASF
Conversion Factor	x 1.26
Departmental Gross Square Feet (DGSF)	49,080 DGSF
Conversion Factor	x 1.20
Building Gross Square Feet (GSF)	58,895 GSF

3.4 Functional Requirements

The Preferred Alternative for the new Walla Walla Skilled Nursing Facility is a hybrid of the Green House® physical and programmatic model that creates separate residential houses that are tied together by support spaces. The spaces provided in the program can be grouped into three major functional categories:

- **Residential Houses:** 6 total houses each including 12 private resident rooms with bathrooms, living, dining and laundry room, kitchen, quiet room and pantry as well as associated linen, housekeeping, equipment and medical supply support spaces and a nursing substation.
- **Neighborhood Support:** 3 total neighborhoods of 2 residential houses each including nursing station, activity/multipurpose space, bathing suites, storage, nursing and activities coordinator office space and conference room.
- **Facility Support:** including physical and occupational therapy, chapel, barber shop, security, administrative staff spaces, medical records along with staff lounge and lockers.

A brief description of the key spaces within each category is provided below. A more detailed description of the spaces and requirements is provided in Section 8.0.

3.4.A Residential Houses

These spaces are the centerpiece of the new Skilled Nursing Facility. Each is basically a self-contained residence, designed like a private home. Twelve residents live in a house, each with his/her own bedroom, bath with shower and locked medicine cabinet. The physical space is not meant to be non-institutional, but to be like a home in which the veteran might have lived in their community. The houses include a full kitchen where menus and meals are prepared. Residents will have access to the kitchen and all areas of the house at anytime. Meals are eaten family style in the home's dining room which also functions as an activity space for residents. Residents can participate in meal preparation as desired.

Outdoor spaces will be easily accessible to residents and in full view of living room and kitchen to allow observation by staff. A small office/study space in the house will function as the nursing substation. Each house will have one larger bedroom with additional space to allow for residents with bariatric care needs and other conditions which require additional space for mobility and equipment clearances. Other house support spaces include linen, housekeeping and medical supply space. The entire facility will be designed to meet the accessibility standards required by the Americans with Disabilities Act (ADA).

The program as now envisioned assumes 5 general houses and 1 specialty house for Alzheimer's patients. This specialty house has the same floor plan as the general house with slightly larger dining and living areas. Outdoor space will be fenced to provide for increased patient security.

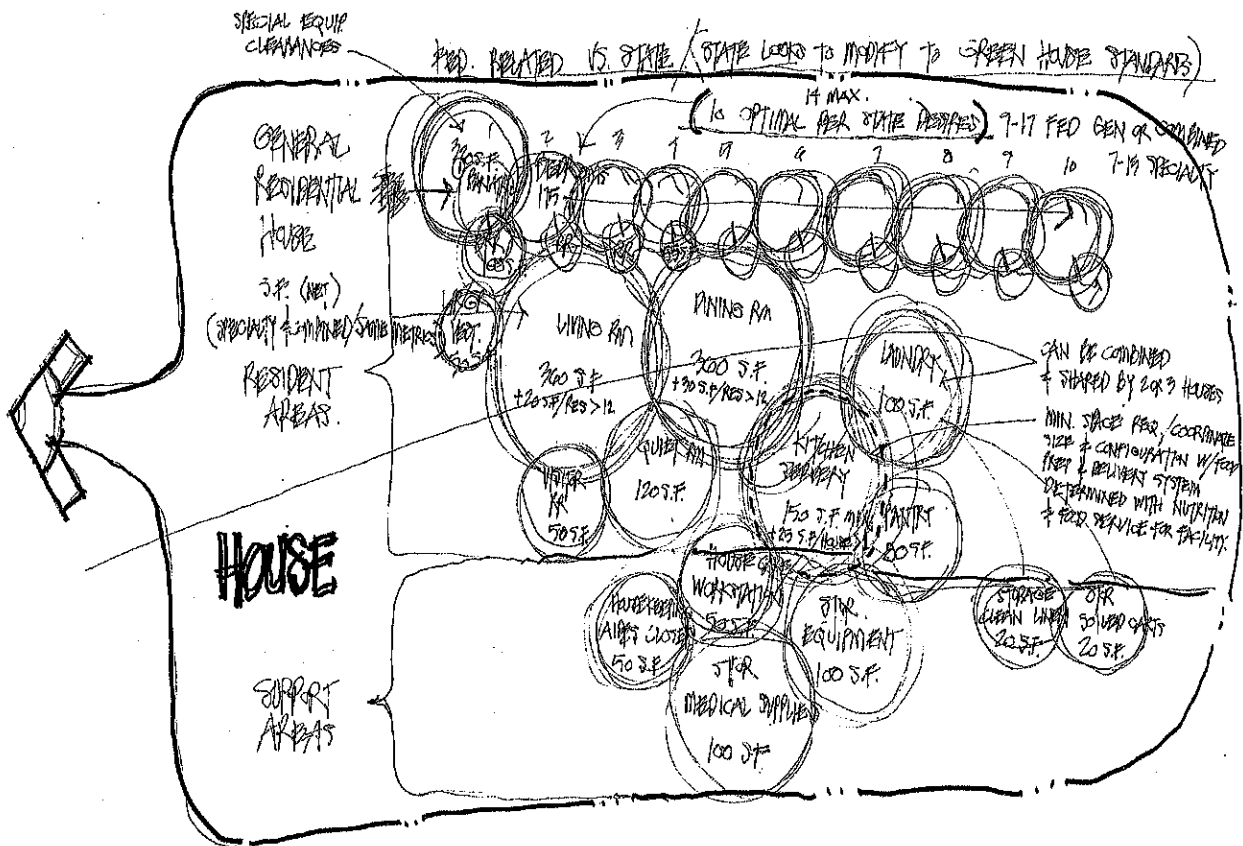


Figure 3.2 Residential House Adjacency Diagram

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3.4.B Neighborhood Support

Every neighborhood of two residential houses will be supported by a variety of more institutional spaces providing resident care and support. These include:

- **Activity/multipurpose space** – with space for crafts, recreational therapy and small gatherings. Many of the elderly are computer literate and the number can be expected to increase in the future. Power and data access for computers will be provided.
- **Bathing suite** – for those who cannot use a shower and need assistance with bathing
- **Exam room** - that will function as physician exam/treatment rooms for dental, eye and podiatry services, other primary health care needs and family and patient counseling areas.
- **Staff support spaces** – including nursing station, nursing and support staff offices, conferences rooms.
- **Facility support spaces** – including housekeeping, and storage/wheelchair/stretcher storage.

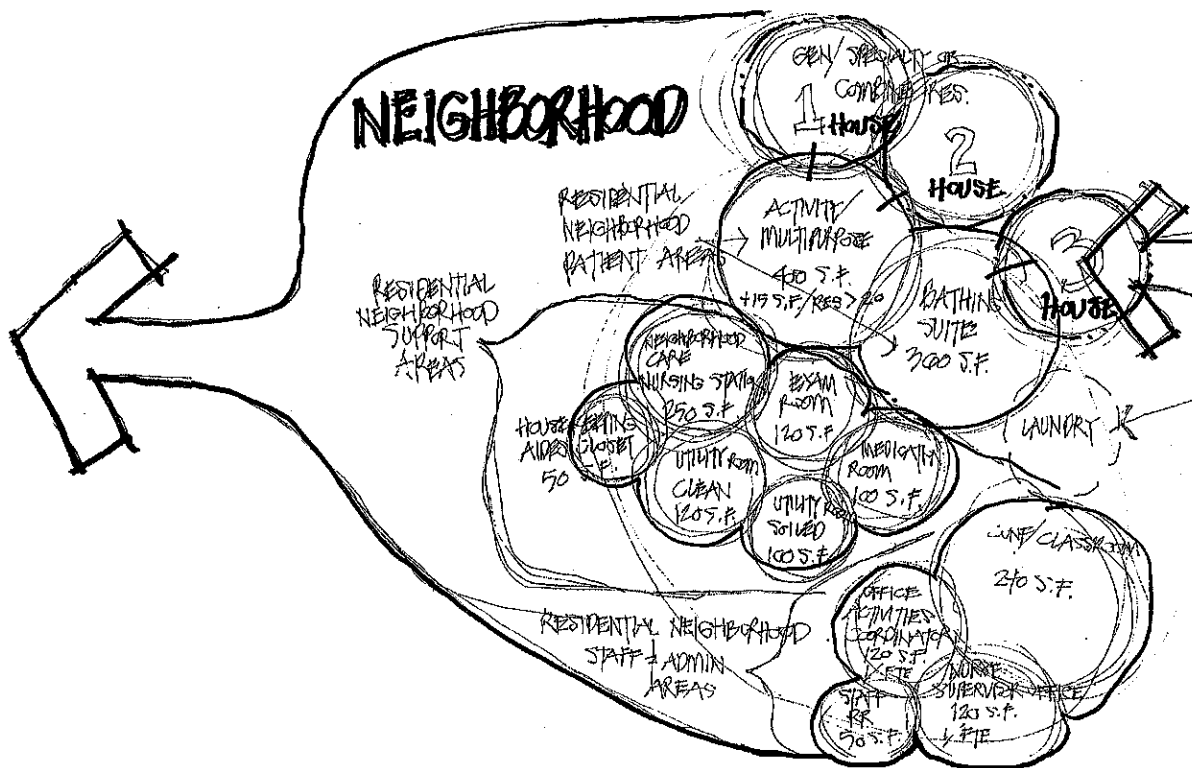


Figure 3.3 Neighborhood Support Adjacency Diagram



3.5 Interrelationships & Functional Adjacencies

The adjacency diagrams illustrated in the preceding figures summarized the functional relationships among the program elements. Preliminary floor plans are provided in Section 8.0 to further define the desired and important relationships among spaces in the new facility.

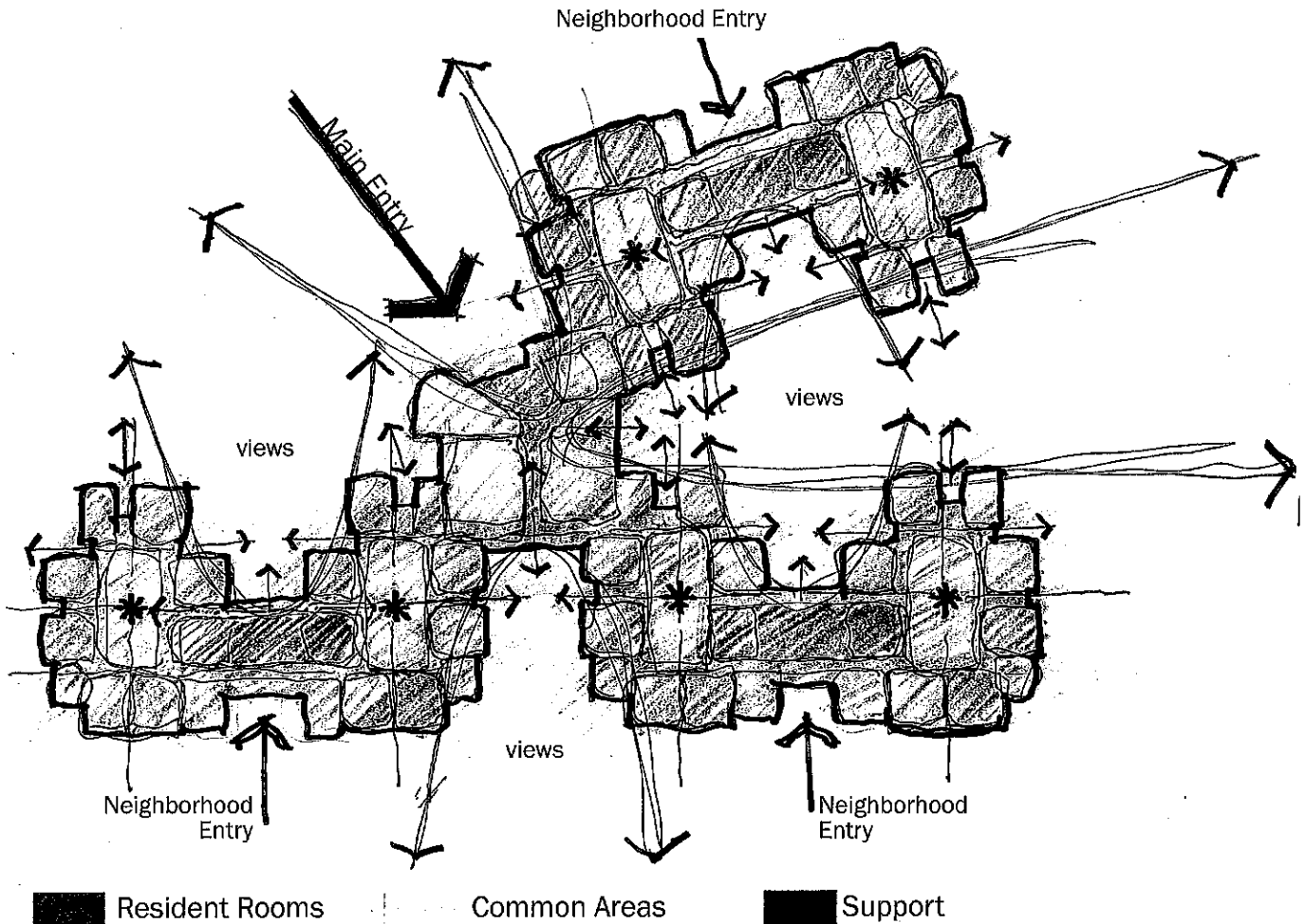


Figure 3.5 Organization Diagram of Six Houses

3.6 Major Equipment

A refined and updated list of equipment will be developed during the Design phase of the project. Given the residential nature of the facility, major furnishings and equipment will include:

- Resident room beds and resident lifts;
- Physical and occupational therapy equipment;
- Residential model kitchen and laundry appliances; and
- Telecommunications including nurse call systems and security.

3.7 Special Systems and Applicable Codes & Regulations

The Appendices include electrical, mechanical and telecommunications Predesign narratives which address applicable codes, regulations and any special requirements.

3.8 Future Requirements

The new facility will provide 72 beds in approximately 3 acres of the VAMC campus. At this time, additional capacity is not anticipated at Walla Walla, however the preferred site on-campus offers ample expansion potential should WDVA elect to increase the available beds at this location.

3.9 Skilled Nursing Facility Relationship to VAMC

The proposed facility is intended to compliment the existing VAMC campus and the established spatial relationships defined by the existing facilities. (See Figure 3.6 on the following page to understand existing campus land uses, as communicated by VAMC campus and City staff.) The residential precedent of Officers' Row will influence the architecture, massing and design character of the Skilled Nursing Facility. The design will take into account regional influences as well as the history of Fort Walla Walla and the local Native American tribes. See Section 4.0 for further discussion of the proposed site and analysis.

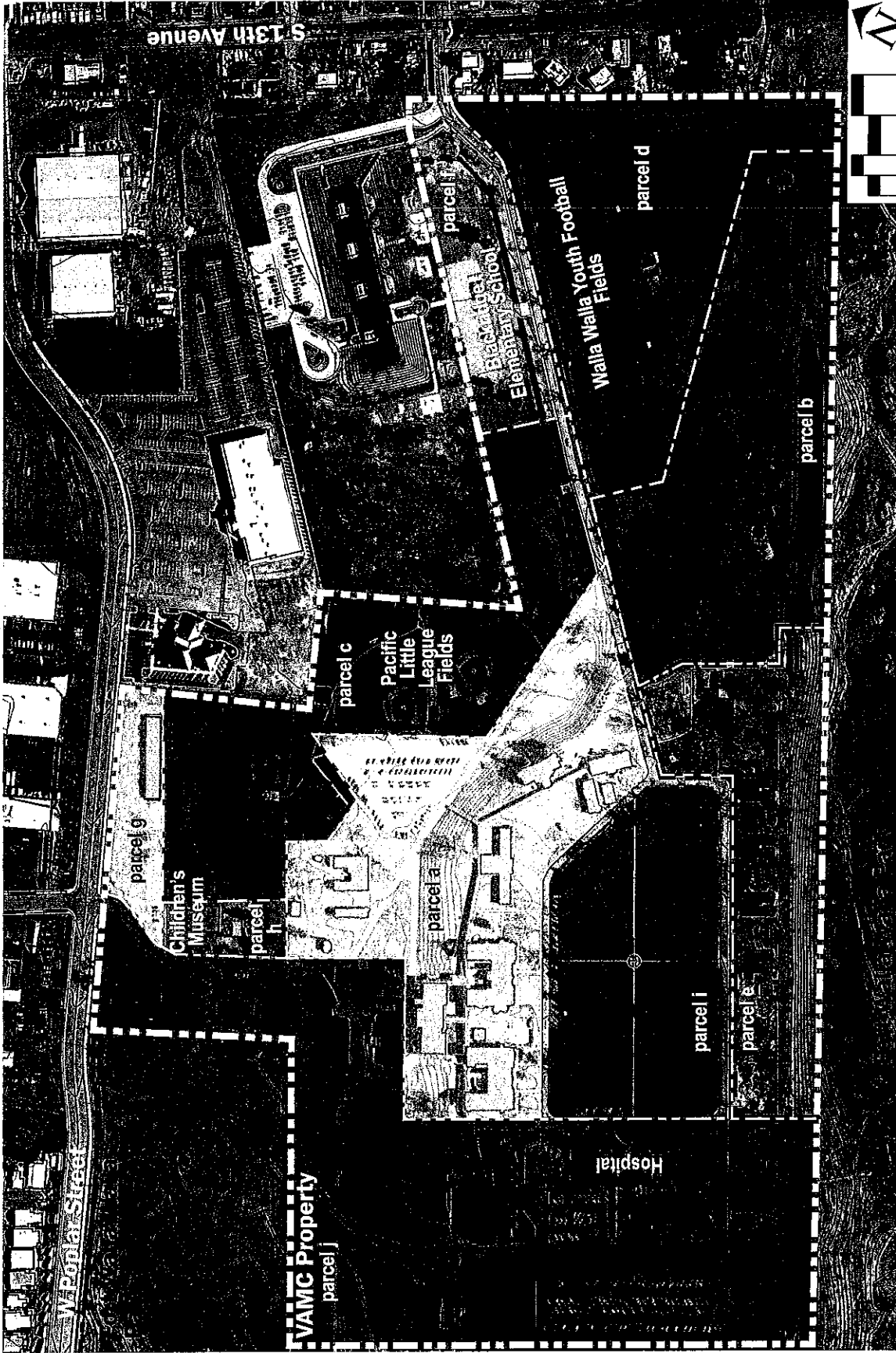


Figure 3.6 VAMC Campus Land Uses



4.0 SITE ANALYSIS

The proposed Skilled Nursing Facility will be sited on federal property owned by The United States Department of Veterans Affairs (Federal VA) on the grounds of the historic Fort Walla Walla. The Department operates the Jonathan M. Wainwright Memorial Medical Center (VAMC) on the property; VAMC services are concentrated on approximately twenty acres of the 84-acre site. The campus is located within the southern limits of the City of Walla Walla, Washington.

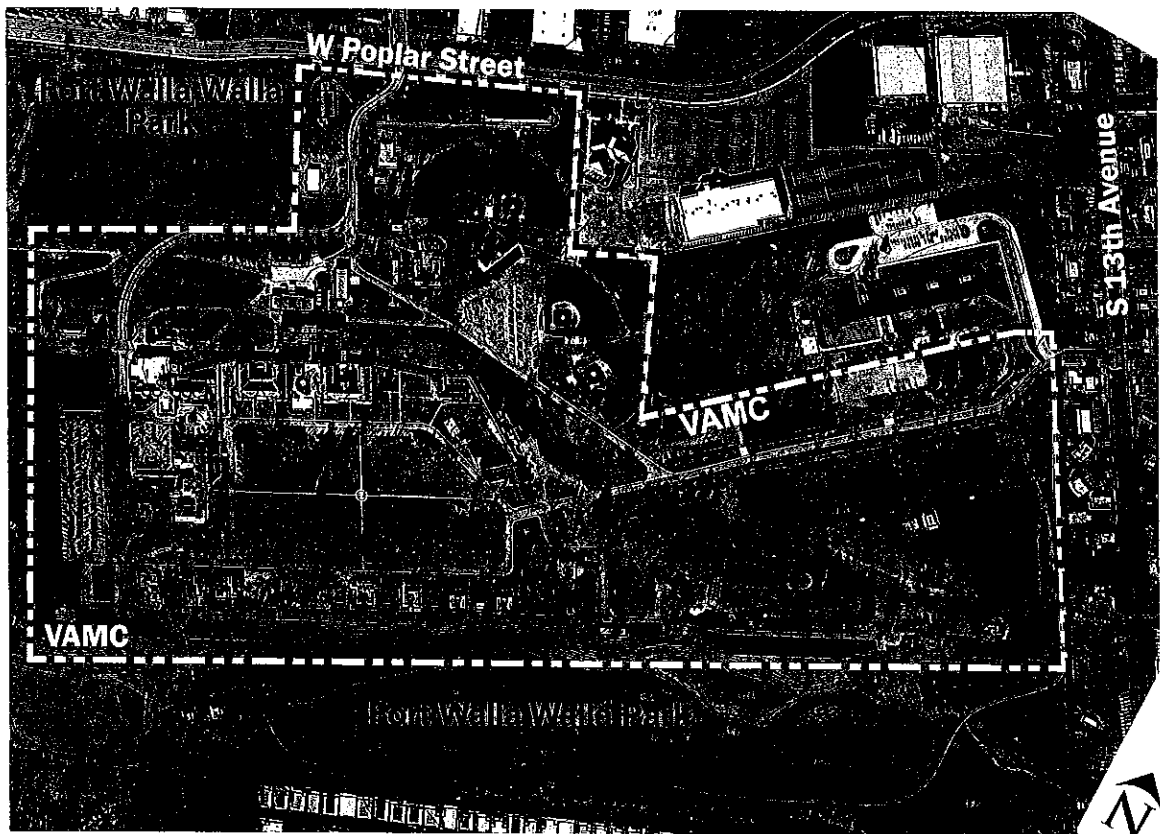


Figure 4.1 Aerial Photograph, 2008 (Courtesy of the City of Walla Walla)

4.1 Potential Sites

The original Fort Walla Walla was organized around cavalry parade grounds situated within park lands and natural areas. VAMC services and administration are housed in multiple structures, many of which face the parade grounds, including the hospital at the western terminus. Other buildings fronting the parade grounds include seven officers' quarters on the south side which are identified on the National Register of Historic Places.

In 2006, the Walla Walla Community Task Force analyzed the campus and studied siting the proposed facility immediately west of the hospital for programmatic reasons

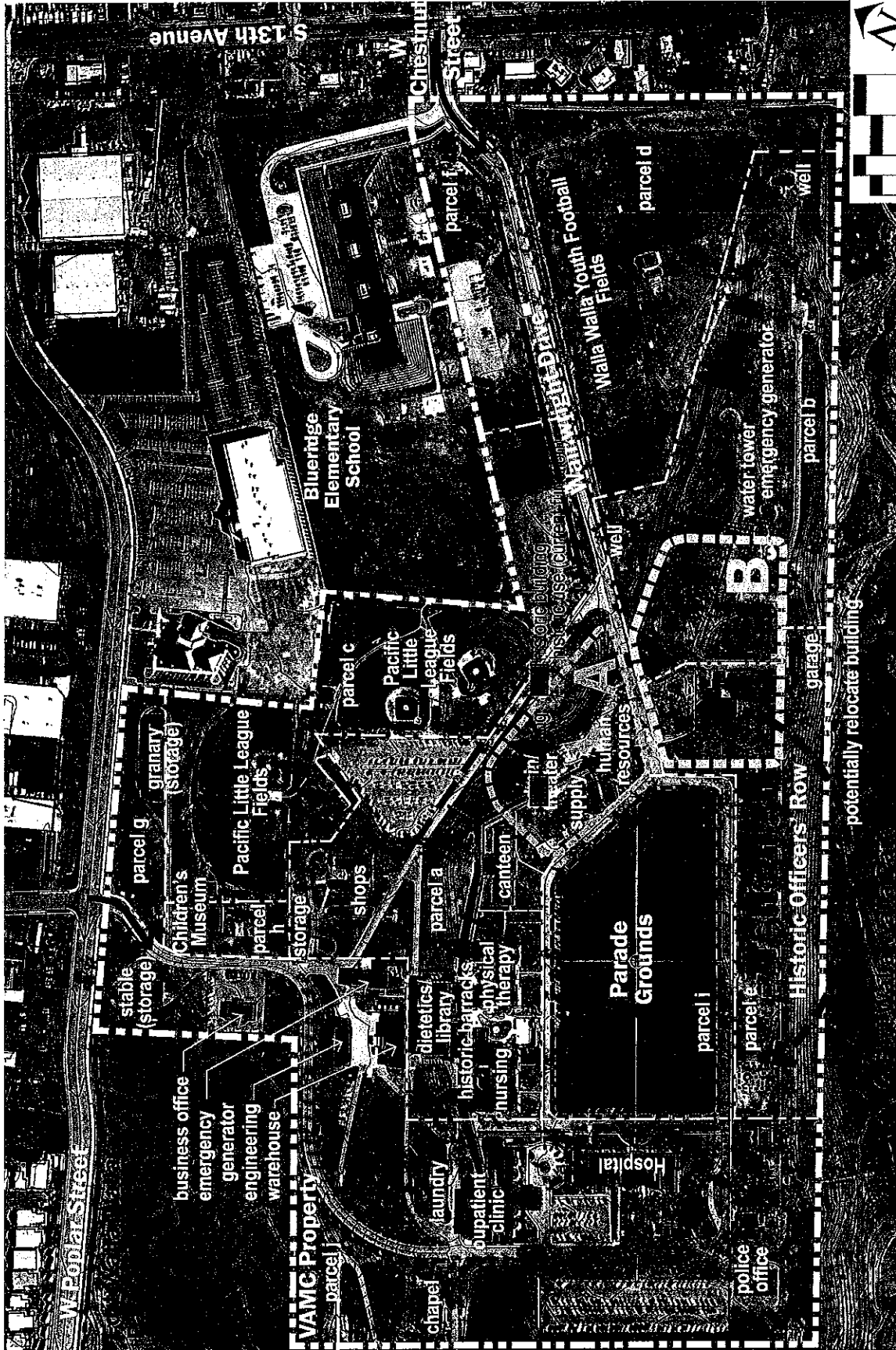


Figure 4.2 Existing VAMC Campus & Potential Development Zones

no longer being considered. As discussed in Section 3.0, Federal VA and WDVA are developing skilled nursing facilities that offer veterans a well-designed, residential home experience that is very different from the institutional or clinical environment. In addition, the site previously considered is park property owned by the City of Walla Walla. The Predesign study assessed the campus for potential sites within federal ownership that offered a more residential setting.

Two candidate locations at the eastern terminus of the parade grounds were considered for the proposed project. Both sites were preliminarily evaluated and tested to determine if the proposed program could be accommodated, or fit, on the site. The development zones are here named in relation to the VAMC parcel nomenclature:

- **Zone A** – approximately 1.60 acres located north of the entry road, Wainwright Drive; assumes relocation of uses and demolition of existing buildings; or
- **Zone B** – approximately 3.75 acres located south of Wainwright Drive; considers potential relocation of existing historic house to reinforce Officers' Row.

