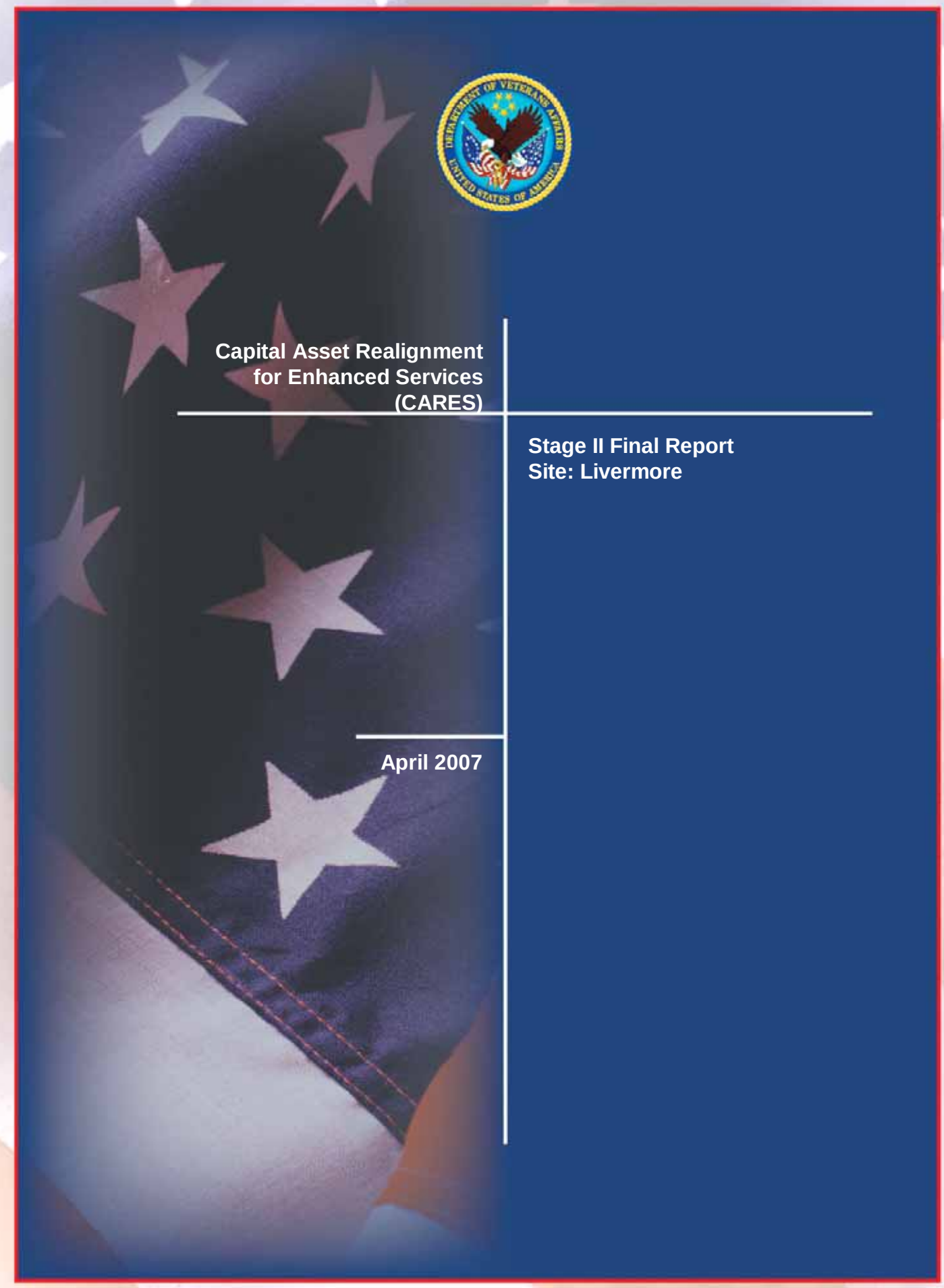

Capital Asset Realignment for Enhanced Services (CARES)

Stage II Final Report
Site: Livermore

April 2007

This report was produced under the scope of work and related terms and conditions set forth in Contract Number V776P-0515. PricewaterhouseCoopers LLP's (PwC's) work was performed in accordance with Standards for Consulting Services established by the American Institute of Certified Public Accountants (AICPA). PwC's work did not constitute an audit conducted in accordance with generally accepted auditing standards, an examination of internal controls or other attestation service in accordance with standards established by the AICPA. Accordingly, we do not express an opinion or any other form of assurance on the financial statements of the Department of Veterans Affairs (VA) or any financial or other information or on internal controls of VA.