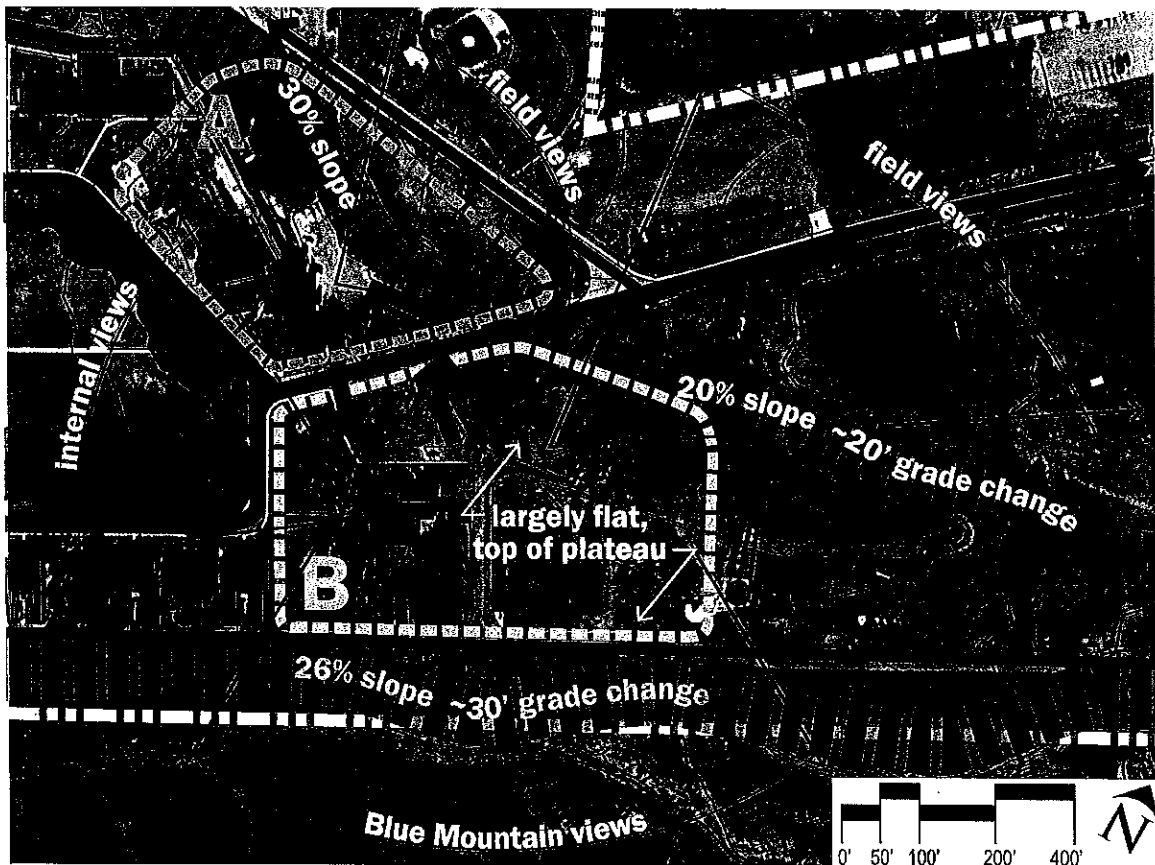


Figure 4.3 Potential Development Zones

nbbj

WDVA - SKILLED NURSING FACILITY, WALLA WALLA PREDESIGN



Both sites would allow the Skilled Nursing Facility to directly address the parade grounds and integrate the new structure within the campus setting while remaining apart from the hospital. This separation provides an opportunity to create the desired residential setting for the skilled nursing residents which will be designed to be more in keeping with Officers' Row than the institutional hospital environment.

Development Zones A and B are both defined by the parade grounds and the immediate topography. The majority of the Fort was developed on top of a plateau, which offered the military good visibility; the angular notch of the cavalry grounds responds to the plateau's edge, allowing two buildings to front the grounds at the northeastern corner. Slopes adjacent to both development zones measure approximately 20' in grade change.

4.2 Programmatic Tests-of-Fit

The program assumptions for the proposed Skilled Nursing Facility include the following development precepts relevant for the programmatic tests-of-fit:

- Assume 72 beds x estimated 750 gross square feet (GSF)/bed = 54,000 GSF of building(s);
- Prefer 1-story buildings for ease of access & emergency egress (2-stories are possible where terrain permits);
- Consider Green House® concept emphasis on individual houses with central clubhouse facility for shared uses;
- Allow for possible future expansion of Skilled Nursing Facility;
- Limit infrastructure modifications/ improvements as possible; and
- Provide requisite parking in adjacent, surface parking areas, preferably on-street or smaller off-street parking facilities.

As illustrated in the following figures, both development zones can accommodate the proposed 72-bed Skilled Nursing Facility. Development Zone A, however is constrained by the topography and challenges the development precepts for 1-story, multi-house construction as promoted by the Green House® concept. Zone A also provides limited opportunities for future expansion or immediately adjacent parking options. Development Zone B was considered to provide greater flexibility for the design of the 72-bed facility in keeping with the Green House® concept and allowing for possible future expansion. Zone B is therefore referred to as "the site" throughout the remainder of this *Predesign* document.

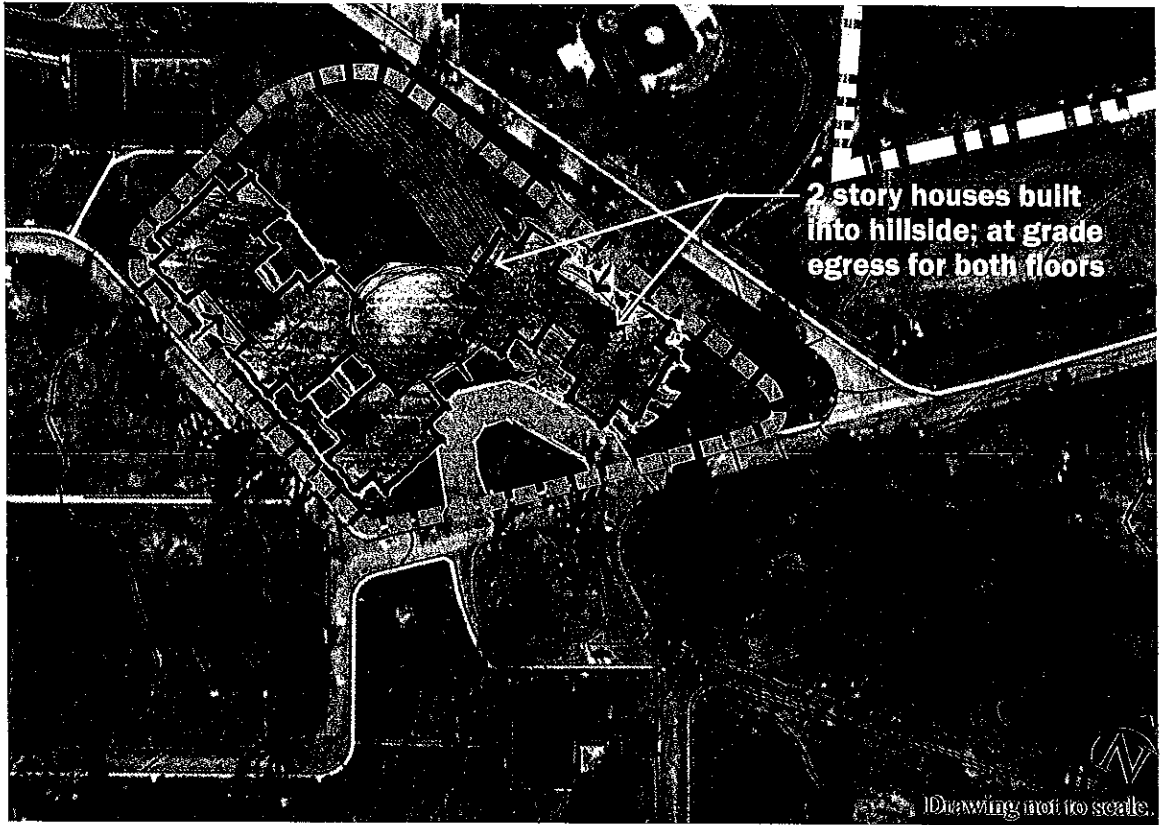


Figure 4.4 Test-of-Fit: Development Zone A

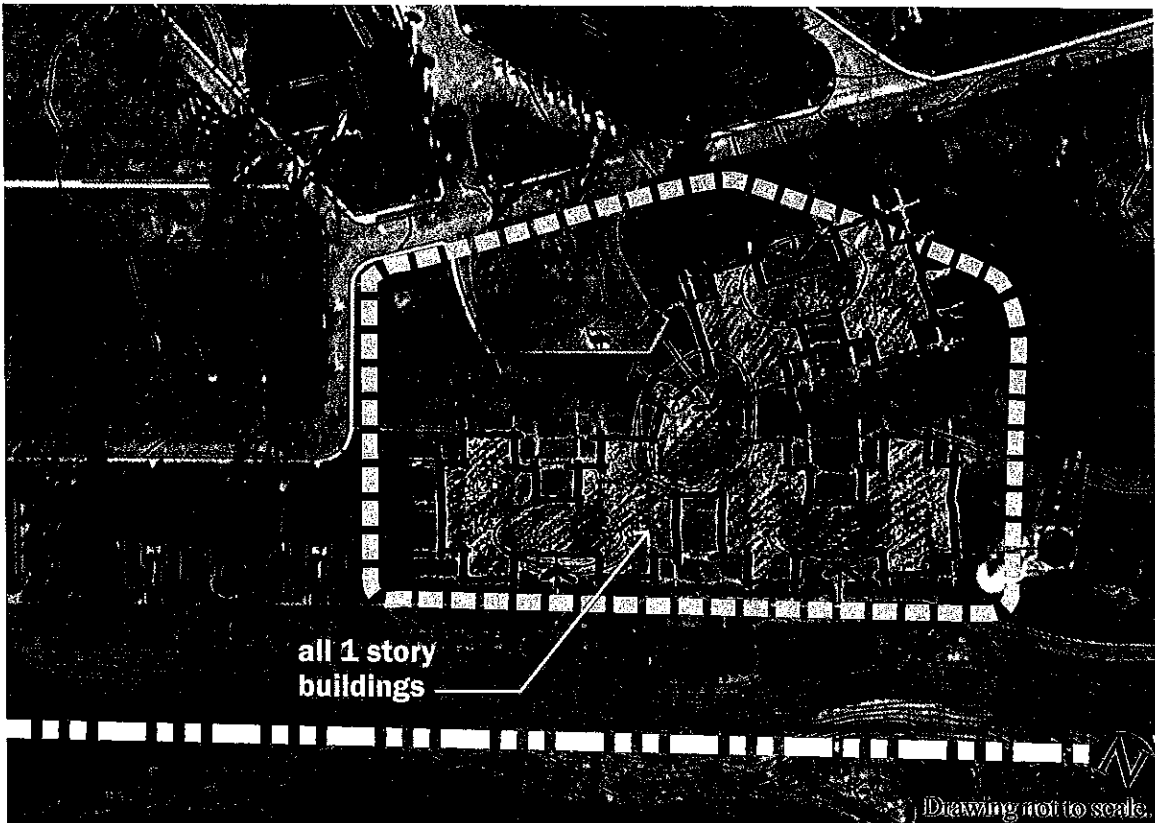


Figure 4.5 Test-of-Fit: Development Zone B

4.3 Site Considerations: Physical, Regulatory, Transportation & Access Issues

The site is located on the southeastern corner of the parade grounds, adjacent to Officers' Row and Wainwright Drive. The following discussion analyzes the physical, regulatory and access conditions specific to this site as well as the campus as a whole. Where noted, some information is excerpted from the 2006 report of the Walla Walla Community Task Force, *Planning for the Future: Wainwright Veterans Administration Medical Center and Historic Fort Walla Walla Land Use Study*.

4.3.A Physical Conditions

The site is relatively flat, with sloping edges of approximately 20-25% grade at the northeast corner and south of the adjacent road along the southern edge of the development zone. Minor paved road/walkways cross the site.



Figure 4.6 Building #1, Front Facade

Two vacant, historic structures occupy the site as well as Building #97, an 8-car garage used for storage purposes. The historic structures, Buildings #1 and #103, were formally used as the Fort commander's residence and a related outbuilding; these buildings are listed on the National Register of Historic Places and are in need of repairs. *Planning for the Future* documented the conditions and estimated repairs at \$335,900 in 2006.

Consideration of this site for the development of the proposed skilled nursing facility assumes further evaluation of the relocation, renovation/integration or retention strategies for Building #1 during the Design Phase:

- Relocation of Building #1 to Officers' Row – Building #1 could be moved to the west end of the Row, in closer proximity to the hospital as shown in Figure 4.1;
- Renovation of Building #1 – renovate and integrate Building #1 into the proposed skilled nursing facility “commons area”; or
- Retention – shift the siting of the skilled nursing facility to accommodate retention of Building #1 in its current location and condition.



Figure 4.7 Officers' Row, View West



Figure 4.8 Adjacent Buildings: Water Tower & Building #97



Figure 4.9 Site View of Parade Grounds & VAMC



Figure 4.10 Site View of Blue Mountains

The Predesign study assumed relocation would be pursued. Should the Design Phase utilize a different strategy for Building #1, the other options are possible: integration of the facility would be resolved during architectural design and/or the site (and adjacent area to the east, if needed) is substantial enough to accommodate shifting the proposed building footprint.

Several structures are adjacent to the site, including the historic Officers' Row to the west and a well, water tower and electrical distribution system building to the east. The adjacent residential structures, or "Duplex Quarters 2, 3, 4 and 5," are situated immediately west along Wainwright Drive; these vacant buildings are four of the several VAMC structures that are historic, registered and in need of repairs, as documented in *Planning for the Future*. The formal parade grounds are also immediately adjacent and offer internal views across the campus to the hospital and historic barracks.

The plateau location offers great visibility within the campus and to/from the larger Walla Walla area. The site is visible from the Chestnut Street entry and internally, across the VAMC campus. External views to the south include an expansive territorial view of the Blue Mountains. More immediate views of the youth



Figure 4.11 Site View of Entry Drive & Youth Football Fields

football fields are also possible from the site's plateau location. A Fort Walla Walla park trail is down the slope to the south.

Eastern Washington weather brings all seasons to this exposed site. Prevailing winds from the south blow up the valley and across the campus. Average temperatures range from 41 degrees Fahrenheit in January to 90 degrees in July. The mature trees on the parade

grounds and southern breezes provide respite during the dry summer months. Existing vegetation within the development zone however, is limited to lawn and a variety of trees, predominantly along the northern slope of the plateau.

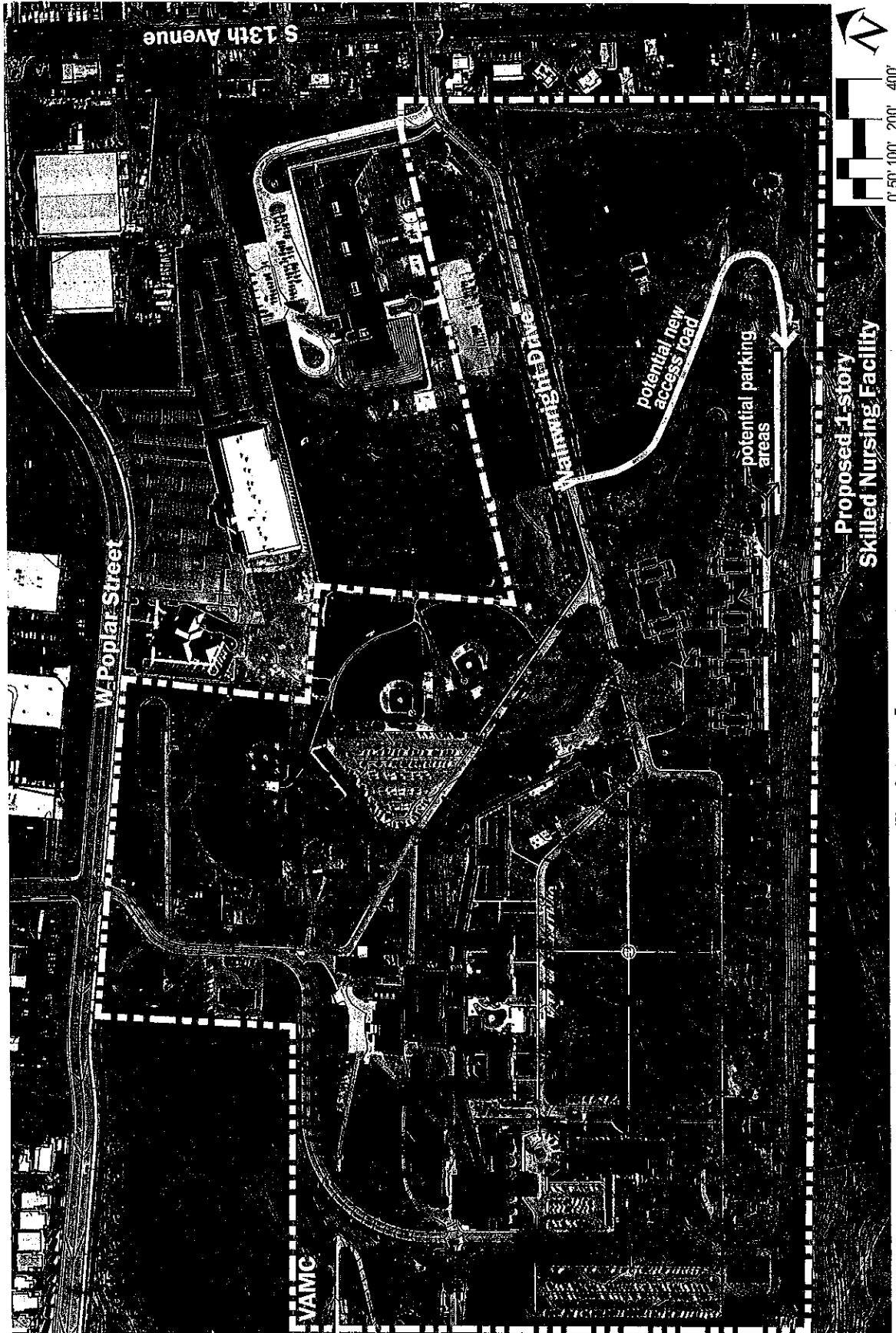
All necessary utilities are currently available on campus. Systems conditions and available capacities are documented in Appendix I. Requisite infrastructure improvements and connection fees are included in the *Predesign* cost estimates.

4.3.A Regulatory Conditions

The City of Walla Walla designates the VAMC campus as Public Reserve, PR zone. The proposed project would be considered a "nursing care facility" in the City's Municipal Code which is a Level III permitted land use that entails site plan review and a public hearing with the Hearings Examiner. With the exception of an eighty percent maximum lot coverage, dimensional standards are not defined for this zone and are subject to site plan review for consideration and approval. The proposed 1-story, 72-bed facility should not pose regulatory constraints on the project timeline.

4.3.B Transportation & Access Issues

The VAMC campus has two vehicular access points: from the main arterial, West Poplar Street on the north or the local access of Chestnut Street enters onto Wainwright Drive from the east. Wainwright Drive is a one way, counterclockwise circuit around the parade grounds intersecting secondary campus roads, including the service road behind Officers' Row and the proposed site. A drop-off court is included within the site bounds



Proposed 1-story
Skilled Nursing Facility

Figure 4.12 VAMC Campus with Proposed Skilled Nursing Facility & Access Improvements

and is maintained in the Predesign alternatives discussed in Section 5.0. New access to the service road may need to be developed during construction of the skilled nursing facility to facilitate deliveries and storage. (Costs have been included in the estimates.)

Parking for residents and staff would need to be accommodated in proximity to the skilled nursing facility. Regulatory requirements dictate 96 stalls should be provided for the residents and staff for the 72-bed residence. Parking may be provided in combination of on-street stalls and a small surface lot. Final configuration and location will be further evaluated during the Design Phase.

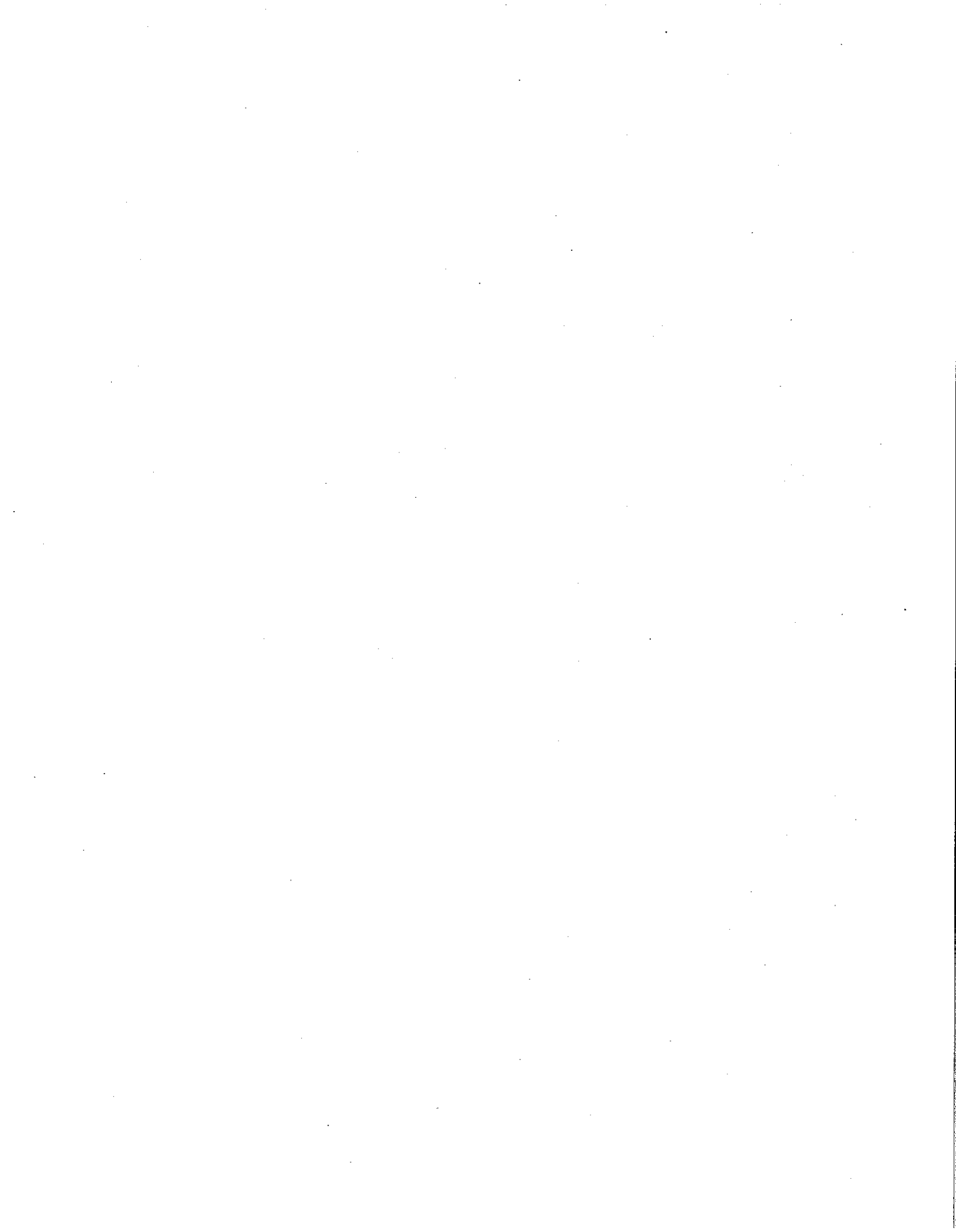
4.4 Site Ownership & Schedule

The proposed site is within Federal VA ownership as part of the Jonathan M. Wainwright Memorial Medical Center campus. Current subdivision of the property defines the site as portions of parcels E and B. WDVA discussions with Federal VA are ongoing to acquire the property for the purpose of the Skilled Nursing Facility. No site acquisition costs are anticipated.

Development of the skilled nursing facility will include extensive collaboration with a number of stakeholders to gather input, influence the design and achieve a number of requisite approvals. Federal VA authorization for funding purposes, site ownership and facility design will be obtained. The Predesign team has initiated conversations with Federal VA staff to build the proposed program definition and will continue the dialogue during Design. On-site meetings have been conducted with community stakeholders to discuss the project intent, predesign program definition, potential sites and sustainable design opportunities.

The significant histories of Fort Walla Walla and VAMC operations as well as Native American tribes in the area necessitate careful consideration of the site's past and the proposed development. The Design phase will entail collaboration with the State Department of Archaeology and Historic Preservation and local tribal representatives to determine the most appropriate solution. Given the importance the site has in the history of the native peoples of the area, it is hoped that the design can reflect and honor that influence.

Immediate campus neighbors and City of Walla Walla staff will be included in stakeholder discussions for project review. Regulatory approvals for the project, including environmental review and building permits will be authorized by the City. It is possible a full environmental impact statement (EIS) may be required due to cultural sensitivity concerns. Permit submittals and timelines will be developed during the Design phase.



5.0 PROJECT BUDGET ANALYSIS

Pre-design analysis of the Skilled Nursing Facility project budget assessed the potential cost impacts of various programmatic and operational strategies, resultant building configurations and proposed building systems. The following discussion enumerates those assumptions used in the development of the project's Pre-design cost estimates.

5.1 Conceptual Alternatives

Three alternatives reflecting a range of programmatic care models were considered. Each care model impacts both the physical organization of the facility as well as the operational philosophy and the staffing model. They are defined and described below.

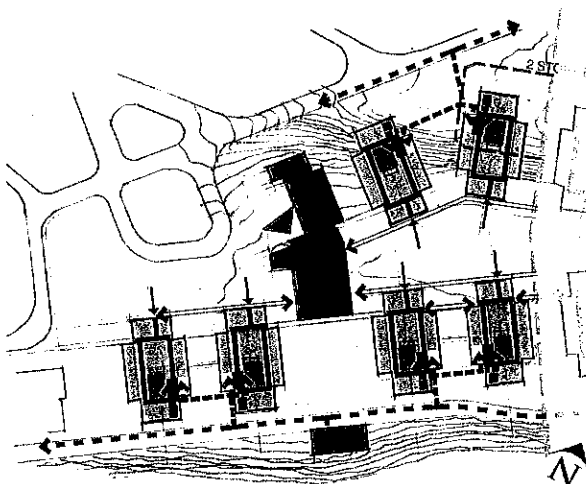


Figure 5.1 Alternative #1 - Green House®

Alternative #1 – Green House®

This alternative fully embraces the Green House® physical, operational and staffing model. Six self-contained houses of 12 residents each are provided with a central Clubhouse Building accommodating the facility administrative and support functions. Specially trained universal workers called Shahbazim (with core training as certified nursing assistants) staff each residence and provide a wide range of assistance including: personal care, activities, meal preparation and service, light housekeeping and laundry.

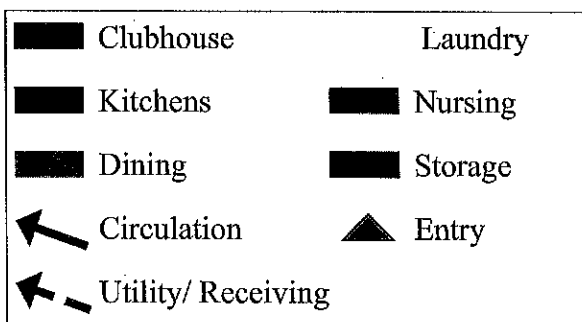


Figure 5.2 Alternatives Legend

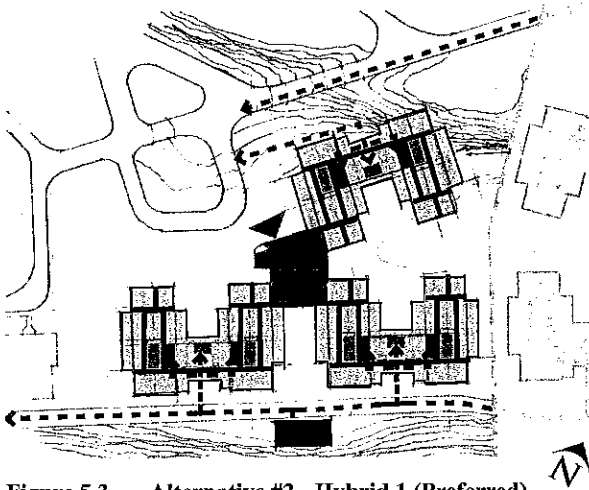


Figure 5.3 Alternative #2 - Hybrid 1 (Preferred)

Alternative #2 – Hybrid 1 (Preferred)

This alternative incorporates many of the Green House® physical characteristics with some modifications. While the alternative does provide six residences of 12 rooms, the facility is organized into 3 neighborhoods with shared support space tying 2 homes together. Facility administrative and support functions are also provided – as in Alternative 1 – in a central Clubhouse building. This alternative assumes a more traditional staffing model, but with staff very much involved in the on-going activities in each home.

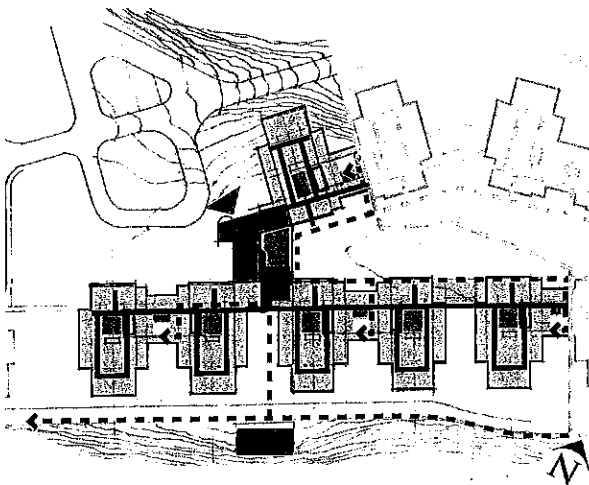


Figure 5.4 Alternative #3 - Hybrid 2

Alternative #3 – Hybrid 2

This alternative also incorporates some of the Green House® physical characteristics in terms of houses with private rooms, but is more similar to the operational and staffing model of the Retsil facility. The 6 houses are tied together by a spine providing circulation and support services. The Clubhouse also includes a central kitchen. While dining does occur in the dining room of each home, food is prepared primarily in the central kitchen and delivered to the small kitchen and servery in each home. This model assumes the same type of staffing model required at the Spokane State Veterans Home.

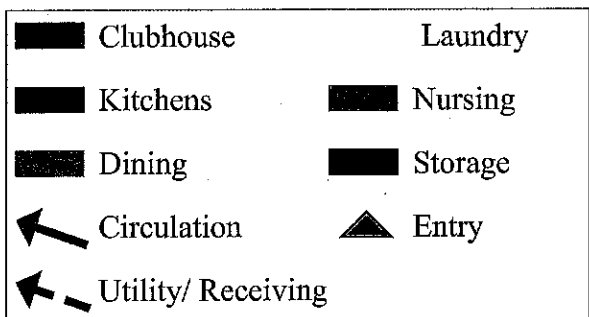


Figure 5.5 Alternatives Legend



5.2 Assumptions

Cost estimates were developed to help evaluate the Predesign alternatives and the costs or benefits offered. Project costs for each of the alternatives were estimated on the following assumptions:

- Relocation of historic Building #1 to Officers' Row;
- Self contained, stand alone facility that is not tied into the VA Medical Center systems;
- 50 year building life and therefore not typical wood frame residential construction - some combination of masonry and steel;
- Fully sprinklered;
- Individually controlled rooms;
- State-of-the-art systems – technology smart and adaptable;
- Air conditioned;
- Utility connections as defined in the engineering predesign narratives provided in the Appendix;
- Sustainable design features including operable windows where appropriate;
- Interior finishes and lighting consistent with those appropriate for homes, but of a quality that gives longevity to the design life; and
- The facilities meet the requirements for the 65% cost match from the U.S. Department of Veteran Affairs State Home Construction Grant Program including conforming to the “Seismic Design Requirement” documents (H-18-8) and the Code of Federal Regulation (CFR) for reimbursement by the State Home Per Diem program.

Funding for the 35% State match is anticipated through the Washington State Building Construction Account. The 65% federal match will come from the Federal VA State Home Construction Grant Program. The project schedule would follow State biennia budget planning and therefore assumes Design in the 2009-11 biennium with construction to occur in the 2011-13 biennium.

5.3 Escalated Project Costs

Table 5.1 provides a summary of the capital cost estimates in today's dollars and dollars escalated to the midpoint of construction for each alternative. The detailed cost estimates are included in Appendix C.

Table 5.1 Construction Cost Comparison Summary

	Alternative #1 Green House®	Alternative #2 Hybrid 1 (Preferred)	Alternative #3 Hybrid 2
Area (gross square feet)	59,400	58,895	67,618
Today's MACC/GSF (2008 \$s)	\$346	\$339	\$326
Today's MACC Total Construction Cost	\$20,533,700	\$19,972,700	\$22,062,900
Bid Date MACC/GSF	\$387	\$377	\$365
Bid Date MACC Total Construction Cost	\$22,988,000	\$22,196,963	\$24,676,000

The comparative cost estimates reveal the following observations:

- There is little cost difference between the Green House® scheme and the Preferred Alternative – Hybrid 1 – which was the least costly scheme, by approximately \$791,000 in 2008 estimates.
- Alternative #3 – Hybrid 2 – was the most expensive option due to the increased square footage required which increased both the exterior materials costs as well as those associated with site work. This operational model assumes both a central kitchen for food preparation in addition to small kitchens and serverys in each residence. The spine connecting the buildings also results in more circulation and a less efficient floor plan.
- Escalation to the midpoint of construction at the Office of Financial Management's required rate of 3.5% annually increases the capital costs by over 12%.

Total project costs of the Preferred Alternative were calculated at \$31.9 M. This estimate is based on the following timeframe for design and construction:

- Design would begin in July of 2009 and be completed by April, 2011.
- Construction would begin in July 2011 and be completed by September of 2012.

With the State of Washington support for the proposed Walla Walla Skilled Nursing Facility, the Federal VA will contribute up to 65% of the project cost. The State of Washington contribution in future biennia is \$11,176,838. The Federal VA State Home Construction Grant Program will contribute \$20,756,983.

In order to understand the reasonableness of the cost estimate, comparisons were made to costs of the WDVA Retsil facility, the new Federal VA Nursing Home Care Unit at American Lake Medical Center and a new State Veterans Home in Nevada currently in the design phase. These veterans facilities are the most appropriate for comparison to the new State Home at Walla Walla. In the case of the Retsil project, the actual cost/square feet was benchmarked using a number of different construction cost indices and were escalated to 2008 dollars.

Table 5.2 Construction Cost/Square Foot at Comparable Facilities

Facility	Estimated Construction Cost/Sq.Ft. (2008 \$s)
American Lake Medical Center Nursing Home Unit - Tacoma, Washington	\$300
WDVA Veterans Home - Retsil, Washington	
Engineering News Record Index	\$293
Turner Construction Index	\$330
Rider Levett Buchnall Index	\$353
Marshall & Swift Building Cost Modifier	\$310
Nevada State Veterans Home - Reno, Nevada	\$340
Proposed Walla Walla State Home	\$339

This analysis indicates that the Walla Walla costs are within the range of costs of comparable facilities.

Detailed cost estimates are found in the Capital Budgeting System (CBS) forms included in the following pages and/or in Appendix C.

OFM

305 - Department of Veterans Affairs

Cost Estimate Summary

2009-11 Biennium

Cost Estimate Number: 9
Cost Estimate Title: Predesign
Version: 00 Facility Version
Project Number: 30000056
Project Title: Walla Walla Nursing Facility 08-2-008
Project Phase Title: Predesign

Report Number: CBS003
Date Run: 12/23/2008 1:38PM

Facility Preferred: Yes

Contact Info Contact Name: Kim Selby Contact Number: 206.515.4657

Statistics

Gross Sq. Ft.: 58,895
Usable Sq. Ft.: 38,952
Space Efficiency: 66%
MACC Cost per Sq. Ft.: 339
Escalated MACC Cost per Sq. Ft.: 377
Remodel?: No
Construction Type: Nursing Homes
A/E Fee Class: B
A/E Fee Percentage: 7.05%

Table with 3 columns: Schedule, Start Date, End Date. Rows include Predesign, Design, Construction, and Duration of Construction (Months).

Cost Summary Escalated

Table showing cost breakdown: Acquisition Costs Total, Consultant Services Total, Construction Contracts Total, Equipment Total, Art Work Total, Other Costs Total, Project Management Total, Grand Total Escalated Costs, and Rounded Grand Total Escalated Costs.

Additional Details

Alternative Public Works Project: No



OFM

305 - Department of Veterans Affairs

Cost Estimate Summary

2009-11 Biennium

Cost Estimate Number: 9

Report Number: CBS003

Cost Estimate Title: Predesign

Date Run: 12/23/2008 1:38PM

Version: 00 Facility Version

Facility Preferred: Yes

Project Number: 30000056

Project Title: Walla Walla Nursing Facility 08-2-008

Project Phase Title: Predesign

Contact Info

Contact Name: Kim Selby

Contact Number: 206.515.4657

Additional Details

State Construction Inflation Rate:	3.50%
Base Month and Year:	12-2008
Project Administration By:	GA
Project Admin Impact to GA that is NOT Included in Project Total:	\$599,181

OFM

305 - Department of Veterans Affairs

Cost Estimate Detail

2009-11 Biennium

Cost Estimate Number: 9 Analysis Date: December 10, 2008
 Cost Estimate Title: Predesign
 Detail Title: 72 Bed Version 1
 Project Number: 30000056
 Project Title: Walla Walla Nursing Facility 08-2-008
 Project Phase Title: Predesign
 Location: Walla Walla
 Contact Info Contact Name: Kim Selby Contact Number: 206.515.4657

Statistics

Gross Sq. Ft.: 58,895
 Usable Sq. Ft.: 38,952
 Rentable Sq. Ft.:
 Space Efficiency: 66%
 Escalated MACC Cost per Sq. Ft.: 377
 Escalated Cost per S. F. Explanation

Construction Type: Nursing Homes
 Remodel?: No
 A/E Fee Class: B
 A/E Fee Percentage: 7.05%
 Contingency Rate: 5.00%
 Contingency Explanation

Management Reserve: 2.50%
 Projected Life of Asset (Years): 50
 Location Used for Tax Rate: Walla Walla
 Tax Rate: 8.30%
 Art Requirement Applies: Yes
 Project Administration by: GA
 Higher Education Institution?: No
 Alternative Public Works?: No

Project Schedule

	Start Date	End Date
Predesign:	08-2008	12-2008
Design:	07-2009	04-2011
Construction:	07-2011	09-2012
Duration of Construction (Months):	14	
State Construction Inflation Rate:	3.50%	
Base Month and Year:	12-2008	

Project Cost Summary

MACC:	\$ 19,972,700
MACC (Escalated):	\$ 22,196,963
Current Project Total:	\$ 28,816,576
Rounded Current Project Total:	\$ 28,817,000
Escalated Project Total:	\$ 31,933,821
Rounded Escalated Project Total:	\$ 31,934,000



<u>ITEM</u>	<u>Base Amount</u>	<u>Sub Total</u>	<u>Escalation Factor</u>	<u>Escalated Cost</u>
CONSULTANT SERVICES				
<u>Construction Documents</u>				
A/E Basic Design Services	971,572			
SubTotal: Construction Documents		971,572	1.0514	1,021,511
<u>Extra Services</u>				
Civil Design (Above Basic Services)	50,000			
Commissioning (Systems Check)	45,000			
Site Survey	40,000			
Testing	30,000			
Leadership Energy & Environment Design List(LEED)	45,000			
Voice/Data Consultant	20,000			
Value Engineering Participation & Implementation	25,000			
Constructability Review Participation	10,000			
Environmental Mitigation Services (EIS)	20,000			
Landscape Consultant	50,000			
Energy Conservation Report	8,000			
Document Reproduction	25,000			
Advertising for bid and release of retainage	1,000			
Acoustic Consultant	15,000			
Art Coordination	5,000			
Cost Estimating	42,500			
Fire and Life Safety Consultant	4,500			
Graphics	6,000			
Interior Consultant	80,000			
Lighting Consultant	12,000			
Security/Technology/AV Consultant	20,000			
Dementia Specialist	12,000			
Kitchen Consultant	16,000			
SubTotal: Extra Services		582,000	1.0514	611,915
<u>Other Services</u>				
Bid/Construction/Closeout	436,503			
HVAC Balancing	20,000			
Commissioning and Training	45,000			
Constructibility Consultant	20,000			
Value Engineering Consultant	10,000			
Fulltime Roofing Inspector	8,000			
SubTotal: Other Services		539,503	1.1151	601,600
<u>Design Services Contingency</u>				
Design Services Contingency	104,654			
SubTotal: Design Services Contingency		104,654	1.1151	116,700
Total: Consultant Services		2,197,729	1.0701	2,351,726

CONSTRUCTION CONTRACTS

<u>Site work</u>				
G10 - Site Preparation	250,800			
G20 - Site Improvements	636,900			
G30 - Site Mechanical Utilities	290,400			
G40 - Site Electrical Utilities	193,600			
SubTotal: Site work		1,371,700	1.0928	1,498,994
<u>Related Project Costs</u>				
Offsite Improvements	1,973,400			
SubTotal: Related Project Costs		1,973,400	1.0928	2,156,532
<u>Facility Construction</u>				
A10 - Foundations	919,600			
B10 - Superstructure	2,136,200			
B20 - Exterior Closure	2,608,100			

<u>ITEM</u>	<u>Base Amount</u>	<u>Sub Total</u>	<u>Escalation Factor</u>	<u>Escalated Cost</u>
CONSTRUCTION CONTRACTS				
B30 - Roofing	1,270,500			
C10 - Interior Construction	1,112,100			
C30 - Interior Finishes	1,608,200			
D20 - Plumbing Systems	775,500			
D30 - HVAC Systems	1,775,400			
D40 - Fire Protection Systems	243,100			
D50 - Electrical Systems	1,478,400			
F10 - Special Construction	275,000			
F20 - Selective Demolition	12,100			
General Conditions	2,413,400			
SubTotal: Facility Construction		16,627,600	1.1151	18,541,437
Maximum Allowable Construction Cost (MACC)		19,972,700	1.1100	22,196,963
<u>Construction Contingencies</u>				
Management Reserve	499,318			
Allowance for Change Orders	998,635			
SubTotal: Construction Contingencies		1,497,953	1.1151	1,670,367
Sales Tax		1,782,064	1.1116	1,980,988
Total: Construction Contracts		23,252,717	1.1116	25,848,318
EQUIPMENT				
E10 - Equipment	2,005,000			
E20 - Furnishings	710,000			
SubTotal:		2,715,000	1.1151	3,027,497
Sales Tax		225,345	1.1151	251,282
Total: Equipment		2,940,345	1.1151	3,278,779
ART WORK				
Total: Art Work		110,985	1.0000	110,985
OTHER COSTS				
LEED Registration / Certification Fees	6,000			
City Building Permit	132,000			
City Plan Review	85,800			
Project Signage	1,000			
City Capital Facilities Charge	90,000			
Total: Other Costs		314,800	1.0928	344,013
PROJECT MANAGEMENT				
GA Project Management	599,181			



OFM

305 - Department of Veterans Affairs
Cost Estimate Summary and Detail
2009-11 Biennium

Cost Estimate Number: 9
Cost Estimate Title: Predesign

Report Number: CBS003
Date Run: 12/23/2008 1:38PM

<u>Parameter</u>	<u>Entered As</u>	<u>Interpreted As</u>
Associated or Unassociated	Associated	Associated
Biennium	2009-11	2009-11
Agency	305	305
Version	00-F	00-F
Project Classification	*	All Project Classifications
Capital Project Number	30000056	30000056
Cost Estimate Number	9	9
Sort Order	Number	Number
User Group	Agency Facility	Capital Facility
User Id	30500kselnbj	30500kselnbj

5.4 Life Cycle Cost Analysis

The three alternatives for the proposed Skilled Nursing Facility were subjected to life cycle cost analysis (LCCA) as required in the OFM Pre-design Manual. LCCA considers both capital costs and relevant annual operating costs over the life of the project in order to compare the total projected costs of each alternative. All costs are stated as present values through the use of an appropriate discount rate, thereby enabling the comparison of costs on an apples-to-apples basis. The analysis was based on several LCCA assumptions:

- **Economic Life Used for LCCA:** 30 years from expected opening of facility (2013).
- **Discount Rate:** 5% was used, reflecting the average cost of capital for the State of Washington, to translate all future costs into present values.
- **Capital Costs:** as estimated for each alternative. Escalated costs for each major element (consultant services, construction contracts, equipment, etc.) were determined based on the projected timing of design and construction of the proposed Skilled Nursing Facility. These costs were then discounted at 5% per year to estimate present values.
- **Facility Operating Costs:** several facility-related operating costs (in 2013 \$s) would be associated with the proposed building under all four alternatives:
 - Personnel Costs: depending on the Alternative, 93-100 FTEs will be required for the new facility
 - Supplies and Materials: including both administrative supplies as well as supplies and materials to support the functions of each of the 6 residences
 - Other Purchased Services: including contractual medical support personnel including physicians, therapists and counseling services and such items as consolidated billing services,
 - Utilities
 - Repairs and Maintenance
 - Other Associated Costs – including such items as advertising, alarm monitoring, copier rentals and leases, etc.
- **Operating Costs Escalation Factor:** The operating cost escalation factor used was 3.5%. Estimated annual costs described above were escalated to the base year (2013, the year the facility is expected to open) and out over the life of the LCCA. These costs were then discounted back to the present using the annual discount rate of 5%.

The details of the life cycle cost analysis can be found on the completed Form C-3. Table 5.3 is a summary of the LCCA results (all amounts are in 2008 dollars).

**Table 5.3 Life Cycle Cost Analysis Summary
(in Thousands of Dollars)**

	Alternative #1 Green House®		Alternative #2 Hybrid 1 (Preferred)		Alternative #3 Hybrid 2	
	Present Value	Escalated Cost	Present Value	Escalated Cost	Present Value	Escalated Cost
Total Initial Costs	\$27,229	\$33,097	\$26,272	\$31,934	\$29,241	\$35,543
Operating Costs:						
Personnel	\$133,991	\$310,756	\$133,991	\$310,756	\$141,289	\$327,683
Supplies & Materials	\$8,685	\$20,144	\$8,685	\$20,144	\$9,990	\$23,170
Other Purchased	\$3,411	\$7,912	\$3,411	\$7,912	\$3,411	\$7,912
Utilities	\$1,987	\$4,390	\$1,987	\$4,390	\$2,285	\$5,048
Repairs & Maintenance	\$912	\$2,015	\$912	\$2,015	\$912	\$2,015
Other Costs	\$3,398	\$7,505	\$3,398	\$7,505	\$3,398	\$7,505
Total Operating Costs	\$152,384	\$352,721	\$152,384	\$352,721	\$161,285	\$373,332
TOTAL Life Cycle Costs	\$179,613	\$385,819	\$178,656	\$384,655	\$190,526	\$408,875

The LCCA reveals the following major observations:

- The Preferred Alternative (Alternative #2 – Hybrid 1) is the least costly of the alternatives in terms of the initial capital costs.
- The only difference in cost between Alternative #1 – Green House® and the Preferred Alternative is in the capital cost – the Green House® concept requires approximately 500 additional GSF.

- Alternative #3 – Hybrid 2 – is the most costly in terms of both initial capital costs and ongoing operating costs. This programmatic model requires 8-9,000 GSF more than the other alternatives, 7 more FTEs to support Food Service and higher utility and support costs due to the increased size of the facility.

Form C-3 can be found in Appendix C.

5.5 Evaluation of Alternatives for Non-Cost Criteria

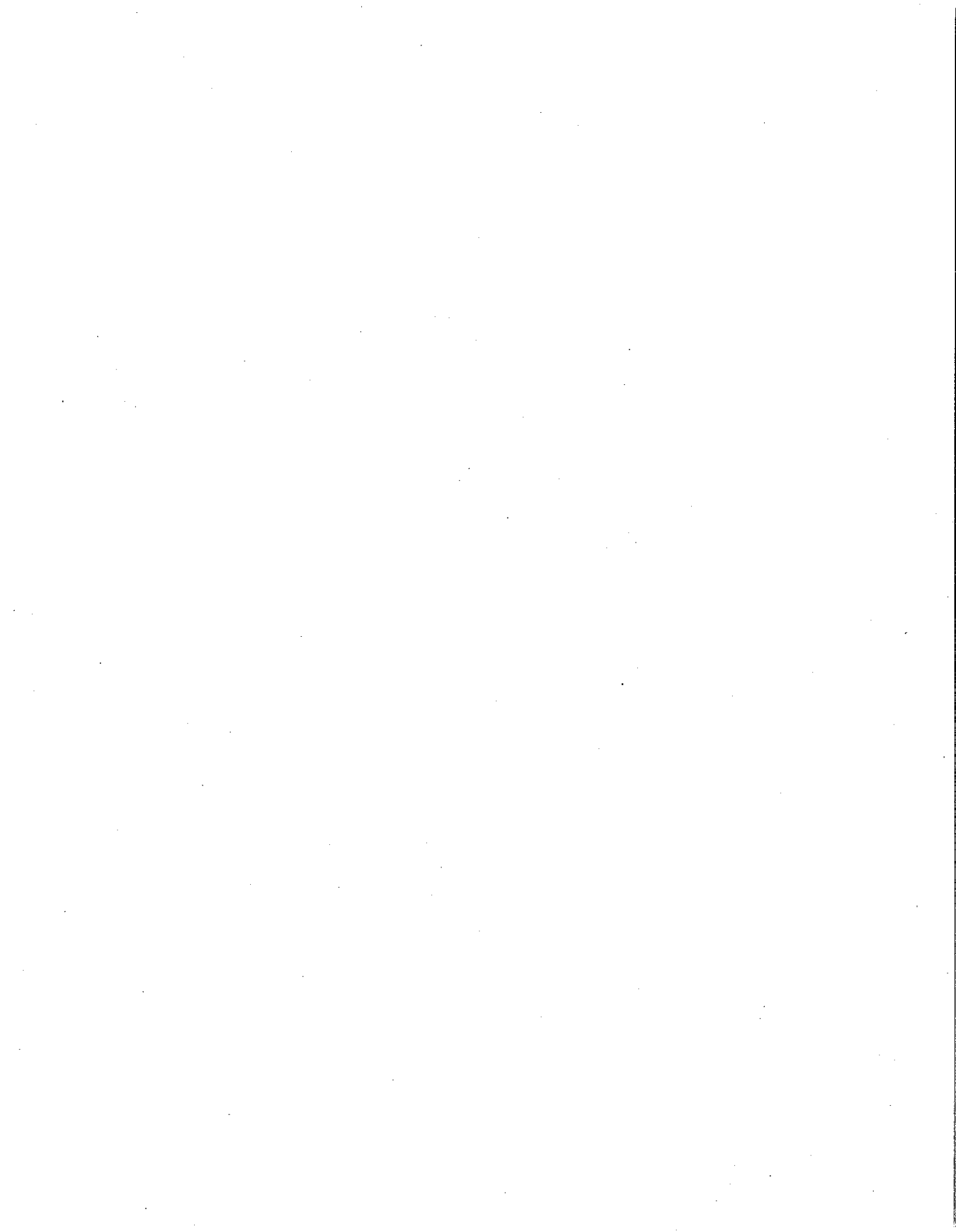
Evaluation of the alternatives was significantly based on non-cost issues. As Federal VA updates its nursing home design guidelines to promote resident-centered, home-like facilities, the agency is encouraging the State Homes to consider the Green House® concept. WDVA evaluated three alternatives to assess the physical and operational impacts to the different care models. Veterans Affairs colleagues at both Federal VA and other State agencies were consulted to discuss the State Homes currently being planned or designed to identify significant physical, operational and staffing issues. Lessons learned from Retsil, as well as the proposed facilities for Nevada and Florida were considered as part of this evaluation. Figure 5.6 on the following page summarizes the non-cost criteria evaluation of the programmatic differences.

The Pre-design team ultimately selected the Hybrid #1 option as the most successful solution for WDVA: it provides all the amenities of the Green House® concept in a more consolidated footprint by providing support at the neighborhood (two houses, 24 residents total) level rather than at each individual house. The dedicated area per resident is therefore reduced and staffing/operational targets appear achievable with further design and analysis.

	Alternative #1 Green House®	Alternative #2 Hybrid 1 (Preferred)	Alternative #3 Hybrid 2	Area / Resident (GSF)
<ul style="list-style-type: none"> Nursing Stations, Laundry & Clubhouse 	<ul style="list-style-type: none"> Nursing & Laundry in each house All amenities in Clubhouse 	<ul style="list-style-type: none"> Nursing & Laundry shared per 2 houses Amenities in Neighborhood or Clubhouse 	<ul style="list-style-type: none"> Nursing & Laundry shared per 2 houses Most amenities in Neighborhood 	939 GSF/ Resident
<ul style="list-style-type: none"> Kitchens & Dining 	<ul style="list-style-type: none"> Full kitchens in each house All dining decentralized 	<ul style="list-style-type: none"> Full kitchens in each house All dining decentralized 	<ul style="list-style-type: none"> Centralized kitchen & dining in Clubhouse Serveries & small dining in each house 	818 GSF/ Resident
<ul style="list-style-type: none"> Circulation, Entry & Receiving 	<ul style="list-style-type: none"> Covered walkways needed to connect all houses & Clubhouse 	<ul style="list-style-type: none"> All houses & Clubhouse connected to each other 	<ul style="list-style-type: none"> All houses & Clubhouse connected to each other 	825 GSF/ Resident

Figure 5.6 Non-Cost Criteria Comparative Evaluation





6.0 MASTER PLAN & POLICY COORDINATION

The Jonathan M. Wainwright Memorial Medical Center has not been master planned. *Planning for the Future*, documented in 2006, was compiled to testify to the value and role of the VAMC campus in serving the veterans of Eastern Washington, Idaho and Northeastern Oregon. Physical development strategies were considered for the campus in order to define a possible range of alternative futures for redevelopment. The resultant document has not been adopted by VA to guide future site operations. Section 6.0 therefore reviews the compliance of the proposed skilled nursing facility from a policy perspective rather than a physical standpoint.

6.1 Relationship to the WDVA Strategic Plan 2009-2013

The agency mission, "Serving those Who Served" mandates providing Washington veterans with a continuum of care, including skilled nursing facilities. Long-term, residential health care is currently provided in three WDVA facilities: Retsil, Orting and Spokane. Veterans receiving care in these facilities are eligible for VA funding for a portion of their care, which makes these facilities highly cost-effective for our veterans. WDVA provision of long-term care contributes to the Governor's Priority of Government of *Improving the security of Washington's vulnerable children and adults*.

Since 2005, existing facilities have maintained a high occupancy rate beyond the goal of 95%. Available beds are in short supply and geographically limited, so WDVA is also looking for "opportunities to increase the availability of services offered as community-based programs" as well as assessing the feasibility of the proposed new facility in Walla Walla.

6.2 Adherence to Significant State Policies

The Walla Walla Skilled Nursing Facility proposal adheres to all relevant Statewide policies, including the Growth Management Act, sustainable design requirements and energy conservation goals. The Skilled Nursing Facility will be developed on the VAMC campus within Walla Walla city limits and designed to meet or exceed the environmental design criteria of LEED® Silver at a minimum, as defined by the U.S. Green Building Council (Leadership in Energy and Environmental Design).

7.0 FACILITY OPERATIONS & MAINTENANCE REQUIREMENTS

7.1 Impacts to Operations & Maintenance Budget during the Project

The only impact during the Project design and construction phases will be the re-assignment of a portion of the time of WDVA's Chief Financial Officer to serve as the Department's Project Manager.

7.2 Impacts to Operations & Maintenance Budget

The anticipated annual impact on the new 58,895 GSF building on the Agency's operating and maintenance budget is summarized below. The project will result in the addition of 93 FTEs required to staff this new State Home.

Table 7.1 Anticipated Operating and Maintenance Budget Impacts: Skilled Nursing Facility Walla Walla – 2012 Completion

Salaries and Benefits	\$6,091,666
Supplies and Materials	\$ 390,286
Other Purchased Services	\$ 153,193
Utilities	\$ 85,050
Repairs and Maintenance	\$ 39,080
Other Costs	\$ 145,366
TOTAL	\$6,832,641

These forecast costs are based on the current experience at the Spokane State Veterans Home with adjustments to reflect the Preferred Alternative staffing model and anticipated building systems efficiencies. Annual escalation of 3.5% is assumed from the 2008 base year to early 2013 when the facility opens. See the Appendices for additional information.