VA has also contracted with another government contractor, S&S/ACG Joint Venture, to develop re-use options for this study site. S&S/ACG Joint Venture issued its report, *Phase 3 Report: General Re-use/Redevelopment Options Livermore Division, VA Palo Alto Medical System,* which is available at the VA's Office of Asset Enterprise Management website. As directed by VA, PwC has included information from its report in relevant parts of its analysis. PwC was not engaged to review and, therefore, makes no representation regarding the sufficiency of nor takes any responsibility for any of the information provided by S&S/ACG Joint Venture.

This report was written solely for the purpose set forth in Contract Number V776P-0515 and, therefore, should not be relied upon by any unintended party who may eventually receive this report.

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1.0 Executive Summary

CARES is VA's effort to produce a logical, national plan for modernizing healthcare facilities. The objective is to identify the optimal approach to provide current and projected veterans with healthcare equal to or better than is currently provided in terms of access, quality, and cost effectiveness, while maximizing any potential re-use of all or portions of the current real property inventory owned by VA. While most VA Medical Centers (VAMCs) have received approval to proceed with plans consistent with the CARES objectives, the Secretary of Veterans Affairs' May 2004 CARES Decision Document determined that additional study was necessary for the Livermore Division.

The purpose of this preliminary report is to present the results of Stage II of the CARES study process for Livermore. In Stage II, Team PwC and S&S/ACG Joint Venture (independent contractor to VA on re-use referred to as OGC) conducted a detailed assessment of short-listed Business Plan Options (BPOs) in order to provide VA decision makers with an evaluation of each BPO and its relative strengths and weaknesses. A separate implementation plan featuring risk mitigation strategies will be developed for each BPO.

A number of key drivers were considered in the development and evaluation of BPOs: Livermore's NHCU capacity of 120 Nursing Home beds will be maintained over the forecast period; There are opportunities to improve access to healthcare services by moving them closer to where greater numbers of veterans live; Significant vacant space will be created at the Livermore Division as a result of the Secretary's decision to relocate healthcare services; The Livermore Division campus is located in a desirable recreational and wine making region, southeast of San Francisco and appears to have significant potential for a range of private and institutional redevelopment uses.

The Secretary of VA approved the following short-listed BPOs for detailed study in Stage II: Baseline option (BPO 1); Build New Nursing Home on Livermore Campus (BPO 2); Build New Nursing Home in Central Valley and Co-locate with a CBOC (BPO 4); Renovate and Expand the Current Nursing Home on Livermore Campus (BPO 8).

The BPOs were compared against the Baseline option using five categories of evaluation criteria: Capital Planning, Use of VA Resources, Re-Use, Support for Other VA Programs, and Ease of Implementation. Parallel to the evaluation, Team PwC solicited input from a Local Advisory Panel and other interested stakeholders regarding their comments and concerns for each BPO.

Each of these options has relative merits and varying levels of stakeholder support. The baseline option (BPO 1) renovates existing buildings to provide a modern, safe, and secure environment to best accommodate the planned workload. The stakeholders did not ultimately support this option because it fails to provide new state-of-the-art NHCU facilities and it carries with it the disadvantages of higher risk of patient disruption and lower operating efficiencies. The renovations in the baseline create a modern, safe, and secure healthcare delivery environment. However, the result is an increase in underutilized space and vacant space. These renovations also result in the highest operating and net present cost of all of the options for Livermore.

Although some land would potentially be available for re-use in the alternate baseline, this would result in the lowest re-use proceeds of all of the options.

Options 2 and 4 that construct new NHCUs provide several comparative advantages to the other options. These options have shorter construction schedules (almost three years shorter than options 1 and 8), result in lower underutilized and vacant space, lower operating costs, and are characterized by relatively less complex capital projects and patient moves. However, option 2 does require a higher level of capital investment than renovation option BPO 8 and does not co-locate the facility with ambulatory services in a CBOC. Most stakeholders agreed that option 2 was the best of the options which would keep the NHCU at Livermore. However, the LAP raised concerns about the implementation of a stand alone nursing home. Option 4 co-locates the nursing home with a CBOC in the central valley. It likely improves access to primary care services and makes the entire site available for re-use, thereby resulting in the greatest re-use proceeds and lowest net present cost. This option received the most support from stakeholders and the LAP at the fourth LAP meeting. Additionally, there was a strong letter writing campaign from veterans and the community supporting option 4.

Option 8 renovates and expands the NHCU on the Livermore campus. This option is similar to baseline, yet lowers underutilized and vacant space. The construction schedule for these renovations is similar to the baseline at approximately 108 months. BPO 8 has the advantage of having the lowest capital investment costs (net of re-use). Although the operating and net present costs for option 8 are lower than the baseline, they are still higher than options 2 and 4. Similar to baseline, the renovations in BPO 8 involve more complex capital plans and a comparatively greater likelihood of disruption to patients during implementation. This option, like the baseline, was ultimately not supported by stakeholders and the LAP.