8.0 PROJECT DRAWINGS/DIAGRAMS

The following pages illustrate the preliminary floor plans and room diagrams proposed for the Walla Walla Skilled Nursing Facility.

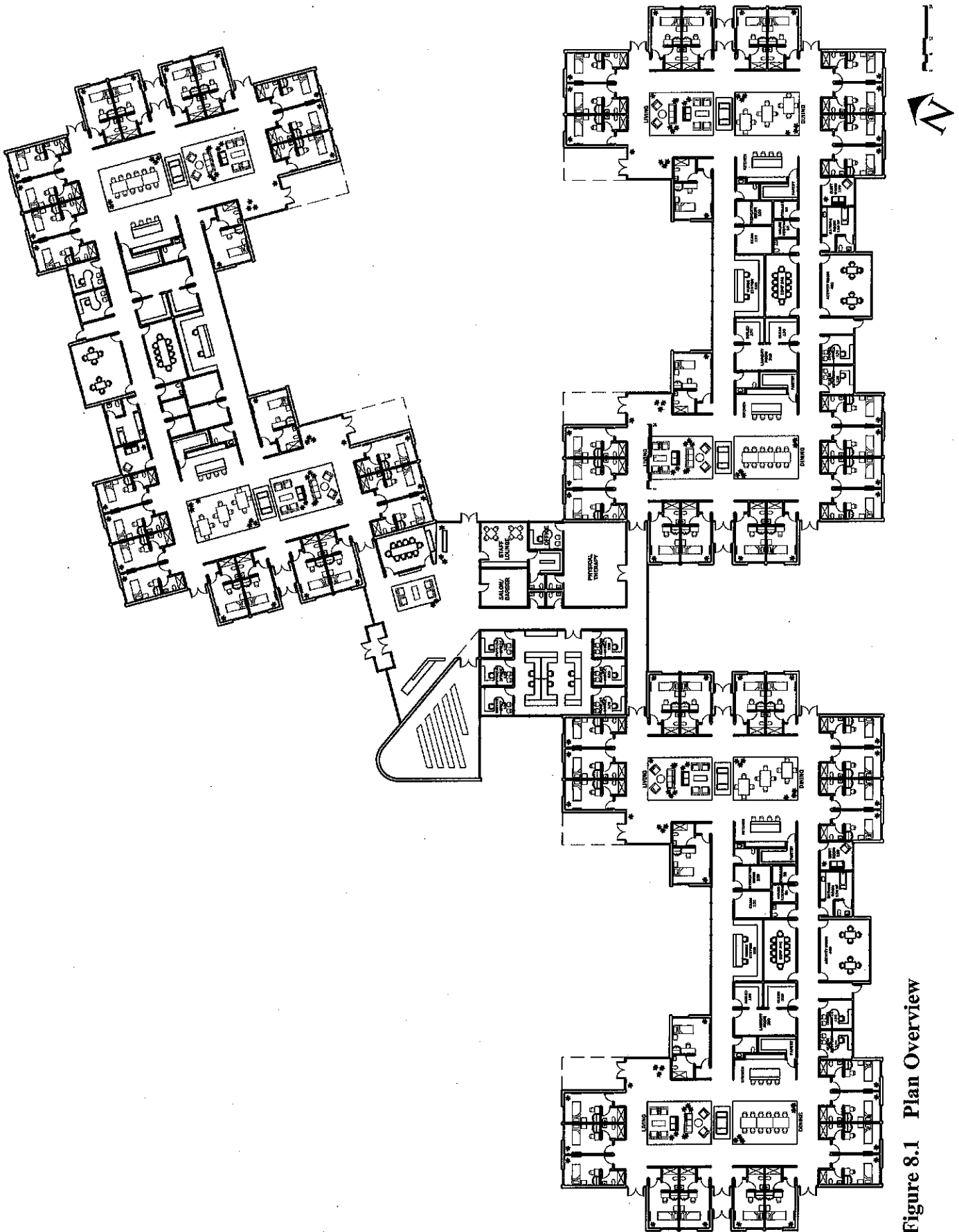
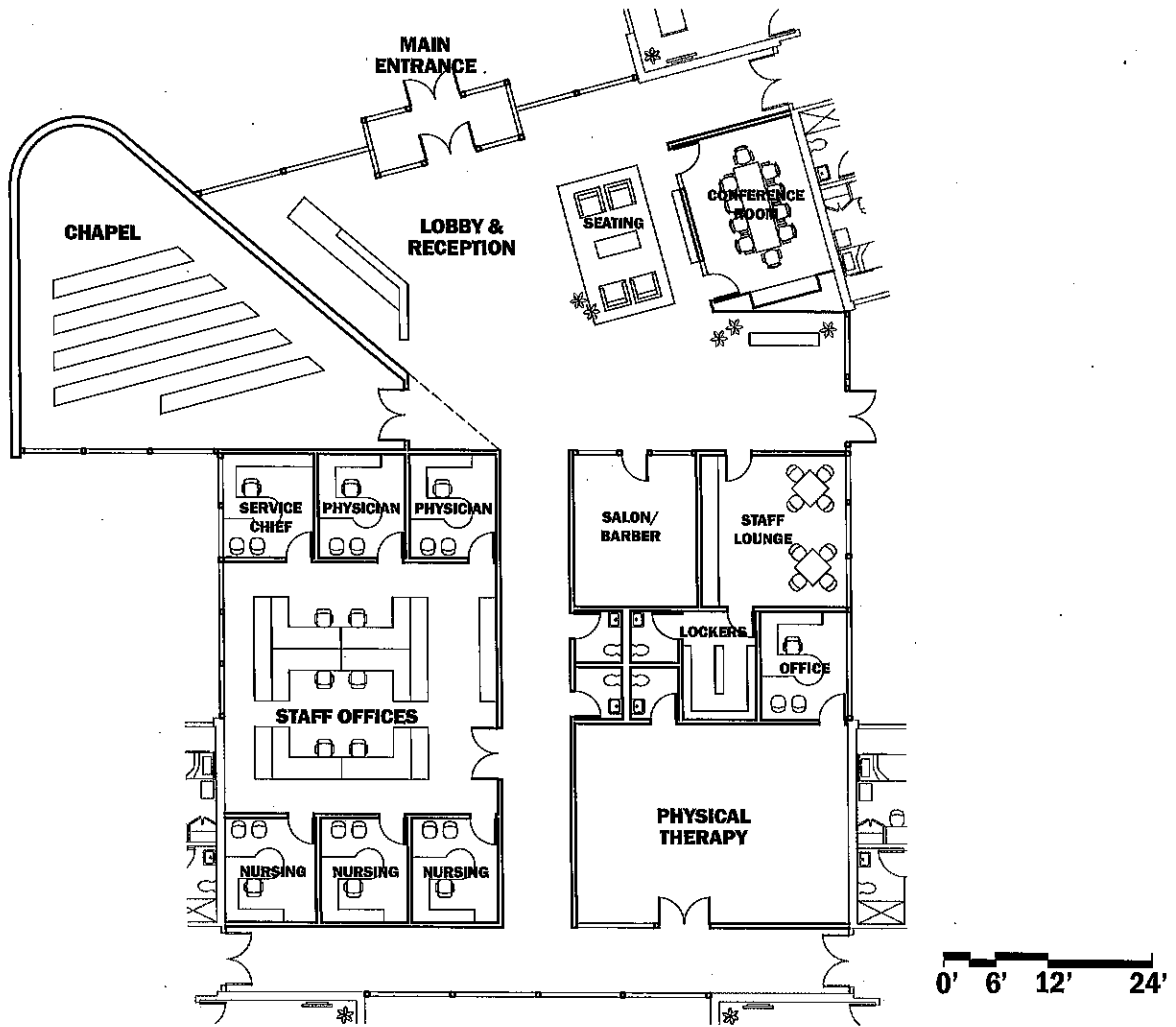
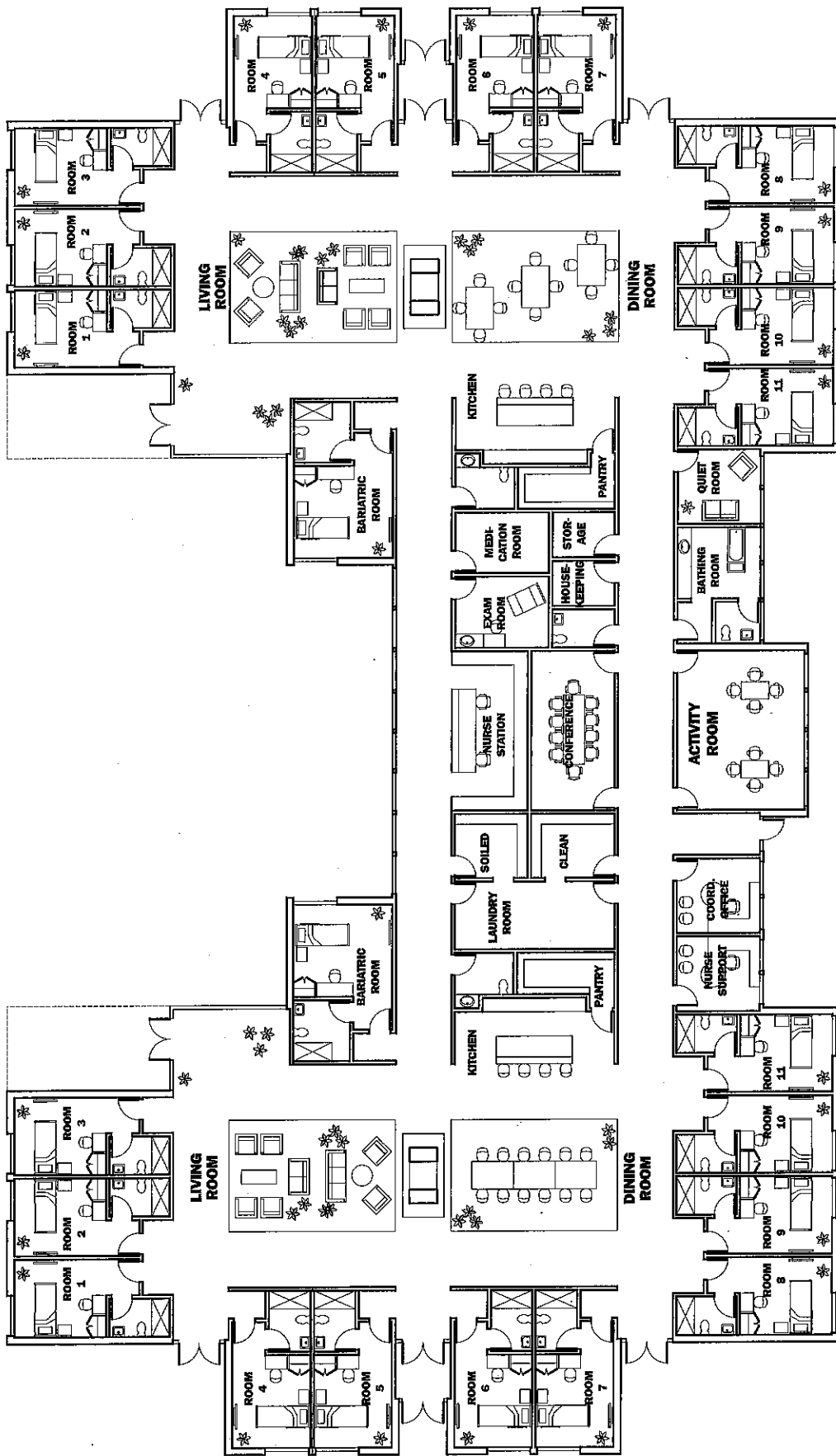


Figure 8.1 Plan Overview



Figure 8.2 Clubhouse



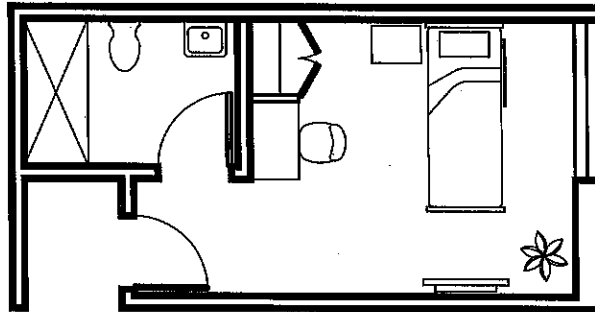


0' 6' 12' 24'

Figure 8.3 Residential Neighborhood (2 Houses + Support)

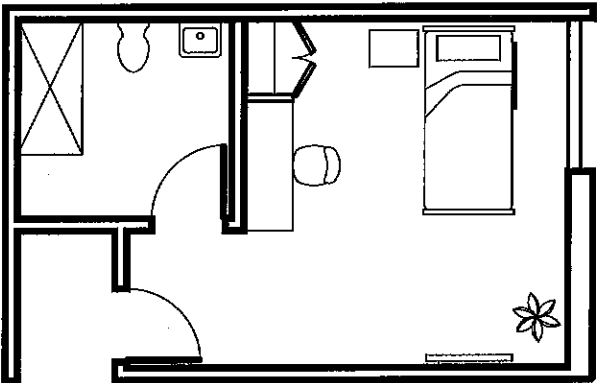


Figure 8.4 Resident Room & Bathroom



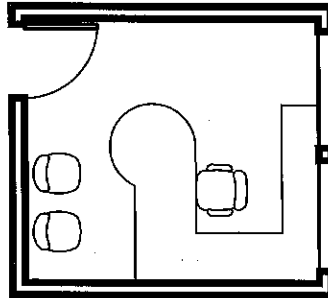
Resident Room 175 SF
Resident Bathroom 55 SF

Figure 8.5 Bariatric Resident Room & Bathroom

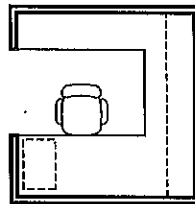


Resident Room 320 SF
Resident Bathroom 100 SF

Figure 8.6 Typical Office & Workstation

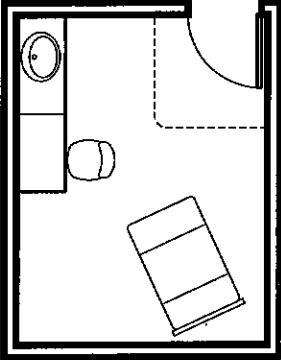


Typical Office 120 SF



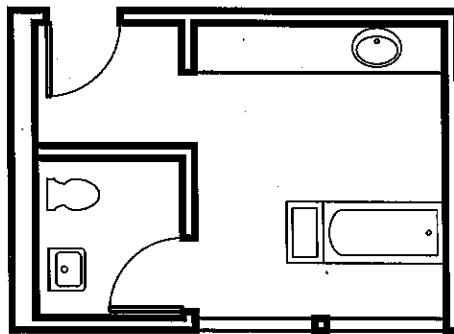
Typical Workstation 64 SF

Figure 8.7 Exam Room



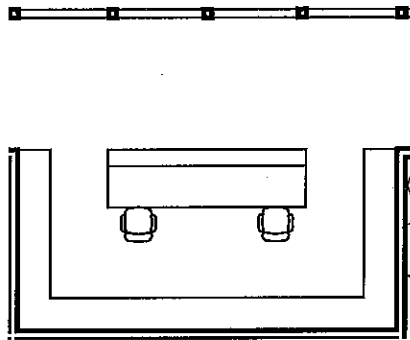
Exam Room 120 SF

Figure 8.8 Bathing Suite



Bathing Suite 120 SF
Toilet Room 60 SF

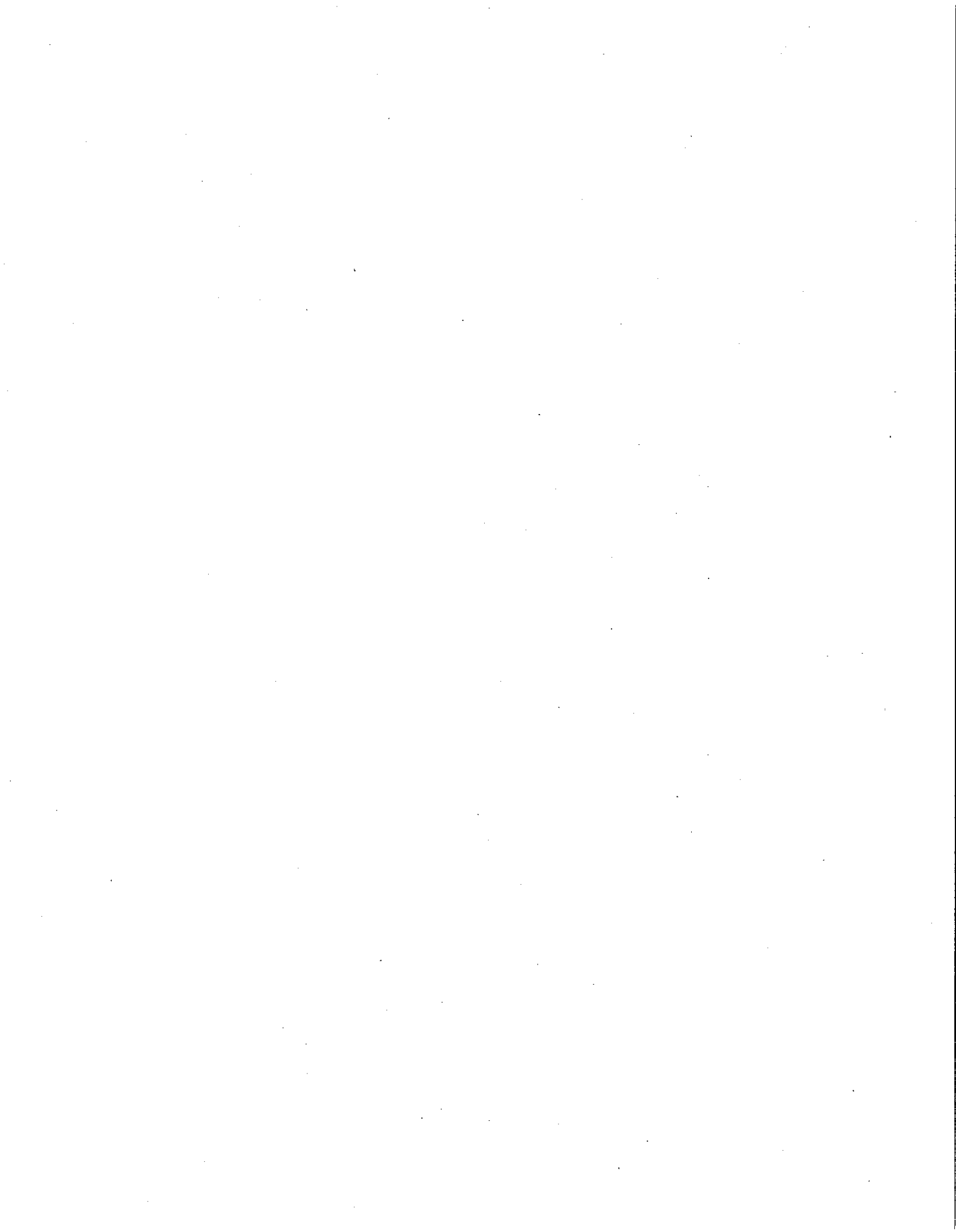
Figure 8.9 Neighborhood Nursing Station



Nursing Station 250 SF

APPENDICES

- A. Predesign Checklist**
- B. Detailed Space Program & Staffing Model**
- C. Cost Analysis of Preferred Alternative**
- D. Sustainable Design Forms**
- E. Electrical Systems Analysis (Hargis Engineers)**
- F. Mechanical Systems Analysis (Hargis Engineers)**
- G. Telecommunications Systems Analysis (Hargis Engineers)**
- H. Structural Systems Analysis (KPF)**
- I. Civil Engineering Systems Analysis (KPF)**



APPENDIX A: PREDESIGN CHECKLIST

PREDESIGN CHECKLIST

The predesign checklist should be completed by the agency and submitted to the Office of Financial Management with the predesign.

Is the following in the predesign? If not, it should be noted "not applicable"



Executive Summary



Project Analysis

- Discussion of operational needs
- Discussion of alternatives – SEE SECTIONS 3.0. & 5.0.
- Discussion of selected alternative – SEE SECTIONS 3.0. & 5.0.
- Identification of issues
- Prior planning and history
- Stakeholders
- Project description
- Implementation approach
- Project management
- Schedule



Program Analysis

- Assumptions
- Functions and FTEs
- Spatial relationships between the facility and site
- Interrelationships and adjacencies of functions
- Major equipment
- Special systems such as environmental, information technology, etc.
- Future needs and flexibility
- Sustainability and energy utilization
- Applicable codes and regulations



Site Analysis

- Potential sites
- Building footprint
- Site considerations such as physical, regulatory, and access issues
- Acquisition process



Project Budget Analysis

- Assumptions
- Detailed estimates
- Funding sources
- Project cost estimate (2008)
- Form C-4, Predesign Capital Project Request Report Summary
- Form C-3, Benefit and Life Cycle Cost Analysis Summary
– INCLUDED IN APPENDIX C.
- Sign off by agency – WDVA APPROVAL IN SUBMITTAL TO OFM

- Master Plan & Policy Coordination**
 - Impacts to existing plans
 - Adherence to significant state policies

- Facility Operations & Maintenance Requirements**
 - ○ Assumptions
 - ○ Operating costs in table form
 - ○ Staffing plan (capital and operating)

- Project Drawings/Diagrams**
 - Site plans
 - Building plans
 - Building volumes
 - Elevations – NOT INCLUDED

- Appendix**
 - Predesign checklist
 - Project budget unit cost detail
 - Sustainable design charette summary – SEE FORMS
 - Additional information as needed

Historical Significance & DAHP Requirement

The proposed site for the Walla Walla Skilled Nursing Facility is Federal VA property with historical significance, both on and immediate to the proposed building location. The Predesign assumes transfer of ownership to WDVA of that portion of the property prior to construction. As federal property, the State Department of Archaeology and Historic Preservation (DAHP) has no oversight responsibility but would likely assume that role with the property transfer. WDVA is committed to continue ongoing discussions with all appropriate agencies at the Federal, State and Tribal levels as part of the Design process.

APPENDIX B: DETAILED SPACE PROGRAM & STAFFING MODEL

The following pages include the detailed program build-up and staffing model, which was developed for both the Green House® and conventional nursing home models.

Chapter 106 Space Guidelines
 72 Residents; 6 Residential Houses, 2 Neighborhoods. We assume 3 Neighborhoods and adjust accordingly

Function	NSF Proposed by State	Quantity	Total NSF Proposed by State	VA Criteria	Total VA Allowed	Code	Comments
Residential House, General	175	11	1,925	175	1,925	BRNP1	1 for a minimum of 9 and a maximum of 17 residents
Residential House, Specialty	55	11	605	55	605	LTSS2	1 for a minimum of 7 and a maximum of 13 residents
Residential House, Combined	320	1	320	320	320	BRNP2	1 for a minimum of 6 and a maximum of 17 residents
Residential Neighborhood	100	1	100	100	100	LTSS2	1 for a maximum of 9 general, specialty or combined homes
RESIDENTIAL HOUSE							
General Residential House: Resident Areas							
5 Resident Houses @ 12 residents per house	175	11	1,925	175	1,925	BRNP1	1 each
Bedroom, Resident	55	11	605	55	605	LTSS2	1/resident bedroom
Bathroom, Resident	320	1	320	320	320	BRNP2	1/residential house
Bedroom, Bariatric	100	1	100	100	100	LTSS2	1/bariatric bedroom
Vestibule	50	1	50	50	50	LOB02	min; add; 20/resident greater than 12; 1/residential house
Living Room	360	1	360	360	360	DAVR1	min; add; 20/resident greater than 12; 1/residential house
Quiet Room	120	1	120	120	120	RAMR1	1/residential house
Dining Room	360	1	360	360	360	FSOD1	min; add; 30/resident greater than 12; 1/residential house; could combine 2 or more houses into centralized neighborhood dining
Kitchen and Service	150	1	150	150	150	IPK01	min; add; 25/resident greater than 11 if serving a residential neighborhood
Family Room	50	1	50	50	50	BRNP1	min; add; 1/residential house greater than 11 if serving a residential neighborhood; can be combined and shared by 2 or 3 houses
Laundry	50	1	50	50	50	LTSS2	1/residential house
Laundry	100	1	100	100	100	NURL1	1/residential house; can be combined and shared by 2 or 3 houses
Subtotal Resident Area			4,320		4,320		
Resident Area Subtotals X 5 Houses			21,100		21,100		
Residential Area Totals			21,100		21,100		
House Care / Workstation	50	1	50	50	50	NSTAG	1/residential house; this space functions as a nursing sub-station
Storage, Clean Linen	20	1	20	20	20	LCCL1	1/residential house
Storage, Soiled Care	20	1	20	20	20	LCCL1	1/residential house
Storage, Equipment	100	1	100	100	100	SRE01	1/residential house
Storage, Medical Supplies	100	1	100	100	100	SRE01	1/residential house
Housekeeping Aides Closet - HAC	50	1	50	50	50	JANC1	1/residential house
Subtotal Residential Support Areas			340		340		
Resident Support Area Subtotals X 5 Houses			1,700		1,700		
Residential Support Area Totals			1,700		1,700		
TOTAL GENERAL RESIDENTIAL HOUSE AREA			4,960		4,960		
Specialty Residential House: Resident Areas							
1 Resident House @ 12 residents per house	175	11	1,925	175	1,925	BRNP1	1/specialty resident
Bedroom, Resident	55	11	605	55	605	LTSS2	1/specialty resident bedroom
Bathroom, Bariatric	320	1	320	320	320	BRNP2	1/specialty residential house
Vestibule	50	1	50	50	50	LOB02	1/specialty bariatric bedroom
Living Room	400	1	400	400	400	DAVR1	1/specialty residential house
Quiet Room	120	1	120	120	120	RAMR1	360 + add; 20/specialty resident greater than 10; 1/residential house
Dining Room	420	1	420	420	420	FSOD1	1/specialty residential house
Kitchen and Service	150	1	150	150	150	IPK01	360 + add; 30/specialty resident greater than 10; 1/residential house; could combine 2 or more houses into centralized neighborhood dining
Family Room	50	1	50	50	50	BRNP1	min; add; 25/specialty residential house greater than 11 if serving a residential neighborhood
Laundry	50	1	50	50	50	LTSS2	min; add; 10/specialty residential house greater than 11 if serving a residential neighborhood; can be combined and shared by 2 or 3 houses
Laundry	100	1	100	100	100	NURL1	1/specialty residential house; can be combined and shared by 2 or 3 houses
Subtotal Specialty Residential Support Areas			4,320		4,320		
Resident Area Subtotals X 1 House			4,320		4,320		
Residential Area Totals			4,320		4,320		
House Care / Workstation	50	1	50	50	50	NSTAG	1/residential house; this space functions as a nursing sub-station
Storage, Clean Linen	20	1	20	20	20	LCCL1	1/residential house
Storage, Soiled Care	20	1	20	20	20	LCCL1	1/residential house
Storage, Equipment	100	1	100	100	100	SRE01	1/residential house
Storage, Medical Supplies	100	1	100	100	100	SRE01	1/residential house
Housekeeping Aides Closet - HAC	50	1	50	50	50	JANC1	1/residential house
Subtotal Residential Support Areas			340		340		
Resident Support Area Subtotals X 1 House			340		340		
Residential Support Area Totals			340		340		
TOTAL - 6 RESIDENTIAL HOUSES			4,960		4,960		
TOTAL - 6 RESIDENTIAL HOUSES			27,460		27,460		



Function	NSF Proposed by State	Quantity	Total NSF Proposed by State	VA Criteria	Total VA Allowed	Code	Comments
NEIGHBORHOOD - 3 NEIGHBORHOODS							
Residential Neighborhood Patient Areas	400	3	1,200	400	1,200	DARY1	min; add: 15 neighborhood resident greater than 20; residential neighborhood
Activity / Multipurpose	180	3	540	350	720	TL19Z	Residential neighborhood standard. We determine and have a at 180 (Resid model = 130 sub + 50 table)
Subtotal Neighborhood Patient Areas			1,740		1,920		
Residential Neighborhood Support Areas	260	3	780	260	780	NSTF1	Residential neighborhood could de-centralize and add as room to houses
Neighborhood Care (Nursing) Station	120	3	360	120	360	EXR63	Residential neighborhood
Exam Room	100	3	300	100	300	MEDPT	Residential neighborhood if medication room is authorized in concept of ops.
Utility Room	100	3	300	100	300	UCDL1	Residential neighborhood
Utility Room, Clean	100	3	300	100	300	USCL1	Residential neighborhood
Utility Room, Soiled	100	3	300	100	300	JANCI	Residential neighborhood
Housekeeping Aides Closet - HAC	50	3	150	50	150	SRLV1	Residential neighborhood
Storage, Stretcher / Wheelchair	60	3	180	60	180		
Subtotal Neighborhood Support Areas			2,400		2,400		
Residential Neighborhood Staff and Administrative Areas	120	3	360	120	360	OPDC1	Residential coordinator FTE position authorized
Office, Activities Coordinator	120	2	240	120	240	OPDC3	Nurse supervisor FTE position authorized
Office, Nurse Supervisor	240	3	720	240	720	CR901	Residential neighborhood can be combined and asked by 2 neighborhoods
Conference / Classroom	50	4	200	50	200	TL1U1	If total # of residential neighborhood FTE positions authorized is between 34,13, add: 1 If # is greater than 15 assumes 2 > 15
Toilet, Staff	50	4	200	50	200		
Subtotal Neighborhood Staff/Admin Areas			1,520		1,520		
TOTAL NEIGHBORHOOD SUPPORT AREAS			3,260		3,440		
NURSING HOME - 1 NURSING HOME							
Therapeutic Areas	400	1	400	400	400	PTEA1	1 for nursing home / residential care
Physical Therapy	300	1	300	300	300	OTDL1	1 for nursing home / residential care
Occupational Therapy	100	1	100	100	100	OPDC3	min; add: 50 each increment of 4 therapist FTE positions authorized greater than 2
Office, Therapist	160	1	160	160	160	MEDP1	If pharmacy is authorized in concept of operations; not model to be used
Pharmacy	50	1	50	50	50	TL1U1	1 for nursing home / residential care
Toilet, Resident	50	1	50	50	50		
Subtotal CLC Therapeutic Areas			870		870		
Resident Support Areas	300	1	300	300	300	RAMR1	1 if chapel / medication is authorized in concept of ops.
Chapel / Meditation	240	1	240	240	240	XATYC	1 if barber / beauty shop is authorized in concept of ops.
Laundry	600	1	600	600	600	CCCL1	1 if laundry is authorized in concept of ops; not authorized
Maintenance / Engineering Shop	500	1	500	500	500	PAKCS	1 if nursing, linen and engineering shop is authorized in concept of ops.
Receiving / Loading	150	1	150	150	150	CMAP3	1 if security service is authorized in concept of ops.
Office, Security	100	1	100	100	100	SR801	1 for nursing home / residential care
Storage, Bulk Non-Food	100	1	100	100	100	SR801	1 for nursing home / residential care
Storage, Bulk Dry Food	100	1	100	100	100	SR801	per Chapter 224; bulk replacement supplies - china, utensils, paper goods
Storage, Refrigerated and Frozen	100	1	100	100	100	SR801	per Chapter 225
Food Preparation	200	1	200	200	200	RER01	per Chapter 226
Storage, Resident	198	1	198	198	198	FSNPF1	none - done in homes
Subtotal CLC Support Areas			2,598		2,598	SRPB1	min; add: 2 NSF protected general and specialty resident greater than 48
Staff and Administrative Areas	200	1	200	200	200	LOB01	1 for nursing home / residential care
Lobby	60	1	60	60	60	TL1U1	2 for nursing home / residential care
Toilet, Visitor / Resident	150	1	150	150	150	OF0A1	1 for nursing home / residential care
Office, Services Chief	300	1	300	300	300	OF0A2	Administrative FTE pos. authorized; provide OFA01 if standard furnished or OFA02 if systems furnished authorized
Office, Nursing Administration	200	1	200	200	200	OF0A3	Physician FTE pos. authorized
Office, Physician	200	1	200	200	200	CR401	1 for nursing home / residential care
Conference Room	100	1	100	100	100	RPR01	1 for nursing home / residential care
Medical Records / QA	100	1	100	100	100	RPR01	1 for nursing home / residential care
Custody Clerical	64	1	64	64	64	OF0A3	1 identical FTE pos. authorized
Toilet, Staff	50	1	50	50	50	TL1U1	1 for nursing home / residential care
Subtotal CLC Staff/Admin Areas			1,984		1,984		
Staff Lockers, Lounges, and Toilets	210	1	210	210	210	SLD01	min; add: 15 protected FTE on peak shift; greater than 5; max: 210
Lounge, Staff (these depend on final staffing numbers/types)	90	1	90	90	90	LRD01	min; if FTE's for whom office or cubicle space is not authorized is between 54,13, add: 6 FTE if # is greater than 13
Locker Room, Staff	50	2	100	50	100	TL1U1	min; 1 additional toilet/increment of 5 protected FTE's on peak shift greater than 13
Toilet, Staff	50	2	100	50	100		
Subtotal CLC Staff Lockers, Lounge and Toilet			5,632		5,632		
TOTAL NURSING HOME SUPPORT AREAS			8,892		9,072		
GRAND TOTAL CLC NSF			38,952		39,132		
Conversion Factors			48,000		48,000		
DISP TOTALS			48,000		48,000		
Conversion Factors			5,112		5,112		
BSSF TOTALS			53,112		53,112		

Washington State Veterans Home
 Walla Walla Predesign
 Staffing Analysis

Dept/Positions		Staffing Information			
Department	Position	Walla Walla (72 bed) Green House®	Salary	Benefits	Comments
Administration	Administrator	1	\$ 91,850	\$ 21,588	
	Exec. Assistant	1	\$ 48,168	\$ 14,780	
	IT Technician IV				
	Admissions Coordinator				
	Social Workers	2	\$ 106,296	\$ 29,763	
Business Office	Personnel Analyst				
	Personnel Tech				
	PI/QA/Compliance				
	Infection Control				
	Volunteer Coordinator				
	Human Resources	1.5	\$ 87,984	\$ 24,636	
	Admin Service Officer				
	Financial Analyst II	1	\$ 36,756	\$ 10,292	
	Cashier IV	1	\$ 36,756	\$ 10,292	
	Marketing/Prog Spec III	1	\$ 55,836	\$ 15,946	
Office Assist III	1	\$ 29,784	\$ 8,340		
Vet. Benefit Spec II	0.9	\$ 37,357	\$ 10,460		
Accountant					
Supply Tech II					
Supply Tech I					
Purchasing	1	\$ 47,016	\$ 13,164		
Admin. Assist.					
Accounting Assist.					
Accountant II					
Medicaid/Medicare Biller					
Page Subtotal		11.4	\$ 577,803	\$ 159,260	



Washington State Veterans Home
 Walla Walla Pre-design
 Staffing Analysis

Dept/Positions		Staffing Information			
Department	Position	Walla Walla (72 bed) Green House®	Salary	Benefits	Comments
Facilities	Facility Supervisor	1	\$ 42,014	\$ 11,764	
	Maint. Repair Spec. I	1.8	\$ 69,401	\$ 19,432	
	Security/Transportation	1	\$ 32,516	\$ 9,104	
Medical Records	HIS Director	1	\$ 42,588	\$ 11,925	
	Administrative Assist.	2	\$ 59,568	\$ 16,680	
	Medical Records Tech.				
Activities	Therapeutic Rec. Spec.				
	Activities Therapy Aide	2	\$ 74,928	\$ 20,980	
Therapy	Allied Health Services Coordinator				
	PT Assistant				
	PT Technician	2	\$ 85,176	\$ 23,850	
Dietary	OT				
	Speech				
	RT				
	Physicians Dietitian				
Clinical	Cooks/FSW	0			Assume shahbaz will do cooking
	Director of Nursing	1	\$ 88,680	\$ 24,830	RN
	Administrative Assist. II Staff Coordinator RN II	3.0	\$ 240,624	\$ 67,375	
	RN III	3	\$ 240,624	\$ 67,375	Assume 1 MDS, 1 Education; 1 restorative ALL RNs
	RN IV				
Page Subtotal		17.8	\$ 976,119	\$ 273,315	



Washington State Veterans Home
 Walla Walla Pre-design
 Staffing Analysis

Dept/Positions		Staffing Information			
Department	Position	Walla Walla (72 bed) Green House®	Salary	Benefits	Comments
	LPN	9.6	\$ 389,030	\$ 108,929	LVN's for meds/ etc.
	RN V				
	RN V	3.8	\$ 304,790	\$ 85,341	Assume: 1 Infection Control/Process Improvement responsibilities; 2.8 House supervisors for PMs/Nocs ALL RNS
	RN IV				
	Shahbaz Nursing Assist.	50.4 0	\$ 1,852,502	\$ 518,701	No. NA in the Green House model
	EVS				Assume light cleaning and laundry by Shabaz;clubhouse and other common spaces will need EVS services and custodial services
	Housekeeping				
	Page Subtotal	63.8	\$ 2,546,323	\$ 712,970	
TOTAL		93.0	\$ 4,100,245	\$ 1,578,121	
		72 Bed - Green House® Staffing Model			

Notes:

* Contracted services (included in Other Costs); additional services to be contracted = Dentist, MDs; Audiologist; Pharmacist; Grounds maintenance
 Denotes changes from 100 resident Spokane Model to 72 bed conventional (Spokane) model

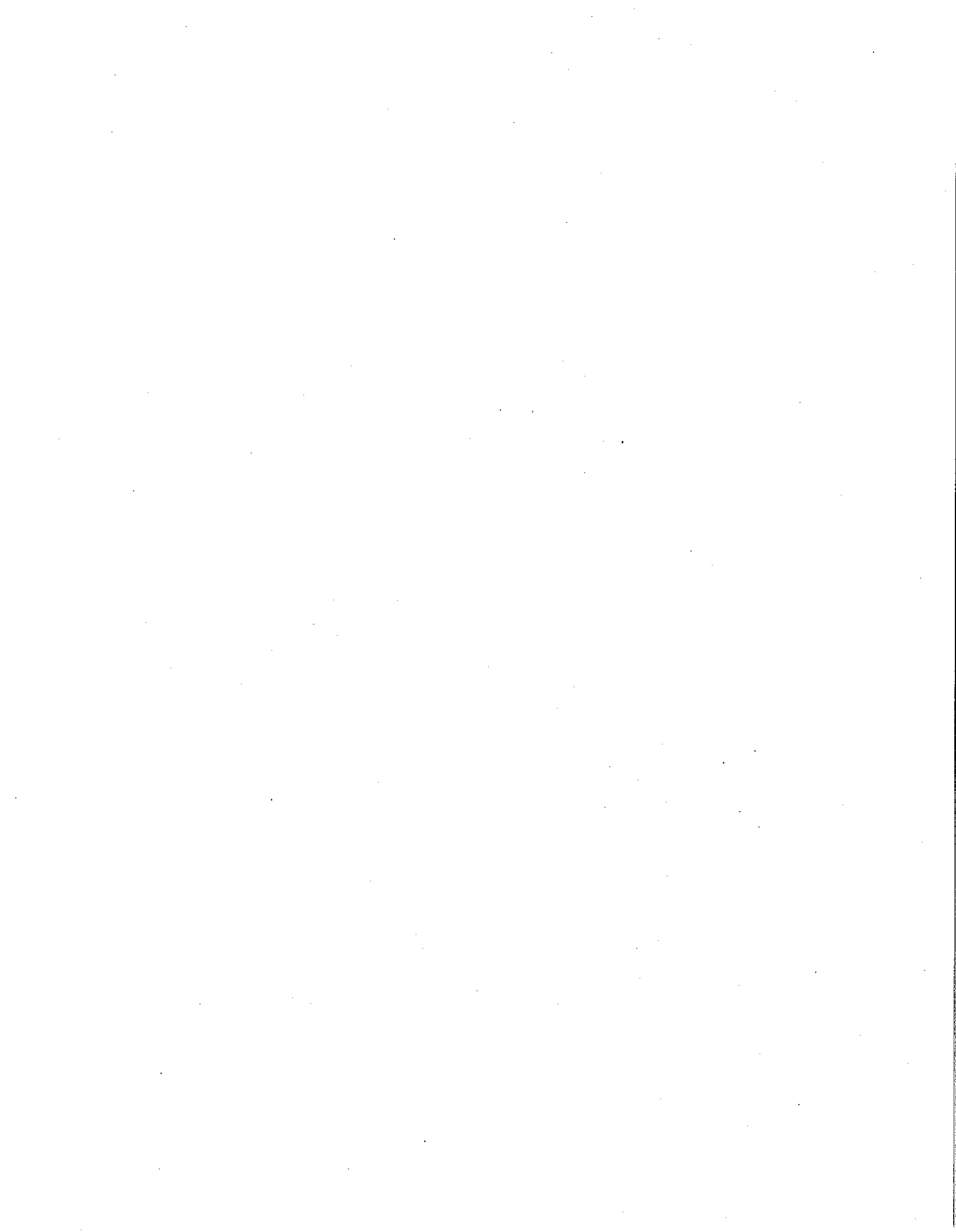


APPENDIX C: COST ANALYSIS OF PREFERRED ALTERNATIVE

The following pages include all cost estimate forms required by the Office of Financial Management:

- Pre-design Capital Project Request Report Summary
- Capital Budget System Forms (CBS)
- Project Budget Unit Cost Detail (NBBJ estimate)
- C-3 Benefit & Life Cycle Cost Analysis Summary

In addition, NBBJ estimates of the alternatives discussed in Section 5.0 are also here included for reference.



PREDESIGN CAPITAL PROJECT REQUEST REPORT SUMMARY	(Rev. 6/01)
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AGENCY NAME DEPARTMENT OF VETERANS AFFAIRS					AGENCY CODE 305	
PROJECT TITLE Walla Walla Nursing Home				TYPE	PROJECT NUMBER 08-2-008	
PLAN PRIORITY 001	OFM PRIORITY	PREVIOUSLY REQUESTED No	COUNTY Walla Walla	CITY Walla Walla	LEGISLATIVE DIST. 16	
WAS PROJECT INCLUDED IN PRIOR 10 YEARS? S?PLAN? (9)		No	IF YES, WHEN?	PREV. PROJECT #		

PROJECT DESCRIPTION		46° 3'11.56"N, 118°21'15.43"W		Project Mgmt by GA? Yes	
a. Problem/Justification/Why is this project needed? The need for long-term care for veterans will increase dramatically over the next 20 years as the population ages. There is a great need to provide adequate facilities in south central Washington to provide high quality and cost-effective long-term care to the growing and aging veteran population in that geographic area. While WDVA currently operates three State Veterans Homes, the Federal VA Office of Geriatrics Extended Care finds Washington State has an unmet State Home bed need of 642 beds. The Washington State Veterans Homes provide unique environments where veterans are treated with the dignity and respect they deserve, in distinctive settings that all provide a sense of belonging unique – and critically important – to veterans.					
b. Proposed Solution/Benefit to public service, strategic goals?				Complies w/GMA? Yes	
The proposed solution is a new 72-bed 58,895 gross square feet State Veterans Home on the grounds of the Federal VA campus of Jonathan M. Wainwright Memorial Medical Center in Walla Walla. The project will enhance WDVA's ability to fulfill its Mission and contribute to the Governor's Priority of Government of <i>improving the security of Washington's vulnerable children and adults</i> . The Federal VA State Home Construction Program will pay 65% of the project costs. In addition, the State will benefit from the Federal VA per-diem that is paid only to residents of State Homes and off-sets over \$30/day for costs of Medicare-eligible veterans.					
c. Predesign Issues The major predesign issue related to the model of care to be provided at the new State Veterans Home. The choices ranged from the Green House® model of individual houses with specially trained universal workers providing direct care, laundry, housekeeping and cooking to the more consolidated physical and staffing model seen at the existing home at Retsil. The model of care impacted both the physical characteristics of the facility as well as staffing models and employee classifications. It was determined that a hybrid of the Green House® model could achieve the desired programmatic outcomes and quality of life. Other issues concerned the best location for a new State Home on the Walla Walla VA campus as well sustainable design opportunities.					
RELATED COSTS Operating budget costs/savings required for this project including staff and cost of maintenance				93 FTE; \$6,832,641 / \$ per fiscal year (2013 dollars)	

PROJECT STATISTICS												
PROJECT LIFE		Net Project Size (sq. ft.)				Gross Project Size (sq. ft.)				Cost Per Gross Square Foot		
50+	New	38,952	Remodel	0	New	58,895	Remodel	0	New	\$339	Remodel	\$0
Building Type:						PROJECT SCHEDULE (20)				ADJUSTED CAPITAL COST		
Project Phases		BASE COST (7/02)				START		COMPLETE		%	COST	
ACQUISITION COSTS		\$0										
DESIGN CONSULTANT SERVICES		\$2,197,729				07/01/09		04/01/11		1.0	\$2,351,726	
CONSTRUCTION CONTRACT COSTS:												
MACC		\$19,972,700								1.1	\$22,196,963	
7.5 % Contingency		\$1,497,953								1.1	\$1,670,367	
8.30 % TAX		\$1,782,064								1.1	\$1,980,988	
CONSTRUCTION SUBTOTAL		\$23,252,717				07/01/11		09/01/2012		1.1	\$25,848,318	
EQUIPMENT (include tax)		\$2,940,345								1.1	\$3,278,779	
ARTWORK		\$110,985								1.0	\$110,985	
OTHER COSTS		\$314,800								1.0	\$344,013	
CONTRACT ADMINISTRATION												
TOTAL COST		\$28,816,576								1.1	\$31,933,821	

ANALYSIS DATE: December 10, 2008		ABBREVIATIONS				
PREPARED BY: NBBJ		Assignable Sq Feet (ASF)				
PHONE NUMBER: 206-515-4657		Full-Time Equivalent Student (FTE)				
		Weekly Student Hours (WSH) = student hours per week in room				
		Room Utilization Rate (RUR) = hours per week room is scheduled for use				
		Number of Stations (N) = desks or lab stations				
		Station Occupancy Ratio (SOR) = percent of stations used during scheduled use				
A. ROOM TYPES	ASF	N	FTE	WSH	RUR	SOR
Residential Houses - 6	27,460	n/a	n/a	n/a	n/a	n/a
Neighborhood Support	5,660	n/a	n/a	n/a	n/a	n/a
Facility Support	5,832	n/a	n/a	n/a	n/a	n/a
TOTAL	38,952	n/a	n/a	n/a	n/a	n/a
B. OPERATING AND MAINTENANCE COSTS						\$/YEAR
Utilities						\$
Custodial						
Maintenance						
Security						
Landscaping and Ground Maintenance						
Liability and Hazard Insurance						
Tenant Improvements						
Capital Maintenance						
Management Fees						
Furniture						
Moving Expenses						
Telephone						
Data Processing						
Other Equipment						
Total O&M Cost						\$6,832,641

	Est. Total	OPERATING IMPACT					
		2009-11	2011-13	2013-15	2015-17	2017-19	2019-21
Annual Average FTEs (#)	\$		93	93	93	93	93
General Fund-State	\$		6,832,641	13,665,282	13,665,282	13,665,282	13,665,282
Total Funds	\$						

PROJECT FUNDING		ESTIMATED TOTAL COST	TOTAL EXPENDITURES		2009-11 FISCAL PERIOD	
FUND CODE(S)			Prior Biennium	Current Biennium	Reappropriation	New Appropriation
057		\$	\$0	\$	\$	\$2,351,726
FUTURE FISCAL PERIODS						
			2011-13	2013-15	2015-17	2017-19
057		\$	\$29,582,095	\$0	\$0	\$0

Note: With the State of Washington support for the proposed Walla Walla Skilled Nursing Facility, the Federal VA will contribute up to 65% of the project cost. The State of Washington contribution in future biennia is \$11,176,838. The Federal VA State Home Construction Grant Program will contribute \$20,756,983.

305 - Department of Veterans Affairs Capital Project Request

2009-11 Biennium

Version: 00 Facility Version

Report Number: CBS002

Date Run: 12/23/2008 1:34PM

Project Number: 30000056

Project Title: Walla Walla Nursing Facility 08-2-008

Description

Project Phase Title: Predesign
 Starting Fiscal Year: 2010
 Project Class: Program
 Facility Priority: 0

Project Summary

WDVA proposes to design and construct a new 72-bed State Veterans Home on the VA Medical Center Walla Walla campus to provide long-term care for indigent veterans in the surrounding 7 county area. These veterans have unique and special needs and a State Veterans Home provides the best possible environment and quality of life. 65% of the project costs will be provided by the Federal VA State Home Construction Program. In addition, residents of the new Home will receive federal per-diem to off-set a significant portion of the cost of care.

Project Description

1. The proposed project is a new 72-bed State Veterans Home to be built on the campus of the Federal VA Jonathan M. Wainwright Memorial Medical Center campus (VAMC) on Fort Walla Walla.
2. The need for long-term care for veterans will increase dramatically over the next 20 years as the population ages. There is a great need to provide adequate facilities in south central Washington to provide high quality and cost-effective long-term care to the growing and aging veteran population in that geographic area. While WDVA currently operates three homes with a combined licensed bed capacity of 397 long-term care beds in Western and Eastern Washington, the Federal VA Office of Geriatrics Extended Care finds Washington State has an unmet State Home bed need of 642 beds. The opportunities include receiving 65% of the project funding from the Federal State Home Construction Grant Program and the per-diem that offsets the cost of the State to care for Medicare patients; this per-diem is only paid to veterans who reside in State Homes.
3. This project contributes to the Governor's Priority of Government of *Improving the security of Washington's vulnerable children and adults*. The project is also consistent with the WDVA 2009-2013 Strategic Plan.
4. The specific benefits include the 65% Federal VA project funding and the per-diem which off-sets the costs the State must pay for the care of Medicare patients. In addition the Washington State Veterans Homes provide unique environments where veterans are treated with the dignity and respect they deserve, in distinctive settings that all provide a sense of belonging unique – and critically important – to veterans.
5. See #4 above. Veterans will be able to receive long term care in a State Home in an environment where their special needs can be met. Veterans requiring nursing care are younger, pre-dominantly male, more unstable and much more likely to have psychiatric problems than those in community nursing homes.
6. The major impact will be the avoidance of Medicare cost to the State of over \$30/per day for veterans served in a State Home instead of a community nursing home.
7. **to be answered**
8. This is the best alternative for providing the nursing care environments that most benefit indigent veterans.. The 3 existing State Homes are full; purchase and total renovation of an existing community nursing home would likely be equal in cost to new construction. Continuing with the existing situation means that not only do veterans not have the best environment of care, but also that the State is not receiving the Federal per-diem which off-sets a major portion of State Medicaid costs for veterans in State Homes.
9. 35 % of the project funding will come from the State Building Construction Account and 65% from the Federal VA State Home Construction Grant Program.

Location

City: Walla Walla

County: Walla Walla

Legislative District: 016

Project Type

New Facilities/Additions (Major Projects)

Growth Management impacts

305 - Department of Veterans Affairs Capital Project Request

2009-11 Biennium
*

Version: 00 Facility Version

Report Number: CBS002

Date Run: 12/23/2008 1:34PM

Project Number: 30000056

Project Title: Walla Walla Nursing Facility 08-2-008

Description

Proposed project is located within the City limits of Walla Walla at the Jonathan M. Wainwright Memorial Medical Center VA Campus. No growth management impacts are anticipated.

New Facility: Yes

How does this fit in master plan

The Walla Walla Nursing Facility is included in the WDVA Strategic Plan 2009-2013. The proposed site is owned and operated by the U.S. Department of Veterans Affairs and does not have a physical master plan guiding development.

Schedule and Statistics

	<u>Start Date</u>	<u>End Date</u>
Pre-design	08/01/2008	12/01/2008
Design	7/1/2009	4/1/2011
Construction	7/1/2011	9/1/2012

	<u>Total</u>
Gross Square Feet:	58,895
Usable Square Feet:	38,952
Efficiency:	66.1%
Escalated MACC Cost per Sq. Ft.:	377
Construction Type:	Nursing Homes
Is this a remodel?	No
A/E Fee Class:	B
A/E Fee Percentage:	7.05%

Cost Summary

	<u>Escalated Cost</u>	<u>% of Project</u>
Acquisition Costs Total	0	0.0%
Consultant Services		
Pre-Schematic Design Services	0	0.0%
Construction Documents	1,021,511	3.2%
Extra Services	611,915	1.9%
Other Services	601,600	1.9%
Design Services Contingency	116,700	0.4%
Consultant Services Total	2,351,726	7.4%
Maximum Allowable Construction Cost(MACC)	22,196,963	
Site work	1,498,994	4.7%
Related Project Costs	2,156,532	6.8%
Facility Construction	18,541,437	58.1%
GCCM Risk Contingency	0	0.0%
GCCM or Design Build Costs	0	0.0%
Construction Contingencies	1,670,367	5.2%

305 - Department of Veterans Affairs
 Capital Project Request

2009-11 Biennium

Version: 00 Facility Version

Report Number: CBS002

Date Run: 12/23/2008 1:34PM

Project Number: 30000056

Project Title: Walla Walla Nursing Facility 08-2-008

Cost Summary

	<u>Escalated Cost</u>	<u>% of Project</u>
Construction Contracts		
Non Taxable Items	0	0.0%
Sales Tax	1,980,988	6.2%
Construction Contracts Total	<u>25,848,318</u>	<u>80.9%</u>
Equipment		
Equipment	3,027,497	9.5%
Non Taxable Items	0	0.0%
Sales Tax	251,282	0.8%
Equipment Total	<u>3,278,779</u>	<u>10.3%</u>
Art Work Total	110,985	0.4%
Other Costs Total	344,013	1.1%
Project Management Total	0	0.0%
Grand Total Escalated Costs	<u><u>31,933,821</u></u>	
Rounded Grand Total Escalated Costs	31,934,000	

Operating Impacts

Total one time start up and ongoing operating costs

Capital Project Request

2009-11 Biennium

*

<u>Parameter</u>	<u>Entered As</u>	<u>Interpreted As</u>
Biennium	2009-11	2009-11
Agency	305	305
Version	00-F	00-F
Project Classification	*	All Project Classifications
Capital Project Number	30000056	30000056
Sort Order	Priority	Priority
User Group	Agency Facility	Capital Facility
User Id	30500kseInbbj	30500kseInbbj

Cost Estimate Summary

2009-11 Biennium

Cost Estimate Number: 9
Cost Estimate Title: Predesign
Version: 00 Facility Version
Project Number: 30000056
Project Title: Walla Walla Nursing Facility 08-2-008
Project Phase Title: Predesign

Report Number: CBS003
Date Run: 12/23/2008 1:38PM
Facility Preferred: Yes

Contact Info **Contact Name:** Kim Selby **Contact Number:** 206.515.4657

Statistics

Gross Sq. Ft.:	58,895
Usable Sq. Ft.:	38,952
Space Efficiency:	66%
MACC Cost per Sq. Ft.:	339
Escalated MACC Cost per Sq. Ft.:	377
Remodel?	No
Construction Type:	Nursing Homes
A/E Fee Class:	B
A/E Fee Percentage:	7.05%

Schedule

	<u>Start Date</u>	<u>End Date</u>
Predesign:	08-2008	12-2008
Design:	07-2009	04-2011
Construction:	07-2011	09-2012
Duration of Construction (Months):	14	

Cost Summary Escalated

Acquisition Costs Total		0
Pre-Schematic Design Services		0
Construction Documents		1,021,511
Extra Services		611,915
Other Services		601,600
Design Services Contingency		116,700
Consultant Services Total		2,351,726
Site work		1,498,994
Related Project Costs		2,156,532
Facility Construction		18,541,437
Construction Contingencies		1,670,367
Non Taxable Items		0
Sales Tax		1,980,988
Construction Contracts Total		25,848,318
Maximum Allowable Construction Cost(MACC)	22,196,963	
Equipment		3,027,497
Non Taxable Items		0
Sales Tax		251,282
Equipment Total		3,278,779
Art Work Total		110,985
Other Costs Total		344,013
Project Management Total		0
Grand Total Escalated Costs		31,933,821
Rounded Grand Total Escalated Costs		31,934,000

Additional Details

Alternative Public Works Project: No

Cost Estimate Summary

2009-11 Biennium

*

Cost Estimate Number: 9

Report Number: CBS003

Cost Estimate Title: Predesign

Date Run: 12/23/2008 1:38PM

Version: 00 Facility Version

Facility Preferred: Yes

Project Number: 30000056

Project Title: Walla Walla Nursing Facility 08-2-008

Project Phase Title: Predesign

Contact Info Contact Name: Kim Selby

Contact Number: 206.515.4657

Additional Details

State Construction Inflation Rate:	3.50%
Base Month and Year:	12-2008
Project Administration By:	GA
Project Admin Impact to GA that is NOT Included in Project Total:	\$599,181

Cost Estimate Detail

2009-11 Biennium

Cost Estimate Number: 9 **Analysis Date:** December 10, 2008
Cost Estimate Title: Predesign
Detail Title: 72 Bed Version :1
Project Number: 30000056
Project Title: Walla Walla Nursing Facility 08-2-008
Project Phase Title: Predesign
Location: Walla Walla
Contact Info **Contact Name:** Kim Selby **Contact Number:** 206.515.4657

Statistics

Gross Sq. Ft.: 58,895
 Usable Sq. Ft.: 38,952
 Rentable Sq. Ft.:
 Space Efficiency: 66%
 Escalated MACC Cost per Sq. Ft.: 377
 Escalated Cost per S. F. Explanation

Construction Type: Nursing Homes
 Remodel? No
 A/E Fee Class: B
 A/E Fee Percentage: 7.05%
 Contingency Rate: 5.00%
 Contingency Explanation

Management Reserve: 2.50%
 Projected Life of Asset (Years): 50
 Location Used for Tax Rate: Walla Walla
 Tax Rate: 8.30%
 Art Requirement Applies: Yes
 Project Administration by: GA
 Higher Education Institution?: No
 Alternative Public Works?: No

Project Schedule

	<u>Start Date</u>	<u>End Date</u>
Predesign:	08-2008	12-2008
Design:	07-2009	04-2011
Construction:	07-2011	09-2012
Duration of Construction (Months):	14	
State Construction Inflation Rate:	3.50%	
Base Month and Year:	12-2008	

Project Cost Summary

MACC:	\$ 19,972,700
MACC (Escalated):	\$ 22,196,963
Current Project Total:	\$ 28,816,576
Rounded Current Project Total:	\$ 28,817,000
Escalated Project Total:	\$ 31,933,821
Rounded Escalated Project Total:	\$ 31,934,000

<u>ITEM</u>	<u>Base Amount</u>	<u>Sub Total</u>	<u>Escalation Factor</u>	<u>Escalated Cost</u>
CONSULTANT SERVICES				
<u>Construction Documents</u>				
A/E Basic Design Services	971,572			
SubTotal: Construction Documents		971,572	1.0514	1,021,511
<u>Extra Services</u>				
Civil Design (Above Basic Services)	50,000			
Commissioning (Systems Check)	45,000			
Site Survey	40,000			
Testing	30,000			
Leadership Energy & Environment Design List(LEED)	45,000			
Voice/Data Consultant	20,000			
Value Engineering Participation & Implementation	25,000			
Constructability Review Participation	10,000			
Environmental Mitigation Services (EIS)	20,000			
Landscape Consultant	50,000			
Energy Conservation Report	8,000			
Document Reproduction	25,000			
Advertising for bid and release of retainage	1,000			
Acoustic Consultant	15,000			
Art Coordination	5,000			
Cost Estimating	42,500			
Fire and Life Safety Consultant	4,500			
Graphics	6,000			
Interior Consultant	80,000			
Lighting Consultant	12,000			
Security/Technology/AV Consultant	20,000			
Dementia Specialist	12,000			
Kitchen Consultant	16,000			
SubTotal: Extra Services		582,000	1.0514	611,915
<u>Other Services</u>				
Bid/Construction/Closeout	436,503			
HVAC Balancing	20,000			
Commissioning and Training	45,000			
Constructibility Consultant	20,000			
Value Engineering Consultant	10,000			
Fulltime Roofing Inspector	8,000			
SubTotal: Other Services		539,503	1.1151	601,600
<u>Design Services Contingency</u>				
Design Services Contingency	104,654			
SubTotal: Design Services Contingency		104,654	1.1151	116,700
Total: Consultant Services		2,197,729	1.0701	2,351,726
CONSTRUCTION CONTRACTS				
<u>Site work</u>				
G10 - Site Preparation	250,800			
G20 - Site Improvements	636,900			
G30 - Site Mechanical Utilities	290,400			
G40 - Site Electrical Utilities	193,600			
SubTotal: Site work		1,371,700	1.0928	1,498,994
<u>Related Project Costs</u>				
Offsite Improvements	1,973,400			
SubTotal: Related Project Costs		1,973,400	1.0928	2,156,532
<u>Facility Construction</u>				
A10 - Foundations	919,600			
B10 - Superstructure	2,136,200			
B20 - Exterior Closure	2,608,100			

<u>ITEM</u>	<u>Base Amount</u>	<u>Sub Total</u>	<u>Escalation Factor</u>	<u>Escalated Cost</u>
CONSTRUCTION CONTRACTS				
B30 - Roofing	1,270,500			
C10 - Interior Construction	1,112,100			
C30 - Interior Finishes	1,608,200			
D20 - Plumbing Systems	775,500			
D30 - HVAC Systems	1,775,400			
D40 - Fire Protection Systems	243,100			
D50 - Electrical Systems	1,478,400			
F10 - Special Construction	275,000			
F20 - Selective Demolition	12,100			
General Conditions	2,413,400			
SubTotal: Facility Construction		16,627,600	1.1151	18,541,437
Maximum Allowable Construction Cost (MACC)		19,972,700	1.1100	22,196,963
<u>Construction Contingencies</u>				
Management Reserve	499,318			
Allowance for Change Orders	998,635			
SubTotal: Construction Contingencies		1,497,953	1.1151	1,670,367
Sales Tax		1,782,064	1.1116	1,980,988
Total: Construction Contracts		23,252,717	1.1116	25,848,318
EQUIPMENT				
E10 - Equipment	2,005,000			
E20 - Furnishings	710,000			
SubTotal:		2,715,000	1.1151	3,027,497
Sales Tax		225,345	1.1151	251,282
Total: Equipment		2,940,345	1.1151	3,278,779
ART WORK				
Total: Art Work		110,985	1.0000	110,985
OTHER COSTS				
LEED Registration / Certification Fees	6,000			
City Building Permit	132,000			
City Plan Review	85,800			
Project Signage	1,000			
City Capital Facilities Charge	90,000			
Total: Other Costs		314,800	1.0928	344,013
PROJECT MANAGEMENT				
GA Project Management	599,181			

305 - Department of Veterans Affairs

Cost Estimate Summary and Detail

2009-11 Biennium

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Cost Estimate Number: 9
Cost Estimate Title: Predesign

Report Number: CBS003
Date Run: 12/23/2008 1:38PM

<u>Parameter</u>	<u>Entered As</u>	<u>Interpreted As</u>
Associated or Unassociated	Associated	Associated
Biennium	2009-11	2009-11
Agency	305	305
Version	00-F	00-F
Project Classification	*	All Project Classifications
Capital Project Number	30000056	30000056
Cost Estimate Number	9	9
Sort Order	Number	Number
User Group	Agency Facility	Capital Facility
User Id	30500kselnbbj	30500kselnbbj



223 Yale Avenue North
Seattle WA 98109 (206) 223 5555

**Project Cost
Summary**

Job Name: **WDVA Walla Walla, Washington
Skilled Nursing Facility - Hybrid #1 Model**

Predesign Schematic Design
 Design Development Construction Documents

Prepared By: **Bergerud**

Date: **16-Dec-08**

Total GSF: **58,894**

Mid-Pt: **Feb-12**

A Construction	50,076 GSF Housing Buildings		\$15,593,000	
	8,818 GSF Commons Building		\$2,620,000	
	1 LS Relocate Bldg No. 1		\$317,000	
	1 LS Sitework		\$3,807,000	
	SUBTOTAL		\$22,337,000	
Total Probable Construction Cost (MACC)				\$22,337,000
	Construction Contingency	7.5%	1,675,275	
	Sales Tax	8.8%	1,965,656	
Total Probable Final Cost (A)				\$25,977,931
B Furniture & Equipment	Major Equipment - Not Included	NIC		
	Telecom and Data - Allowance	LS	400,000	
	Art - Allowance	0.7%	156,359	
	Furniture and Furnishings	\$14/sf	790,431	
	Equipment	8.0%	1,786,960	3,133,750
C Design & Management	Professional Design Fees	6.5%	1,451,905	
	Special Consultants	4.0%	893,480	
	Design Services Contingency	10%	234,539	
	Mock-ups	NIC		
	GA Project Management - Not Included	NIC		
	Owner's Consultants - Not Included	NIC		
	Testing, Inspection & Balancing - Included Above			
	Commissioning - Included Above			
	Market Studies	NIC		
	Site Surveys	LS	40,000	
Soils Analysis	LS	40,000	2,659,924	
D Contingencies	General Owners Contingency - Not Included	NIC		
E Misc. Project Cost	Insurance & Permits	1.5%	340,000	340,000
F Other	Hazardous Materials Removal - Not Included	NIC		
	City Capital Facilities Charge	LS	90,000	90,000
Total Probable Final Project Cost (A-F)				\$32,201,605



223 Yale Avenue North
Seattle WA 98109 (206) 223 5555

**Project Cost
Summary**

Job Name: **WDVA Walla Walla, Washington
Skilled Nursing Facility - Hybrid #1 Model**

- Predesign Schematic Design
 Design Development Construction Documents

Prepared By: **Bergerud**

Date: **16-Dec-08**

Total GSF: **58,894**

Mid-Pt: **Feb-12**

G Site Acquisition	Land Cost	NIC	
	Legal Fees - operational cost	NIC	
	Surveys for Purchase	NIC	
	Appraisal Fees	NIC	
	Off-Site Work	NIC	
H Leasing/Occupancy	Moving Expenses	NIC	
	Leasing Commissions	NIC	
	Tenant Inducements	NIC	
	Property Taxes During Construction	NIC	
I Financing	Interim Financing	NIC	
	Permanent Financing Placement	NIC	
Total Probable Capital Cost (A-I)			



STATE OF WASHINGTON BENEFIT & LIFE CYCLE COST ANALYSIS SUMMARY	FORM C-3 (Rev 6-01)
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AGENCY: Washington Department of Veterans Affairs PROJECT: Walla Walla Nursing Home LOCATION: Walla Walla, Washington	ANALYSIS TYPE: LCC ANALYSIS DATE: 12/29/08 ANALYSIS BY: NBBJ FILE NAME: WDVA_c3.doc
Economic Life: 30 Yrs Discount Rate: 5%	

Description	Alternative #1 Green House®		Alternative #2 Hybrid 1 (Preferred)		Alternative #3 Hybrid 2	
	Estimated Cost	Present Worth	Estimated Cost	Present Worth	Estimated Cost	Present Worth
1. Initial Costs						
A. TOTAL (in thousands)	\$33,097	\$27,229	\$31,934	\$26,272	\$35,543	\$29,241
B. _____	_____	_____	_____	_____	_____	_____
C. _____	_____	_____	_____	_____	_____	_____
Total Initial Cost (PW)	\$33,097	\$27,229	\$31,934	\$26,272	\$35,543	\$29,241
Total Initial Cost Savings		(\$957)				(\$2,969)
2. Replacement/Salvage Costs						
Year PW						
A. _____	_____	_____	_____	_____	_____	_____
B. _____	_____	_____	_____	_____	_____	_____
C. _____	_____	_____	_____	_____	_____	_____
Total Replacement/Savings (PW)						
3. Annual Costs						
Dif. PWA						
Escal						
A. Personnel 3.5% _____	\$310,756	\$133,991	\$310,756	\$133,991	\$327,683	\$141,289
B. Supplies & Materials 3.5% _____	\$20,144	\$8,685	\$20,144	\$8,685	\$23,170	\$9,990
C. Other Purchased 3.5% _____	\$7,912	\$3,411	\$7,912	\$3,411	\$7,912	\$3,411
D. Utilities 3.5% _____	\$4,390	\$1,987	\$4,390	\$1,987	\$5,048	\$2,285
E. Repairs & Maintenance 3.5% _____	\$2,015	\$912	\$2,015	\$912	\$2,015	\$912
F. Other Costs 3.5% _____	\$7,505	\$3,395	\$7,505	\$3,395	\$7,505	\$3,398
Total Annual Cost	\$352,721	\$152,384	\$352,721	\$152,384	\$373,332	\$161,285
Total Annual Cost Savings (PW)						(\$8,901)
Grand Total PW Costs		\$179,613		\$178,656		\$190,526
Life Cycle PW Savings		(\$957)				(\$11,870)
Savings %		(1%)				(9.3%)



223 Yale Avenue North
Seattle WA 98109 (206) 223 5555

**Project Cost
Summary**

Job Name: **WDVA Walla Walla, Washington
Skilled Nursing Facility - Green House Model**

Predesign Schematic Design
 Design Development Construction Documents

Prepared By: **Bergerud**

Date: **15-Dec-08**

Total GSF: **59,400**

Mid-Pt: **Feb-12**

A Construction	47,400 GSF Housing Buildings		\$15,320,000	
	12,000 GSF Commons Building		\$3,550,000	
	1 LS Relocate Bldg No. 1		\$317,000	
	1 LS Sitework		\$3,801,000	
	SUBTOTAL		\$22,988,000	
Total Probable Construction Cost (MACC)				\$22,988,000
	Construction Contingency	7.5%	1,724,100	
	Sales Tax	8.8%	2,022,944	
Total Probable Final Cost (A)				\$26,735,044
B Furniture & Equipment	Major Equipment - Not Included	NIC		
	Telecom and Data - Allowance	LS	400,000	
	Art - Allowance	0.7%	160,916	
	Furniture and Furnishings	\$14/sf	797,223	
	Equipment	8.0%	1,839,040	3,197,179
C Design & Management	Professional Design Fees	6.5%	1,494,220	
	Special Consultants	4.0%	919,520	
	Design Services Contingency	10%	241,374	
	Mock-ups	NIC		
	GA Project Management - Not Included	NIC		
	Owner's Consultants - Not Included	NIC		
	Testing, Inspection & Balancing - Included Above			
	Commissioning - Included Above			
	Market Studies	NIC		
	Site Surveys	LS	40,000	
	Soils Analysis	LS	40,000	2,735,114
D Contingencies	General Owners Contingency - Not Included	NIC		
E Misc. Project Cost	Insurance & Permits	1.5%	340,000	340,000
F Other	Hazardous Materials Removal - Not Included	NIC		
	City Capital Facilities Charge	LS	90,000	90,000
Total Probable Final Project Cost (A-F)				\$33,097,337





223 Yale Avenue North
Seattle WA 98109 (206) 223 5555

**Project Cost
Summary**

Job Name: **WDVA Walla Walla, Washington
Skilled Nursing Facility - Green House Model**

- Predesign Schematic Design
 Design Development Construction Documents

Prepared By: **Bergerud**

Date: **15-Dec-08**

Total GSF: **59,400**

Mid-Pt: **Feb-12**

G Site Acquisition	Land Cost	NIC	
	Legal Fees - operational cost	NIC	
	Surveys for Purchase	NIC	
	Appraisal Fees	NIC	
	Off-Site Work	NIC	
H Leasing/Occupancy	Moving Expenses	NIC	
	Leasing Commissions	NIC	
	Tenant Inducements	NIC	
	Property Taxes During Construction	NIC	
I Financing	Interim Financing	NIC	
	Permanent Financing Placement	NIC	
Total Probable Capital Cost (A-I)			



223 Yale Avenue North
Seattle WA 98109 (206) 223 5555

**Project Cost
Summary**

Job Name: **WDVA Walla Walla, Washington
Skilled Nursing Facility - Hybrid #2 Model**

Predesign Schematic Design
 Design Development Construction Documents

Prepared By: **Bergerud**

Date: **15-Dec-08**

Total GSF: **67,618**

Mid-Pt: **Feb-12**

A Construction	58,800 GSF Housing Buildings		\$18,063,000	
	8,818 GSF Commons Building		\$2,620,000	
	1 LS Relocate Bldg No. 1		\$317,000	
	1 LS Sitework		\$3,676,000	
	SUBTOTAL		\$24,676,000	
Total Probable Construction Cost (MACC)				\$24,676,000
	Construction Contingency	7.5%	1,850,700	
	Sales Tax	8.8%	2,171,488	
Total Probable Final Cost (A)				\$28,698,188
B Furniture & Equipment	Major Equipment - Not Included	NIC		
	Telecom and Data - Allowance	LS	400,000	
	Art - Allowance	0.7%	172,732	
	Furniture and Furnishings	\$14/sf	907,519	
	Equipment	8.0%	1,974,080	3,454,331
C Design & Management	Professional Design Fees	6.5%	1,603,940	
	Special Consultants	4.0%	987,040	
	Design Services Contingency	10%	259,098	
	Mock-ups	NIC		
	GA Project Management - Not Included	NIC		
	Owner's Consultants - Not Included	NIC		
	Testing, Inspection & Balancing - Included Above			
	Commissioning - Included Above			
	Market Studies	NIC		
	Site Surveys	LS	40,000	
Soils Analysis	LS	40,000	2,930,078	
D Contingencies	General Owners Contingency - Not Included	NIC		
E Misc. Project Cost	Insurance & Permits	1.5%	370,000	370,000
F Other	Hazardous Materials Removal - Not Included	NIC		
	City Capital Facilities Charge	LS	90,000	90,000
Total Probable Final Project Cost (A-F)				\$35,542,597





223 Yale Avenue North
Seattle WA 98109 (206) 223 5555

**Project Cost
Summary**

Job Name: **WDVA Walla Walla, Washington
Skilled Nursing Facility - Hybrid #2 Model**

- Predesign Schematic Design
 Design Development Construction Documents

Prepared By: **Bergerud**

Date: **15-Dec-08**

Total GSF: **67,618**

Mid-Pt: **Feb-12**

G Site Acquisition	Land Cost	NIC	
	Legal Fees - operational cost	NIC	
	Surveys for Purchase	NIC	
	Appraisal Fees	NIC	
	Off-Site Work	NIC	
H Leasing/Occupancy	Moving Expenses	NIC	
	Leasing Commissions	NIC	
	Tenant Inducements	NIC	
	Property Taxes During Construction	NIC	
I Financing	Interim Financing	NIC	
	Permanent Financing Placement	NIC	
Total Probable Capital Cost (A-I)			



APPENDIX D: SUSTAINABLE DESIGN FORMS

The following pages include documentation of the sustainable design strategies identified for the Skilled Nursing Facility as part of the Predesign analysis.

- LEED 2.2 Checklist
- High Performance Green Buildings Predesign/Pre-Schematic Submittal (General Administration)
- Environmental Considerations Form, Figure 3.1 (General Administration)



LEED for New Construction v 2.2 Registered Project Checklist

Project Name: WDVA Walla Walla Nursing Facility

Project Address: Jonathan M. Wainright Memorial Medical Center, Walla Walla, Washington

Yes	?	No		
43	10	6	Project Totals (Pre-Certification Estimates) 69 Points	
GOLD			Certified: 26-32 points	Silver: 33-38 points
			Gold: 39-51 points	Platinum: 52-69 points

Yes	?	No		
11	1	2	Sustainable Sites 14 Points	

Yes	?	No	Prereq 1	Construction Activity Pollution Prevention	Required
1			Credit 1	Site Selection	1
1			Credit 2	Development Density & Community Connectivity	1
		1	Credit 3	Brownfield Redevelopment	1
	1		Credit 4.1	Alternative Transportation, Public Transportation	1
1	0		Credit 4.2	Alternative Transportation, Bicycle Storage & Changing Rooms	1
		1	Credit 4.3	Alternative Transportation, Low-Emitting & Fuel Efficient Vehicles	1
1	0		Credit 4.4	Alternative Transportation, Parking Capacity	1
1			Credit 5.1	Site Development, Protect or Restore Habitat	1
1			Credit 5.2	Site Development, Maximize Open Space	1
1			Credit 6.1	Stormwater Design, Quantity Control	1
1			Credit 6.2	Stormwater Design, Quality Control	1
1			Credit 7.1	Heat Island Effect, Non-Roof	1
1			Credit 7.2	Heat Island Effect, Roof	1
1			Credit 8	Light Pollution Reduction	1

Yes	?	No		
3	1	1	Water Efficiency 5 Points	

1			Credit 1.1	Water Efficient Landscaping, Reduce by 50%	1
	1		Credit 1.2	Water Efficient Landscaping, No Potable Use or No Irrigation	1
	0	1	Credit 2	Innovative Wastewater Technologies	1
1			Credit 3.1	Water Use Reduction, 20% Reduction	1
1			Credit 3.2	Water Use Reduction, 30% Reduction	1

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LEED for New Construction v 2.2 Registered Project Checklist

Yes	?	No			
6	5		Energy & Atmosphere		17 Points
Yes			Prereq 1	Fundamental Commissioning of the Building Energy Systems	Required
Yes			Prereq 1	Minimum Energy Performance	Required
Yes			Prereq 1	Fundamental Refrigerant Management	Required
*Note for EAc1: All LEED for New Construction projects registered after June 26, 2007 are required to achieve at least two (2) points.					
2	4		Credit 1	Optimize Energy Performance	1 to 10
			Credit 1.1	10.5% New Buildings / 3.5% Existing Building Renovations	1
			→ Credit 1.2	14% New Buildings / 7% Existing Building Renovations	2
			Credit 1.3	17.5% New Buildings / 10.5% Existing Building Renovations	3
			Credit 1.4	21% New Buildings / 14% Existing Building Renovations	4
			Credit 1.5	24.5% New Buildings / 17.5% Existing Building Renovations	5
			Credit 1.6	28% New Buildings / 21% Existing Building Renovations	6
			Credit 1.7	31.5% New Buildings / 24.5% Existing Building Renovations	7
			Credit 1.8	35% New Buildings / 28% Existing Building Renovations	8
			Credit 1.9	38.5% New Buildings / 31.5% Existing Building Renovations	9
			Credit 1.10	42% New Buildings / 35% Existing Building Renovations	10
	1		Credit 2	On-Site Renewable Energy	1 to 3
			Credit 2.1	2.5% Renewable Energy	1
			Credit 2.2	7.5% Renewable Energy	2
			Credit 2.3	12.5% Renewable Energy	3
1			Credit 3	Enhanced Commissioning	1
1			Credit 4	Enhanced Refrigerant Management	1
1			Credit 5	Measurement & Verification	1
1	0		Credit 6	Green Power	1



LEED for New Construction v 2.2 Registered Project Checklist

Yes	?	No		
7	2	3	Materials & Resources	13 Points

Yes	?	No		
		1	Prereq 1 Storage & Collection of Recyclables	Required
		1	Credit 1.1 Building Reuse , Maintain 75% of Existing Walls, Floors & Roof	1
		1	Credit 1.2 Building Reuse , Maintain 95% of Existing Walls, Floors & Roof	1
		1	Credit 1.3 Building Reuse , Maintain 50% of Interior Non-Structural Elements	1
1			Credit 2.1 Construction Waste Management , Divert 50% from Disposal	1
1			Credit 2.2 Construction Waste Management , Divert 75% from Disposal	1
0	1		Credit 3.1 Materials Reuse , 5%	1
		0	Credit 3.2 Materials Reuse , 10%	1
1			Credit 4.1 Recycled Content , 10% (post-consumer + 1/2 pre-consumer)	1
	1		Credit 4.2 Recycled Content , 20% (post-consumer + 1/2 pre-consumer)	1
1			Credit 5.1 Regional Materials , 10% Extracted, Processed & Manufactured	1
1	0		Credit 5.2 Regional Materials , 20% Extracted, Processed & Manufactured	1
1	0		Credit 6 Rapidly Renewable Materials	1
1	0		Credit 7 Certified Wood	1

Yes	?	No		
15			Indoor Environmental Quality	15 Points

Yes	?	No		
Yes			Prereq 1 Minimum IAQ Performance	Required
Yes			Prereq 2 Environmental Tobacco Smoke (ETS) Control	Required
1			Credit 1 Outdoor Air Delivery Monitoring	1
1			Credit 2 Increased Ventilation	1
1			Credit 3.1 Construction IAQ Management Plan , During Construction	1
1			Credit 3.2 Construction IAQ Management Plan , Before Occupancy	1
1			Credit 4.1 Low-Emitting Materials , Adhesives & Sealants	1
1			Credit 4.2 Low-Emitting Materials , Paints & Coatings	1
1			Credit 4.3 Low-Emitting Materials , Carpet Systems	1
1			Credit 4.4 Low-Emitting Materials , Composite Wood & Agrifiber Products	1
1			Credit 5 Indoor Chemical & Pollutant Source Control	1
1			Credit 6.1 Controllability of Systems , Lighting	1
1			Credit 6.2 Controllability of Systems , Thermal Comfort	1
1			Credit 7.1 Thermal Comfort , Design	1
1			Credit 7.2 Thermal Comfort , Verification	1
1			Credit 8.1 Daylight & Views , Daylight 75% of Spaces	1
1			Credit 8.2 Daylight & Views , Views for 90% of Spaces	1





LEED for New Construction v 2.2 Registered Project Checklist

Yes	?	No		
1	1		Innovation & Design Process	5 Points
	1		Credit 1.1 Innovation in Design: 100% Controllability of Systems, Thermal Comft.	1
			Credit 1.2 Innovation in Design: Provide Specific Title	1
			Credit 1.3 Innovation in Design: Provide Specific Title	1
			Credit 1.4 Innovation in Design: Provide Specific Title	1
1			Credit 2 LEED® Accredited Professional	1





High-Performance Green Buildings

Received by GA:

Date: 11-Dec-08

Pre-Design/Schematic Design Submittal (submit after the eco-charrette)

Project Name	Walla Walla Nursing Facility	Agency/Institution	Department of Veterans Affairs
Project Number	08-2-008	GA H-P Green Bldg. #	
Building Use	residential_medical_care		

Submit to: sustainableba@ga.wa.gov

Submitted By	Name	Agency or Firm	Phone	E-Mail
	Kim Selby	NBBJ	206-515-4657	ksselby@nbbj.com

Conceptual Construction Cost Estimate
 Total Facility Square Footage Estimate
 Project Location/Address

59,200

Jonathan M. Wainwright Memorial Medical Center, Walla Walla, WA

Has the project been registered with the US Green Building Council?

Yes / No
No

Project Schedule	Begin SD (Date)	Begin DD (Date)	Begin CD (Date)	End Construction (Date)
	Oct-09	Mar-10	Oct-10	Jan-13

This submittal includes the following:

- 1 Provide a completed Environmental Design Considerations form*
- 2 Provide an updated LEED Checklist*

* These are required by the new Energy Life Cycle Cost Analysis (ELCCA) process

Provide a list of the following:	Name	Agency or Firm	Phone	E-Mail
State Project Manager	Jim Steffens	GA	360-902-7266	jsteffe@ga.wa.gov
Agency Representative	Gary Condra	WDVA	360-722-2202	garyc@dva.wa.gov
Architect	Randy Benedict	NBBJ	206-223-5202	rbenedict@nbbj.com
LEED Submittal Preparation By	Anne Filson	NBBJ	206-621-2286	afilson@nbbj.com

Figure 3.1 Environmental Design Considerations Form

Environmental Design Consideration

Version 1.0 July 2005

Project Title:	Walla Walla Nursing Facility	Date:	11-Dec-08
Owner:	Department of Veterans Affairs	Owner's Rep:	Gary Condra
Owner's Project No:	08-2-008	Owner's Phone No:	360-722-2202
Owner's E-mail:	garyc@dva.wa.gov	Owner's Fax No:	360-725-2197
Completed by:	Kim Selby	Phone No:	206-515-4657
Firm:	NBBJ	E-mail:	ksselby@nbbj.com
Bldg Type:	residential, medical care		
Approx. sq. ft:	59,200	<input checked="" type="checkbox"/> New	<input type="checkbox"/> Remodel <input type="checkbox"/> Addition

The following are elements of an energy efficient design and can contribute to LEED™ points. Check 'Yes' to indicate items that will be considered in the High Performance Alternative of the Energy Life Cycle Cost Analysis

	Site Considerations	Yes	No	N/A
1)	Building orientated to optimize energy efficiency	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2)	Landscaping to provide solar shading	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Envelope				
3)	Energy Star™ compliant roof	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4)	Roof insulation to meet or exceed R-30 rigid or R-38 batt*	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5)	Wall insulation with	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	a) wood studs, R-19 batt insulation*	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	b) metal studs, R-19 and rigid insulation on the exterior*	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	c) mass wall, R-10 rigid insulation*	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6)	Windows:			
	a) U=0.45 or lower*	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	b) SHGC=0.45 (reduced cooling load) or lower*	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	c) Exceed 50% Visual Light Transmittance (increased daylighting)*	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7)	Skylights U=0.60 or lower*	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8)	Doors U=0.50 or lower*	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lighting				
9)	Incorporate daylighting in over 50% of occupied critical visual task areas	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10)	Automated daylight harvesting controls	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11)	Lumen maintenance controls (metal halide with electronic ballast)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
12)	Fluorescent lighting for the gym, multipurpose, commons or other High Bay application	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13)	Lighting power densities will meet or be lower than the following*	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	a) Classroom: 1.15 watts per square foot (w/sf)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	b) Gym: 1.00 w/sf (1.8 w/sf over competitive area)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	c) Office: 1.10 w/sf	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	d) Library: 1.30 w/sf	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	e) Corridor: 0.70 w/sf	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

* Represents ELCCA prescriptive elements

	Renewable Energy	Yes	No	N/A
14)	Incorporate solar photovoltaic (PV) technology:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	a) for general building power	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	b) for isolated loads in remote locations (e.g. crosswalks)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
15)	Solar water heater	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16)	Wind power	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
17)	Heat recovery systems	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
18)	Geothermal	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	Water Conservation			
19)	Waterless Urinals	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
20)	Rain water/gray water collection systems	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
21)	Water efficient landscaping	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
22)	Water efficient fixtures	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
23)	Automated lavatory faucets	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	HVAC & Electrical			
24)	Natural ventilation in lieu of mechanical cooling or partly so	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
25)	Displacement ventilation	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
26)	Thermal Storage	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
27)	Premium efficiency motors	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
28)	Independent Building Commissioning Agent hired by owner	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
29)	Variable flow fans and pumping systems	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
30)	Heat recovery systems (between supply and exhaust)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
31)	Evaporative cooling to augment or replace mechanical cooling	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
32)	High efficiency boilers	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
33)	High efficiency chillers	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Controls			
34)	Building automation system	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
35)	Carbon Dioxide monitoring (gym/multipurpose/commons, etc.)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
36)	Demand control ventilation	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	Uninterruptible Power			
37)	Fuel cells for uninterruptible power systems	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

List other energy efficient items or strategies that will be considered:

Photovoltaics will be evaluated during design but are not currently included in the predesign cost estimates.

Submit to GA by FAX: (360) 586-9186
or by E-Mail: ELCCA@ga.wa.gov



Electrical Pre-design Narrative

General

The electrical design for the Washington State Department of Veterans Affairs Skilled Nursing Facility in Walla Walla, WA will incorporate systems which will be low-maintenance and have a long life span. Systems and components will be flexible and robust, suitable to support the program requirements and spaces they serve. Care will be taken throughout the design process to ensure that the systems specified do not limit the use of the facility. Spare capacity will be provided to allow the building to accommodate growth into the future.

Electrical systems will be designed to optimize the energy performance of the facility and support the project sustainability goals. Pacific Power, the electrical utility serving the area, has utility incentives and rebates available for energy conservation measures including mechanical systems, lighting and controls, glazing and similar items which yield certain energy savings. These programs should be evaluated in more detail during the design phase of the project.

This project will be designed to meet all state and federal codes including the AIA Guidelines for Design and Construction of Health Care Facilities and Department of Veterans Affairs, Office of Facilities Management, Nursing Home Design Guide.

Site Utilities

Power

The existing Jonathon M. Wainwright Memorial Medical Center campus power service is being maintained only to serve existing buildings according to on-site facilities personnel. A new power company (Pacific Power) primary feeder is being designed to provide power for new buildings including power for this project.

This new power company primary feeder will be approximately one thousand feet from our facility and plans have not been made to bring this feeder to the project site. This project will likely incur the cost of bring the primary feeder to the site.

A new pad-mounted transformer will be provided to serve the new building. The transformer location will be coordinated to minimize the visibility on the campus. The

Washington State Department of Veterans Affairs
Skilled Nursing Facility – Walla Walla, WA - Predesign

currently estimated transformer size is 2000 KVA, with a 480Y/277 Volts, 3 phase, 4 wire secondary, based upon the following load calculation:

$$59,200 \text{ gsf} * 32 \text{ VA/gsf} = 1,894,400 \text{ VA} / 1000 = 1,894 \text{ KVA load}$$

Site Lighting

Pedestrian pathway lighting, site security lighting and parking lot lighting will be provided in conjunction with existing campus and Veterans Administration (VA) standards and programmatic requirements. Power and lighting controls will be provided.

Alternate Energy Sources

Alternate Energy Sources such as Wind Turbine and Solar Power will be explored for potential use with this project.

Building Electrical System

Power Distribution

The service voltage will be 480 / 277 Volts wye, 3 phase, 4 wire. Based on the above load calculation, the preliminary service size for the project is 3000 Amps, and includes provisions for building lighting, miscellaneous power, mechanical, kitchen and laundry loads and includes a small allowance for minor medical equipment. A minimum of 25% spare capacity and circuit breaker provisions will be provided in all switchboards and panelboards to allow for future growth and flexibility.

A service entrance switchboard will be provided in the Main Electrical Room. The new switchboard will utilize copper bus and circuit breaker construction with transient voltage surge protection, and electronic metering for various types of loads as required by the VA guidelines.

We anticipate providing one electrical room per house for electrical panelboards, transformers, and feeder risers as well as lighting controls. Dedicated panelboards located within the space should be evaluated for kitchens and areas with dense power requirements.

Fire Alarm Equipment, Nurse Call, and Security panels and equipment will be contained in low voltage equipment rooms.



Large electrical loads and motors sized at 1/2 HP and larger will be served at 480 Volts, 3 phase. Lighting will be primarily 120 Volts and small convenience loads as well as power receptacles will be 120 Volts. To enhance power quality and to meet VA metering requirements, the electrical distribution system will be segregated by load-type. Separate panelboards for lighting, mechanical equipment and equipment power will be provided.

Panelboards will have bolt-on circuit breakers and copper bus. Transformers will be energy efficient dry-type, 480 Volts primary to 208Y/120 Volt secondary and copper windings. Circuit breakers will be utilized for overcurrent protection throughout the facility. Electronic trip units will be utilized for 480 Volt circuit breakers 600 Amps and larger. Equipment will be fully rated for the available fault current; series-rated devices will not be utilized.

Wiring Methods

Feeders and branch circuits will utilize copper conductors with 600 Volt THWN/THHN insulation. Conductor size shall be #12 AWG minimum. Aluminum conductors will not be permitted. Conductors will be sized to limit voltage drop to 1.5% in feeders and 3% in branch circuits. The use of metal clad (MC) cable is not currently planned.

Galvanized rigid steel conduit or intermediate metal conduit shall be used for feeders, for circuits exposed to physical damage and in exterior locations. Otherwise, electrical metallic tubing with steel compression fittings shall be used throughout.

Wiring Devices

Wiring devices in resident areas will be hospital grade with thermoplastic coverplates while wiring devices in back of house areas will be extra hard use specification grade with stainless steel coverplates. Special receptacles in various voltage and current configurations will likely be required to serve special equipment.

Ground fault circuit interrupters (5 milliamp) will be provided for all 120 Volt, 15 and 20 Amp devices where required by code such as kitchens, bathrooms and exterior locations.

Power Monitoring

Power monitoring devices will be provided at the service entrance switchboard and at selected downstream panel locations. The power monitoring equipment will incorporate microprocessor based electronic metering to monitor kW, kWh, Amps per phase, Volts,

demand kW, harmonics and power factor. Metering will be tied into the Building Automation System for historical record keeping and possible use in load shedding.

Transient Voltage Surge Suppression

Transient Voltage Surge Suppression (TVSS) will be provided at the service entrance switchboard to protect from utility switching transients and other outside disturbances. In addition, TVSS will be provided at panelboards serving life safety and critical care loads as well as telecommunications equipment.

Emergency / Standby Power Systems

Emergency and Standby Power

A diesel powered emergency generator will be provided for this facility and will be a stand alone unit for the project. Emergency Power will not come from the campus Emergency Power System.

Circuit Breakers serving emergency power loads will be selectively coordinated to help assure reliability. Fusible selectively coordinated systems will not be considered.

Grounding System

The electrical system will be grounded in accordance with the NEC. The grounding electrode system will consist of ground rods, a concrete-encased electrode, structural steel and underground metallic water piping.

A telecommunications grounding system will be provided and will consist of a copper ground bar in the Telecommunications Room bonded to the electrical service ground bar with #4/0 bare copper.

Equipment grounding conductors will be provided for all feeders and branch circuits. Special grounding will be provided as required to support medical equipment needs.

Lighting System

The lighting system will address specific “visibility” requirements for the project and each individual space. “Visibility” includes issues such as light quality, occupant comfort, as well as aesthetics. It is critical that the visibility issues be addressed for each space to provide maximum occupant comfort, ultimately resulting in reduced Owner costs. A quality lighting system will not only add visual interest to a space, but will also increase occupant comfort and safety. Once the visibility issues have been identified and addressed, the lighting system can be designed to provide maximum energy efficiency. Our goal is to exceed the energy code requirements by at least 10% for the lighting systems while meeting the visibility requirements.

Emergency Lighting

Egress and exit lighting will be provided for egress pathways in accordance with code requirements. Exit lighting will be LED type.

Additional building lighting will also be provided in emergency power to aid in continued building operation during a power outage.

Equipment

Light fixtures will primarily utilize fluorescent lamp sources and electronic ballasts. Fluorescent lamps will primarily be a combination of T5 and T8. Supplemental fixtures will utilize compact fluorescent, HID and incandescent lamps. Energy-efficient LED lighting should be reviewed for use where appropriate. Ballasts will be high power factor, electronic. The number of different lamp types will be minimized.

Lighting Control Systems

A lighting control system will be provided for the building utilizing relay panels located in the electrical rooms. The system will control building and building-mounted exterior lighting. System inputs will be a photocells, low voltage switches, occupancy sensors, day-lighting controls and time-of-day inputs sweep signals from the mechanical control system.

Occupancy sensors will be provided for corridors, offices and other common area rooms.

Resident Rooms will have manual switching for overhead lighting.

Lighting within daylight zones will be controlled separate from other areas. Automatic daylighting controls will be evaluated as part of the ELCCA.

Fire Alarm System

The building fire alarm system will be a stand alone intelligent, software-controlled addressable fire alarm and detection system. It will consist of a fire alarm control panel, a dialer for signaling a remote central station and a remote annunciator located at the fire department response point. Building fire alarm wiring will be installed within a raceway system.

Detection devices will consist of intelligent analog addressable smoke detectors, heat detectors, manual pull stations and sprinkler system water flow, tamper and pressure switches. To minimize nuisance alarms smoke detectors will utilize a combination of photoelectric, ionization and thermal detection. Detection devices will be located in accordance with NFPA 72 and the Fire Code.

Annunciating devices will be a combination of ADA compliant audible speakers and audible speaker/visual devices in accordance with NFPA 72 and the Fire Code. Voice capable speakers will be utilized for audible notification. Amber visual devices will also be installed to allow for Mass Notification capability.

The fire alarm system will interface with and control auxiliary equipment including fire doors, fan starters for shutdown and fire/smoke dampers where required.

Nurse Call System

Resident areas will be equipped with a nurse call system complying with state and VA requirements. Resident rooms will have nurse call two way voice communication stations, nurse aid call stations and code blue stations. Resident bathrooms will have emergency pull cords. Nurse Stations will receive nurse call master stations and the system will be capable of outputting these signals to wireless communication devices such as Vocera or Spectra-Link. Wireless Communication devices would be provided and installed by the Owner. The nurse call system will interoperate between buildings to allow staff to alert nurse aid and code blue calls between nurse stations and staff.

Wandering Alert System

Dementia Resident areas will be equipped with a Wandering Alert system complying with state and federal VA requirements. Exiting doors from the space will be equipped with sensors that will transmit a signal when activated by an approaching resident. This signal will alert at the nurse station in the area and at the door being approached by the resident. The doors will not lock. The wandering system will be capable of being alerted to different buildings to allow awareness of an event to be known by additional staff.

Many different systems are available such as wired or wireless, locking doors or non-locking doors, and tone sounding to advanced GPS systems. All system types will be explored for this project to determine the best solution for this site.

Security System

Intrusion Detection:

The site will be equipped with a security system designed to provide a safe working and living environment for this 24 hour never closing environment. Nurse Stations will have security system monitors for peace of mind. All exterior doors will have door contacts allowing staff to know when the door has been breached. Selected areas may be equipped with panic stations to allow staff to call for aid. These stations would alert off premise to summon Police. Medical drug alarms will alert to the security system.

Access Control:

All buildings will be equipped with an access control system designed to provide limited access to areas as designated by the administrators to provide a safe environment, both for staff and residents. Each exterior door and select interior doors will be equipped with electric door strikes and access control appliances either in the form of card readers or electronic keypads. Type of systems will be further researched during design of the system. The system will allow for doors to be unlocked during portions of the day and locked at other times. Each door will be capable of being controlled separately.

Security Video:

The site will have a limited amount of security video installed. Cameras may be installed at select employee's entrances to allow for visual verification of an employee before allowing entrance should they forget their access control number or card. Cameras may be beneficial at specific dementia exits to allow visual identification of the resident leaving and the direction of travel. The site and the administration staff will determine the criteria for placement and use of the security video system.

Mechanical Predesign Narrative

Summary of Work

Major elements of the Mechanical systems will be provided as described below in accordance with the design-criteria, current local codes and standards.

Codes, Regulations and Standards

Applicable codes and standards include the current versions of the following:

- Washington State Energy Code
- International Mechanical Code
- National Standard Plumbing Code
- International Building Code
- NFPA-13, Installation of Sprinkler Systems
- NFPA-54, National Fuel Gas Code
- NFPA-90A, Installation of Air Conditioning and Ventilating Systems
- NFPA-96, Ventilation Control and Fire Protection of Commercial Cooking Operations
- NFPA-101, Life Safety Code
- ASHRAE Standard 55, Thermal Comfort
- ASHRAE Standard 62, Ventilation for Acceptable Indoor Air Quality
- ASHRAE Standard 90.1, Energy Standard for Buildings
- ABA Accessibility Guidelines
- Department of Labor, OSHA, Occupational Safety and Health Standards
- Seismic Restraint Manual Guidelines for Mechanical Systems, 1991. Published by Sheet Metal and Air Conditioning Contractors National Association (SMACNA)
- Washington State Department of Health
- Department of Veterans Affairs, Office of Facilities Management, Nursing Home Design Guide
- Department of Veterans Affairs, HVAC Design Manual for Domiciliary and Nursing Home Projects
- Department of Veterans Affairs, Plumbing Design Manual for Nursing Home Projects
- Department of Veterans Affairs, Fire Protection Design Manual
- Energy (RCW 39.35): This RCW requires that a life cycle cost analysis of energy costs be conducted when designing a facility of this size. Building envelope, lighting, power and HVAC are expected to comply with the energy code.
- Energy Life Cycle Cost Analysis: E.L.C.C.A. will be performed in accordance with the Work Plan (to be approved by the Washington State division of Engineering and Architecture) in order to satisfy the requirements under RCW 39.35.
 - AABC Associated Air Balance Council
 - ADC Air Diffusion Council
 - AGA American Gas Association
 - AMCA Air Moving and Conditioning Association
 - ANSI American National Standards Institute

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- ARI Air-Conditioning and Refrigeration Institute
- ASHRAE American Society of Heating, Refrigerating and Air-Conditioning Engineers
- ASME American Society of Mechanical Engineers
- ASTM American Society for Testing and Materials
- CISPI Cast Iron Soil Pipe Institute
- CS Commercial Standards
- DOE Department of Energy
- EPA Environmental Protection Agency
- FM Factory Mutual
- IAPMO International Association of Plumbing and Mechanical Officials
- MSS Manufacturers Standardization Society of the Valves and Fittings Industry
- NCPWB National Certified Pipe Welding Bureau
- NEC National Electrical Code
- NEMA National Electrical Manufacturers Association
- NFPA National Fire Protection Association
- PDI Plumbing and Drainage Institute
- SMACNA Sheet Metal and Air Conditioning Contractors National Association
- UL Underwriters' Laboratories
- WISHA Washington Industrial Safety and Health Agency

Sustainable Design

The mechanical systems will be designed to help achieve a minimum LEED Silver rating as administered by the U.S. Green Building Council.

H.V.A.C. Design Criteria

Design Temperatures

	Input	Source
Outdoor Air Temp.	12 °F for heating 95 °F db, 65 °F wb for cooling	WDVA Standards, Walla Walla Weather Station
Indoor Air Temp.	78 °F for heating 76 °F for cooling	WDVA Standards, Resident Rooms

Building Envelope

	Information received from the Architect
Roof	To comply with Washington State Energy Code, WDVA Design Standards
Opaque Walls	To comply with Washington State Energy Code, WDVA Design Standards
Doors	To comply with Washington State Energy Code, WDVA Design Standards
Slab Perimeter	To comply with Washington State Energy Code, WDVA Design Standards
Glazing	To comply with Washington State Energy Code, WDVA Design Standards

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Room Design Criteria

	Design Temperature*		Maximum Internal Heat Gain**			Comments
			Light (W/ft ²)	Equip.	Number of People	
	Htg. (°F)	Clg. (°F)				
Toilet Rooms	78	78	1.2	N/A	N/A	Exhaust = 10 ACH
Dining Rooms	72	78	1.2	2 W/Sq. Ft.	1 per 14.3 Sq. Ft.	CO ₂ monitoring to optimize ventilation.
Kitchens	70	82	1.2	8 W/Sq. Ft.	1 per 50 Sq. Ft.	Grease exhaust hoods.
Lounges	72	78	1.2	1 W/Sq. Ft.	1 per 14.3 Sq. Ft.	
Resident Rooms	78	76	1.5	2 W/Sq. Ft.	1 per 100 Sq. Ft.	
Offices	72	78	1.0	150 W per computer	1 per 143 Sq. Ft.	
Conference Rooms	72	78	1.2	1 W/Sq. Ft.	1 per 20 Sq. Ft.	CO ₂ monitoring to optimize ventilation.
Elevator Machine Room	50	94	1.5	TBD	N/A	DX Split A/C
Electrical Equipment Rooms	50	85	1.5	TBD	N/A	DX Split A/C or Ventilation.
Hallway/ Lobby	78	76	0.8	N/A	N/A	Ventilation = 0.05 cfm/ft ²
IDF Room	68	78	1.5	TBD	N/A	DX Split A/C
Janitor	68	N/A	1.5	N/A	N/A	Exhaust = 10 ACH
Mechanical Rooms	50	N/A	1.5	TBD	N/A	Thermostatically controlled automatic dampers and exhaust fan to limit heat build-up.

* Values taken from WDVA Standards.

** Given values are estimates and shall be verified during design by detailed load calculations.

Site Utilities

Natural gas is currently being provided to the campus by a 4" buried gas main that serves the Boiler Plant (Building 76) and distributes from there to other campus buildings. Coordinate gas service to the new Skilled Nursing Facility site with the local gas company.

Refer to the Civil Predesign report for site utilities work.

HVAC Piping Systems and Materials

Heating Hot Water

Schedule 40
Type L

Black Steel
Copper (Hard Drawn)

ASTM A 53
ASTM B 88

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Chilled Water (Above Grade)	Schedule 40 Type L	Black Steel Copper (Hard Drawn)	ASTM A 53 ASTM B 88
Chilled Water – Double Wall (Below Grade)	Schedule 40 Type L P 34	Black Steel Copper (Hard Drawn) Polyethylene	ASTM A 53 ASTM B 88 ASTM D 3350
Relief Valve Piping	Schedule 40	Black Steel	ASTM A 53

Note:

- a. Appropriate pressure-testing, flushing, chemical treatment and 30% (of the volume of each system) polypropylene glycol (food grade) will be included with all heat-transfer fluid handling systems in order to prevent freeze-up.
- b. Drain and vent piping shall be of the same material as the piping system to which it is connected.
- c. Drains from drain pans shall be DWV copper ASTM B 306 1-¼ inch minimum size except otherwise noted.
- d. Circulating pumps, circuit setters valves, expansion tanks, air-vents and other specialty items will be as manufactured by Bell & Gossett, Armstrong or as approved equal.

Noise and Vibration Control

Sound attenuation and vibration isolation will be provided for the Mechanical Systems in accordance with recommendations to be received from Acoustical Consultant.

Mechanical Insulation

All piping, ductwork and plenums will be insulated in accordance with the Washington State Energy Code requirements and WDVA standards. In addition, piping insulation will be provided also for domestic cold water, roof-drain leaders and for condensate drainage piping.

General Requirement: Except where otherwise specified, insulation and coverings shall have a flame spread rating throughout the material not exceeding 25, and a smoke developed classification of not more than 50 as determined by UL Standard No. 723 and NFPA Standard No. 255.

Fire Sprinkler System

Fire-sprinkler system will be hydraulically designed and installed by Fire-Sprinkler Contractor (certified in the State of Washington) in accordance with the requirements under N.F.P.A. 13 and specific requirements per City of Walla Walla Fire Marshall.

Requirement for pressure-booster pump, if any, will be determined after pressure/flow-test information (near the point of connection to the existing fire-main) is obtained by the Civil Engineering consultant for this project.

Materials/Products: All materials and installation of the fire-sprinkler system will comply with the standards described in N.F.P.A. 13.



Plumbing Piping Systems

Roof drainage: Roof drains and overflow drain leader piping will be provided. Building footing drainage and continuation of the storm-drainage outside the building will be shown on the civil/site plans for the building.

Sanitary waste and vent piping will be provided for the following fixtures:

- Water Closets
- Urinals
- Lavatories
- Sinks
- Janitor's Sinks
- Drinking Fountains
- Kitchen Fixtures
- Floor Drains (Restrooms and Mechanical Rooms)

Potable water will be provided to the following fixtures:

- Water Closets
- Urinals
- Lavatories
- Sinks
- Janitor's Sinks
- Drinking Fountains
- Kitchen Fixtures
- Ice Machines

Central backflow prevention for the potable water system (within the building) will be provided through reduced pressure backflow preventers to be located in the Mechanical rooms.

Gas-fired high-efficiency water-heaters will provide potable hot water for domestic use. Hot water from the water heaters will be set at 140° for kitchen use. A mixing valve will be provided to mix the hot water down to 120° for the rest of the building. Hot water re-circulation will be provided for the kitchen and building hot water systems to assure "ready" hot water at all plumbing fixtures.

Duplex medical air-compressor will be provided in the mechanical room to serve medical air outlets in resident rooms as required by the WDVA.

Duplex medical vacuum pump will be provided in the mechanical room to serve vacuum outlets in resident rooms as required by the WDVA.

An oxygen system will be provided to serve oxygen outlets in resident rooms as required by the WDVA. An oxygen vendor will supply cylinders either in a room within the building or outside in a bulk tank depending on the demand.

Natural gas piping will be provided for gas-fired water-heaters.

Materials/Products:

Sanitary Waste and Vent Pipe:

Service weight no-hub cast iron with heavy duty stainless steel couplings.

Potable Water:

Type 'L' copper water tube with cast brass or

Medical Air, Vacuum, Oxygen:	wrought copper fittings. Type 'L' seamless copper with cast brass or wrought copper fittings.
Natural Gas Pipe:	Schedule 40 black steel, ASTM A53 with screwed, malleable iron fittings.

Heating Ventilating and Air Conditioning (HVAC) System

The Variable Air Volume (VAV) system will consist of the following components:

- Heating hot water plant and distribution system.
- Chilled water cooling plant and distribution system.
- Central VAV air handling units.
- Zone terminal units.
- Exhaust fans.
- Air distribution ductwork.
- Direct Digital Controls system.

Heating Hot Water

Heating hot water will be generated by three natural gas-fired high-efficiency boilers. Each boiler will be sized for 50% of the peak building load. Controls will be provided to stage the boiler operation of the first two boilers, while the third boiler will be a redundant unit. Heating hot water will be distributed with two base mounted centrifugal pumps (to provide 100% standby flow capacity) with variable speed drives. The pumps will be part of a packaged pumping system that optimizes energy efficiency.

Chilled Water

Chilled water will be generated by two high-efficiency air cooled chillers. Each chiller will be sized for 60% of the peak building load. Chilled water will be distributed with two base mounted centrifugal pumps (to provide 100% standby flow capacity) with variable speed drives. The pumps will be part of a packaged pumping system that optimizes energy efficiency.

Air Handling Systems

The system will be served by custom manufactured central VAV air-handling units. Each unit is equipped with a supply fan, hot water heating coil, chilled water cooling coil, prefilter, final filter, mixing box with modulating dampers, and a return fan. Variable frequency drives will be provided for each fan in order to reduce the air flow in non-peak conditions. 100% outside air economizer damper controls will be provided to take advantage of free cooling when the temperature outside is less than the return air temperature in cooling mode. CO₂ monitoring (for high-occupancy areas such as Dining Rooms) will be provided in order to maximize energy conservation while ensuring required air-quality. The central units will distribute conditioned air

to the terminal units that will provide zone temperature control. The units will be located either on the roof or in mechanical rooms.

Zone Terminal Units

Hot water reheat coils will be provided at the air-terminal boxes so as to maintain the respective zone temperatures.

Miscellaneous Exhaust Fans

Exhaust fans will be provided to serve Toilet Rooms, Janitor Rooms, Copy rooms, Mechanical and Electrical rooms so as to comply with the local code requirements as well as to provide thermostatically controlled exhaust only when needed by using outdoor air and save energy.

Air Distribution

All air handling plenums and ductwork will be constructed in accordance with the S.M.A.C.N.A. standards.

Combination fire-smoke dampers will be provided at all duct-penetrations (except kitchen hood exhaust ductwork) through fire-separations.

Variable air volume air-terminal boxes with reheat coils will be provided in order to maintain zone temperature control as well as to satisfy minimum ventilation and air-circulation requirements within the rooms.

Grilles, registers, diffusers, volume dampers, and other ductwork accessories will be provided as required to achieve satisfactory air distribution.

Materials/Products:

The following ductwork and plenums shall be fabricated from galvanized steel in accordance with the S.M.A.C.N.A. standards.

- Custom manufactured A.H.U.s shall be constructed for medium pressure service, 6 inch W.G.
- Supply air ductwork from downstream of the A.H.U.s to the upstream side of the V.A.V. boxes shall be constructed for medium pressure service 6 inch W.G. static pressure
- All supply air ductwork from the downstream of the V.A.V. boxes shall be constructed for low pressure service 2" inch W.G. positive static pressure.
- Return air ductwork shall be constructed for low pressure service, 3 inch W.G. negative static pressure up to the inlet side of the A.H.U.s.
- General exhaust ductwork shall be constructed for low pressure service, 3 inch W.G. negative static pressure up to the inlet side of the exhaust fans.

The variable air volume pressure-independent supply air terminals shall be quiet models as manufactured by Envirotech, Titus or Nailor.

Grilles, registers, and diffusers shall be as manufactured by Titus, Krueger or approved equal. Fire/Smoke dampers shall be U.L. listed for the required fire-rating, as manufactured by Ruskin, Air Control, or Greenheck.

Direct Digital Controls

Controls will be microprocessor based Direct Digital Controls (DDC) and will be of a manufacturer that is compatible with the existing central control system on the main campus. The DDC controls will include provision for remote monitoring from the existing central control system on the main campus.

Testing, Adjusting and Balancing

Contractor will be required to hire an independent Balancing Agency (holding current certification from the National Environmental Balancing Bureau or from the Associated Air Balance Council) subject to approval by the Owner. Balancing agency shall have experience with minimum three successfully completed projects of similar size and complexity during the last five years. Contractor will be responsible for coordinating and scheduling necessary equipment operation with the assistance of appropriate-trades to support the work to be performed by the Balancing Agency. Following systems will be balanced.

- Supply Air
- General Exhaust Air
- Return Air
- Kitchen Exhaust
- Heating Hot Water
- Chilled Water

Commissioning

Mechanical systems will be commissioned by an independent Commissioning Agent (Professional Engineer and active member of Building Commissioning Association in Washington State) experienced with minimum three successfully completed projects of similar size and complexity. Qualifications of the Commissioning Agent shall be submitted for approval by the Owner prior to being retained by the Contractor. Mechanical systems will be commissioned in accordance with the Specifications (including Functional Performance Testing of components as well as systems) to be provided by Commissioning Consultant retained by the Owner.

Mechanical systems to be commissioned are as follows:

- Heating Hot Water System.
- Chilled Water System.
- Air Handling Systems.
- Exhaust Systems.
- Direct Digital Controls systems including all Sequence of Operations.
- Domestic Cold/Hot Water systems.
- Kitchen Exhaust systems.

Telecommunications Predesign Narrative

System Topology

The telecommunications infrastructure to serve the new Washington State Department of Veterans Affairs (WDVA) Skilled Nursing Facility in Walla Walla Washington will consist of a single level star topology for the horizontal and backbone cabling infrastructure.

New service entrance facilities will be established to provide pathways for local telco, CATV and other service providers to bring voice, video and data services to the facility.

New telecommunications rooms will be provided for the building. The new telecommunications infrastructure pathways and spaces will be provided in compliance with ANSI/TIA/EIA standards and WDVA standards. New intrabuilding and interbuilding copper and optical fiber backbone cabling will be provided to connect all of the Horizontal Cross-connects to the Main Cross-connect (MC).

Horizontal structured cabling will be provided from each telecommunication outlet to an assigned telecommunications rooms (TR), maintaining a maximum distance length no greater than 295'-0" between telecommunication outlets and terminations in the TR's.

The infrastructure will support private telephones, internet and email applications, and cable TV reception in resident rooms. The infrastructure will also support voice, video, data and wireless administrative applications.

System Type and Materials

The horizontal cabling and connecting hardware will be an unshielded twisted-pair (UTP) Category 6 system as defined in TIA – 568B, Part 1 and Part 2 Standard.

The optical fiber cabling and connectivity infrastructure will consist of laser optimized 50 micron multimode as defined in TIA – 568B, Part 3 Standard.

Interbuilding UTP backbone cabling will consist of Category 3 multi-pair cabling for voice applications.

Horizontal cabling will terminate on modular 48-port patch panels with RJ45, 8-pin, 8-conductor modules with 110 IDC connections on the back of each patch panel.

Optical fiber backbone cabling will terminate in rack mount fiber cabinets with SC connectors.

Telecommunications Rooms

Telecommunications spaces for the termination of horizontal station cabling and backbone cabling and the mounting of network equipment will reside in dedicated telecommunications

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rooms (TR). These spaces will be located to ensure that horizontal cabling does not exceed a distance greater than 295'-0". The walls within the telecommunications space will be covered with a ¾ inch fire retardant treated plywood backboard with two coats of white paint. The fire retardant label shall be exposed.

The Main Telecommunications Equipment Room (ER) will require a minimum of 100sf - 120sf. The ER will serve as the service entrance facility and will house the headend for the data, security, fire alarm, CATV, telephone, and nurse call systems.

Based on the Green House design concept we anticipate that each neighborhood will require a dedicated Telecommunications Room (TR) with a minimum of 100sf. A typical telecommunications room will include facilities for voice, data, security, CATV, and nurse call systems. A TR will contain at least two 19 inch wide equipment racks with 6-inch wide vertical cable management on each side of the equipment racks.

The vertical and horizontal cable management will be utilized for proper organization and routing of patch cords. Entrance protection and 110 cross-connect wall fields will be provided for the termination of voice backbone cabling and voice cross-connects.

Each telecommunications room will have a dedicated telecommunications grounding busbar to provide grounding and bonding to the equipment and devices located in the space, and will connect to building ground through the bonding backbone infrastructure.

The telecommunications rooms will be served by dedicated HVAC split system cooling units. The HVAC units will be sized based upon the active network electronics equipment that will reside within each space. Remote thermostats will be located in each space to control the environmental conditions.

Dedicated power receptacles will be provided to each equipment rack in the telecommunications rooms. The power receptacles will be on power panels dedicated for technology computing loads. The power panels will have transient voltage surge suppression. Vertical power strips will be provided and attached to the rear of the equipment racks. Remote UPSs will be provided in each telecommunications room and will be rack mounted. The UPSs will be sized to support appropriate run time to provide a controlled shutdown of the network.

The flooring of the telecommunications rooms will be anti-static VCT tile flooring grounded to the busbar.

Building Infrastructure

The Skilled Nursing Facility will include telecommunication outlets with specific quantities of ports per outlet based upon the programming requirements to support the spaces. Resident rooms will include at a minimum (1) 3-port telecommunication outlet and (1) Cable TV (CATV) outlet. Offices and administrative locations will have a minimum of one 3-port outlet. If an



office is large enough to support two staff members, outlets will be placed on at least two walls.

Wireless access point devices will be distributed throughout each building to provide wireless network connections.

Telecommunication outlets will be provided to support mechanical and electrical systems, and specialty low-voltage systems including security, audio-visual, and fire alarm panels. For locations requiring a payphone or wall mount telephone, a wall mount faceplate designed to support the telephone device and handset will be provided.

Building Pathways

Pathways to support horizontal cabling will consist of flush mount 4-inch deep square outlet box with a single gang plate with a minimum 1-inch conduit stubbed up above the accessible ceiling space.

Cabling will typically be installed above the accessible ceilings using open cabling methods consisting j-hooks or cable saddles. Conduit pathways and sleeves will be sized to provide enough capacity to ensure adequate pathway for future infrastructure.

Site Requirements

New telecommunications outside plant underground conduit duct banks and maintenance holes will be provided. The exact approach and pathway to connect the new pathway to the existing maintenance hole will be determined during the design phase.

The service entrance to the Skilled Nursing Facility will consist of (2) 4-inch underground conduits for the local exchange carrier and (1) 4" conduit for the local Cable TV company. It is expected that the Skilled Nursing Facility will operate independently of the existing Jonathan M. Wainwright Memorial Medical Center campus network. It is our understanding that digital circuits (e.g. T1 or ISDN) will be leased from the local exchange carrier to provide voice and data connections to the Skilled Nursing Facility.

At this time it is assumed that the underground service entrance conduits will extend from the Main Equipment Room to the nearest existing utility pole. The conduits would be extended 15'-20' up the existing pole. If there is not available service or capacity on the campus, then the pathway would likely need to be installed to West Poplar Street, the nearest main arterial. It is anticipated that at least one additional maintenance hole will be required as a pull point for the telephone company service entrance and a second maintenance hole will be required for the CATV service entrance.

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Outside plant underground conduits between buildings will be (2) 4" conduits with (3) 1" corrugated innerducts and will provide pathway for UTP and optical fiber backbone cables as well as security and nurse call cabling systems.

Outside plant underground conduits routing below the building structure will be PVC coated, rigid galvanized steel for protection of the cabling. Conduits routing below road impact surfaces, campus fire road and conduit curves will be concrete encased with a 3,500 psi rating. Conduits routing below non-impact road surfaces will have standard backfill. Concrete and CDF encasement will extend a minimum of 6 inches beyond each side of the conduit duct bank. All conduit routing will enter and exit each maintenance hole from the end walls, and will not include more than two sweeps between pull points. New conduits will be installed in the bottom-most accessible positions in the new maintenance holes. A minimum of 30" backfill will be provided from the top of the highest potential current or future conduit duct to grade. A marker tape will be buried 12" below grade. A #3/0 AWG ground wire will be routed throughout the new underground conduit duct bank to provide a grounding connection between maintenance holes and for future locates.

Backbone Cabling Infrastructure

New interbuilding voice and data backbone cabling will be provided from the Equipment Room to each of the TR's.

Each TR will be connected to the ER with a Category 3 UTP multi-pair backbone cable for voice connections. The interbuilding UTP cabling will include a water blocking compound and an aluminum protective sheath with an outside plant distribution jacket. Interbuilding UTP multi-pair cabling will terminate on building entrance protection blocks mounted on the plywood backboard and the cabling will extend to 110 cross-connect blocks.

The interbuilding optical fiber backbone cabling will typically consist of a strand count of 12 strand multimode. Interbuilding optical fiber cabling will consist of an outside plant distribution jacket with dry water blocking compound. The optical fiber cabling will consist of 50 micron multimode fiber strands. Multimode optical fiber cabling will terminate in new rack mount fiber cabinets containing SC connectors.

Audio Visual Systems Infrastructure

The Skilled Nursing Facility will include a local cable TV broadband distribution system. Exact device locations will be based upon the programming requirements to support the spaces. Each of the resident rooms will be equipped with a TV outlet capable of connecting a television for reception of local cable TV programming.

APPENDIX H:



Appendix

Structural Engineering Predesign Study

November 24, 2008

Prepared for:
NBBJ

Prepared by:
David Arndt, SE
KPFf Consulting Engineers
1601 Fifth Avenue, Suite 1600
Seattle, WA 98101
KPFf Job No. 108349.20



General

The project consists of the construction of multiple one-story buildings totaling approximately 65,000 gross SF, with about 20,000 SF maximum per individual building. The construction is anticipated to be steel framing for these buildings.

Building Code & Design Criteria

BUILDING CODE

IBC 2006 with City of Walla Walla Amendments

DESIGN CRITERIA

Dead Load:	Self weight plus fixed service equipment
Ground Snow Load	30 psf
Snow Load on Roof:	30 psf minimum
Wind Load:	85 mph - Exposure C
Seismic Soil Site Class:	D to E (per the Washington State Department of Natural Resources site class maps)
Occupancy Category	IV (per US DVA Seismic Design Requirements H-18-8)
Seismic Building Classification:	Seismic Design Category D

Structural Systems

FOUNDATIONS AND SUBSTRUCTURES

Conventional spread footings are assumed to be suitable for these buildings.

Slabs-on-grade are cast-in-place concrete, reinforced with mild reinforcing steel. Slabs-on-grade will be 4 inch thick typically, with 6 inch thick slabs at mechanical spaces or where other heavy loading is anticipated.

The grade is fairly flat at the buildings, except at the northeast corner of the north building where the grade slopes down from the elevation of the floor. At this location, concrete walls will be required beneath the building exterior walls. The floor slab at this corner of the building can either be the typical slab-on-grade on top of structural fill

placed above the existing subgrade or be a structural concrete floor spanning over the low area.

SUPERSTRUCTURE

The roof structures are anticipated to be structural steel supporting metal deck. This system is expected to be the most cost effective with the current plan geometries. Timber framing is a possible alternative to steel framing and will be investigated further during the design phase.

LATERAL FORCE RESISTING SYSTEM

With structural steel used for the gravity framing system, the lateral force resisting system is anticipated to be steel concentric braced frames. Depending upon the exterior cladding used for the project, reinforced brick or concrete masonry shear walls may be possible alternative lateral force resisting systems. Seismic joints will separate the individual buildings.



APPENDIX I:



Appendix

Civil Engineering Predesign Study

December 5, 2008

Prepared for:
NBBJ

Prepared by:
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KPFF Job No. 108349.20





Introduction

The Washington State Department of Veteran Affairs (WDVA) proposes to construct a Skilled Nursing Facility at the Jonathan M. Wainwright Memorial Medical Center in Walla Walla, Washington. The US Federal VA owns the property and associated utility infrastructure. The Washington VA will be a tenant on the site.

This study evaluates existing conditions to the extent information is available, provides a concept for the proposed conditions, and identifies unresolved issues that will need to be addressed in the future.

Information for this study was gathered from campus record drawings provided by NBBJ, communication with Dean Abrams at the City of Walla Walla, and communications with David Alexander and Guy Jessee at the Federal VA on-site in Walla Walla.

Existing Conditions

WATER DISTRIBUTION SYSTEM

The system consists of two water wells, an elevated storage tank, and distribution piping, as shown on Figure 1. The wells are each capable of pumping 600 gallons per minute (gpm). Well No. 1 is the primary, with Well No. 2 serving as a backup. The storage tank holds about 100,000 gallons. Distribution piping is cast/ductile iron. Typical system pressure is about 60 psi. The water supply is chlorinated.

Guy, who has been on-site for 17 years and manages the system, reports there are no existing problems.

There are two emergency interties with the City system. Their purpose is for backup water supply and additional flow in the event of a fire. The interties are normally closed and opened manually when required.

SANITARY SEWER SYSTEM

The system consists of 6-inch and 8-inch collection piping which connects to the City's sewer on the west and north sides of the site, as shown in Figure 2. Wastewater treatment is provided by the City, and the Federal VA pays a monthly sewer fee.

The record drawings do not show manhole inverts, so we were not able to evaluate the existing pipe capacity. The pipe material is unknown, although from its age we would expect concrete and/or clay pipe.

David Alexander reports there are no problems with the existing system.

STORM DRAINAGE SYSTEM

Stormwater runoff is handled primarily by a combination of overland/ street flow and culverts draining to natural low points or off-site creeks. There are isolated areas served by dry wells. In the vicinity of the boiler plant, there is a piped system that discharges northwest to a small creek.

David Alexander reports there are no flooding problems at the site.

Proposed Conditions

GENERAL

David Alexander reported that the Federal VA has three building projects under design on-site. They plan an infrastructure upgrade to support these buildings. This will include water, sanitary sewer, electrical, communication, and natural gas. The Architect-Engineer (AE) team for the Out Patient Clinic project will lead this design. David did not know the AE's name.

The WDVA Skilled Nursing project should coordinate with the Federal VA Out Patient Clinic team to help define the improvements required.

WATER DISTRIBUTION SYSTEM

We propose to provide an 8-inch watermain, looped around the project and tied to the existing system, as shown in Figure 3. It appears that the existing system, along with improvements to be done by the Federal VA, will have adequate supply for domestic, irrigation, and fire protection.


We evaluated the fire protection needs for this project. We understand the new buildings will be Type I construction and fully sprinklered. The required fire flow to exterior fire hydrants is 2,000 gpm for two hours. The existing system can meet the flow and pressure requirements (20 psi residual). The two-hour flow volume is 240,000 gallons. The existing storage tank is only 100,000 gallons. The remaining volume would need to be made up from the wells or through the intertie with the City.

We recommend the WDVA coordinate this issue with the Federal VA in light of their three ongoing building projects.

SANITARY SEWER SYSTEM

There is an existing 6-inch sewer on the south side of the site that serves the buildings on Officers' Row, and extends east to the WDVA project site. The Washington State Department of Ecology sewerage guidelines require that a sewer which serves more than 30 people to be a minimum of 8 inches.

We propose to construct a new 8-inch sewer to replace the existing 6-inch sewer. The existing sewer will be abandoned in place. The new 8-inch sewer will connect to an existing 8-inch that runs along the west side of the hospital. We do not have the information to evaluate the capacity of this line, but based on past experience, it should be adequate. If further study shows otherwise, the new 8-inch will be extended another 250 feet to the City sewer.



The entire campus discharges to a 10-inch City sewer that extends north across Poplar Street. With the addition of the WDVA project, this line will be over capacity. The City will require the existing 10-inch to be connected to an existing 12-inch in Poplar Street. The proposed sewer improvements are shown in Figure 2.

STORM DRAINAGE SYSTEM

The project will need to comply with the City of Walla Walla drainage code, which is the 2004 Department of Ecology (DOE) Stormwater Management Manual for Eastern Washington. In addition to providing runoff control for the new impervious area created by the buildings, we have assumed there will be 30,000 square feet (sf) of paved area to park 100 cars.

We proposed to use a series of raingardens/ bioretention areas to handle runoff. The permeable on-site soils and climate of the area make this a feasible, economic solution. The location of these areas will be dictated by the final site plan.

Unresolved Issues/Key Assumptions

1. We have proposed using the existing Federal VA water system. WDVA should evaluate if they are comfortable with the continued use of the manual interties with Walla Walla's water system for fire projection. If WDVA is not comfortable, additional funding to upgrade the system will be required.
2. A meeting should be held as soon as possible with the Federal VA and the AE for their Out Patient Clinic, to verify the scope of the proposed infrastructure upgrade and how it relates to the WDVA project.
3. The City has indicated there will be a Capital Facilities Charge (CFC) on this project for discharge to the City sewer system. Based on input from Hargis Engineers, the project will have about 750 fixture units. The project should carry a \$90,000 allowance for this CFC.

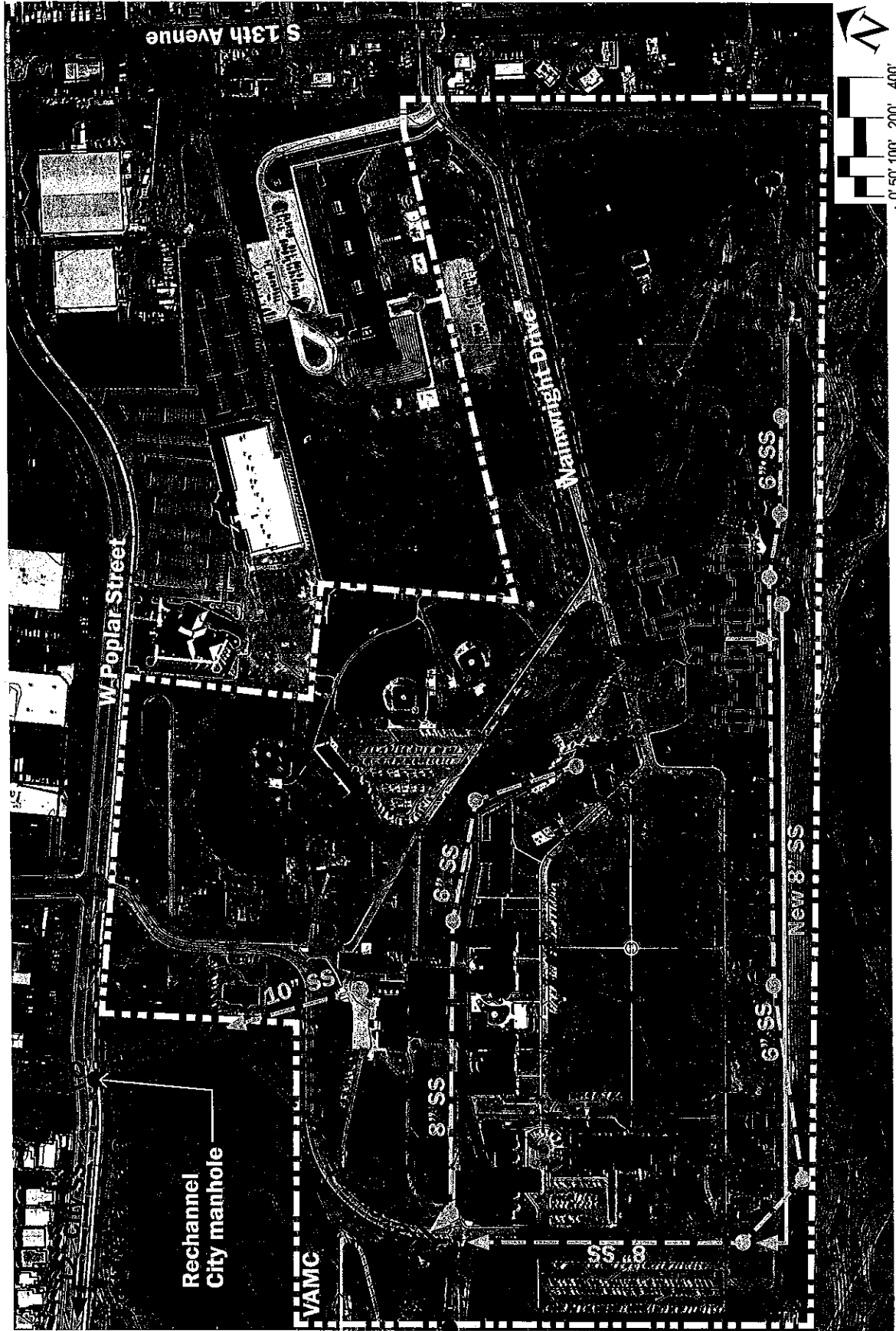
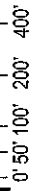
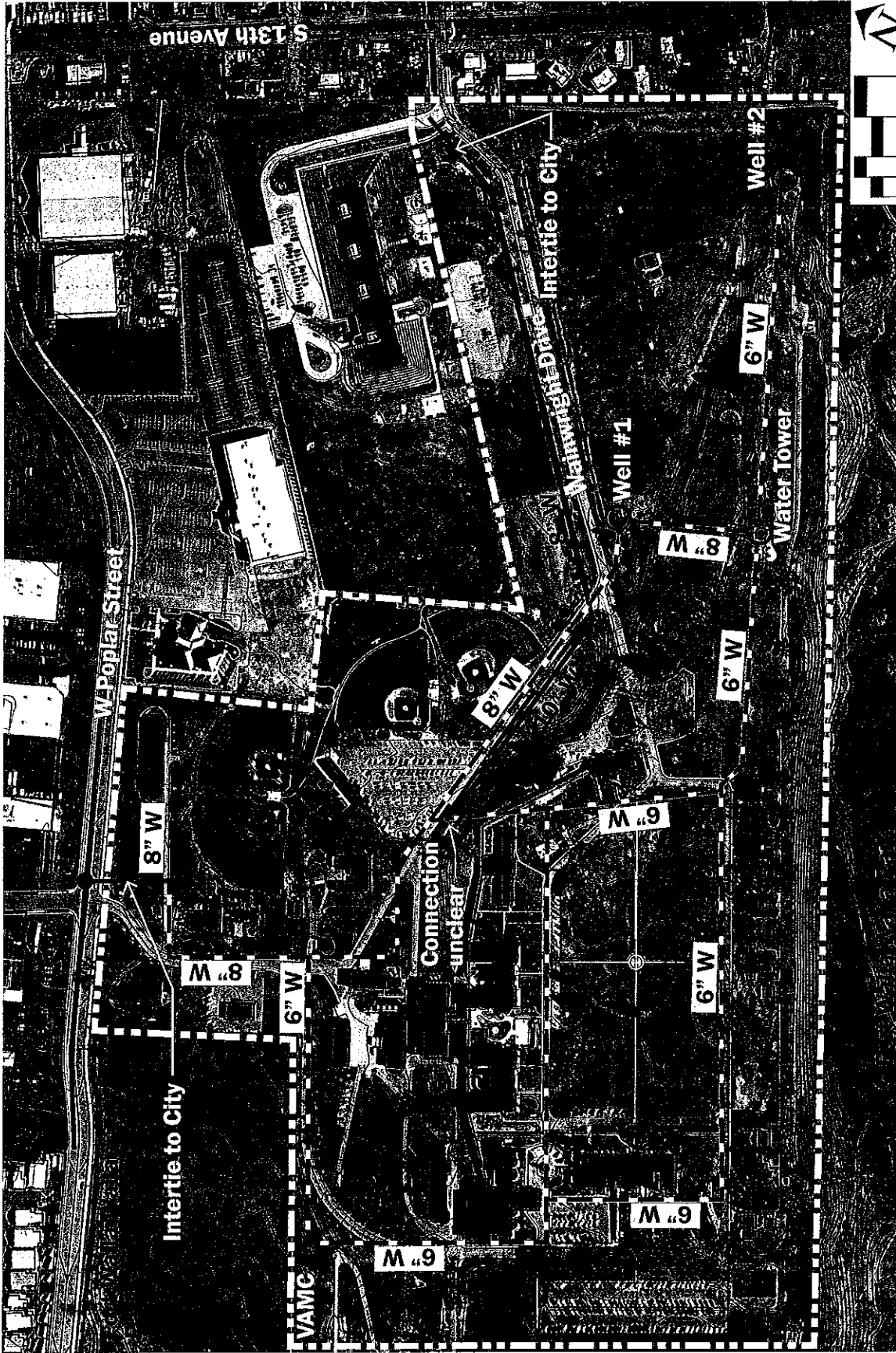


Figure I-1 Existing & Proposed Sanitary Sewer System



City
 --- VAMC

Figure I-2 Existing Water System



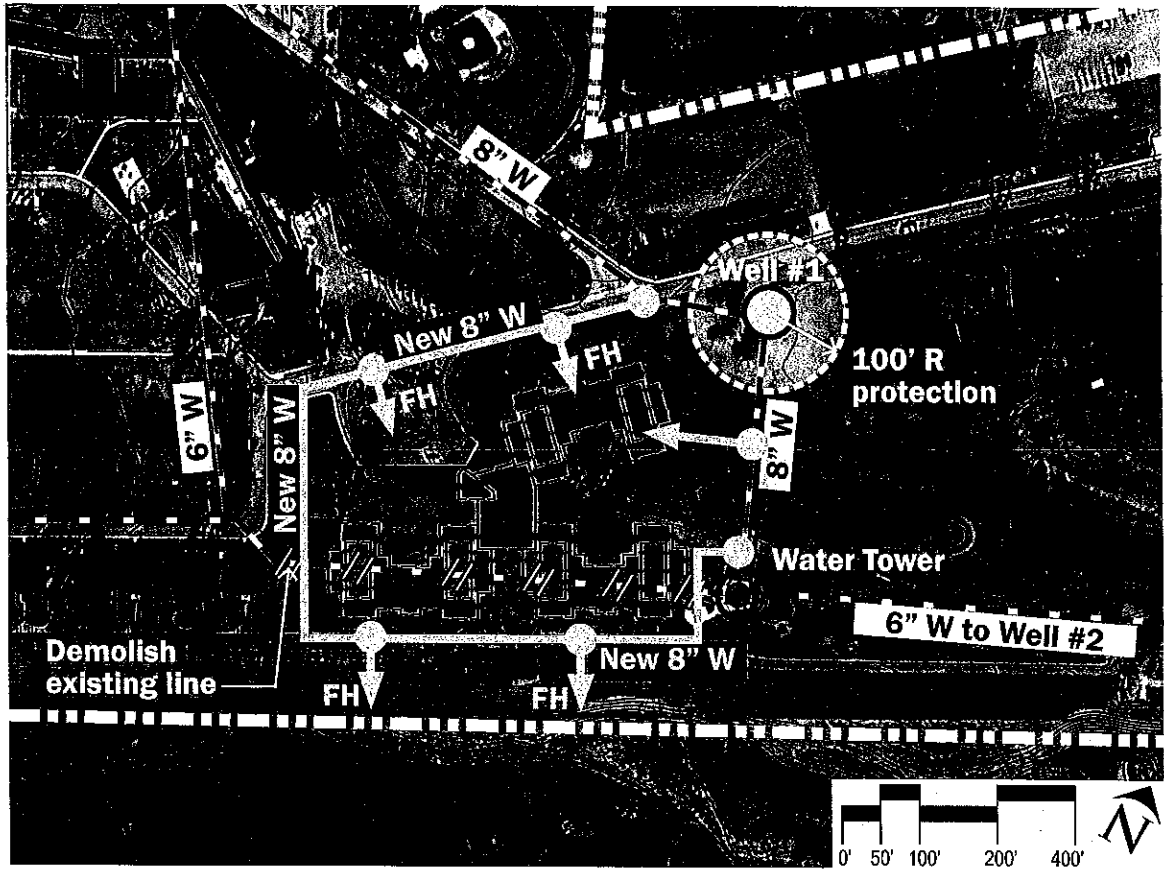


Figure I-3 New Water System