2.0 Introduction and Background

Purpose of Report

The Capital Asset Realignment for Enhanced Services (CARES) study process consists of a planning phase and two study phases, Stage I and Stage II. In Stage I, Team PricewaterhouseCoopers (Team PwC) developed and assessed a broad range of potentially viable business plan options (BPOs) that met the forecast healthcare needs for the study sites. Several of the studies involved a re-use analysis prepared by S&S/ACG Joint Venture. Based upon an initial assessment of these BPOs, Team PwC recommended up to six BPOs to be taken forward for further development and assessment in Stage II, and the Department of Veterans Affairs (VA) selected the specific BPOs to be studied further. In Stage II, Team PwC and the OGC conducted a more detailed assessment of the short-listed BPOs in order to provide VA decision makers with an evaluation of each BPO and its relative strengths and weaknesses. This preliminary report, together with the separate Re-use report (Phase 3 Report: General Re-use/Redevelopment Options Livermore Division, VA Palo Alto Medical System) summarizes the work done by Team PwC and the OGC in Stage II. Additionally, a separate implementation plan featuring risk mitigation strategies will be developed for each BPO.

Project Overview

CARES is VA's effort to produce a logical, national plan for modernizing healthcare facilities. The objective is to identify the optimal approach to provide current and projected veterans with healthcare equal to or better than is currently provided in terms of access, quality, and cost effectiveness, while maximizing any potential re-use of all or portions of the current real property inventory owned by VA. While most VA Medical Centers (VAMCs) have received approval to proceed with plans consistent with the CARES objectives, the Secretary of Veterans Affairs' May 2004 CARES Decision Document determined that additional study was necessary for the Livermore Division.

The 2004 Secretary's Decision Document determined that:

- VA will realign the Livermore campus to improve access to and quality of patient care by moving services closer to where patients live and by co-locating care.
- VA will maintain access to services locally by retaining a Nursing Home presence in Livermore through construction of a new facility.
- Execute a careful study of the appropriate size and location of the new Nursing Home to include a cost-effectiveness analysis to ensure maximum effective use of VA resources.

Following a period of data gathering and analysis conducted under VA-approved guidelines, Team PwC presented its Stage I report to VA. A summary of this report is available online at http://www.va.gov/cares. The report describes options consistent with the mandates of the Secretary's May 2004 decision for the Livermore study site. After examining the BPOs presented in the Stage I report, the Secretary determined and directed that BPOs 1 (Baseline), 2, 4 and 8 (summarized below) be further analyzed in Stage II of the study process.

In Stage II, the BPOs were compared against the Baseline option using a set of agreed-upon evaluation criteria that are described in the following methodology summary section as well as in the detailed Stage II methodology (Appendix B). The Baseline is the BPO under which there would not be significant change in either the location or type of services provided in the study site. In the Baseline BPO, the Secretary's Decision and forecasted healthcare demand and trends from the demand forecast for 2023 are applied to the current healthcare provision solution for the study site. Additionally, capital improvements required to meet modern, safe, and secure standards, where existing conditions permit, are factored into the current state assessment.

Team PwC and the OGC site teams conducted a preliminary evaluation of each BPO. In order to obtain further input into the tradeoff evaluation of the options, Team PwC convened an Independent Review Panel (IRP) to provide an in-process review of the Stage II analysis, which included a balanced review of the tradeoffs considered in developing the evaluation of each BPO. The IRP challenged and validated the assessment findings and evaluation of each BPO, with consideration to stakeholder input. The BPOs were first assessed against the evaluation criteria using a quantitative scale in order to numerically discriminate between each BPO. The evaluation results were then used by site teams and the IRP to discuss the relative strengths and weaknesses of each BPO and in turn to develop the implementation plans. This report contains the evaluation results for each BPO and a tradeoff discussion of their relative merits. The Stage II results will be presented to the Secretary to make a final decision on a set of capital and re-use proposals.

Study Drivers

Over the course of Stage I, four major drivers affecting the planning of the Livermore study site were identified. These drivers represent factors of considerable importance at the Livermore study site that must be balanced in the development and evaluation of BPOs. They are:

1. Livermore's NHCU capacity of 120 Nursing Home beds will be maintained over the forecast period.
2. There are opportunities to improve access to healthcare services by moving them closer to where greater numbers of veterans live.
3. Significant vacant space will be created at the Livermore Division as a result of the Secretary's decision to relocate healthcare services.
4. The Livermore Division campus is located in a desirable recreational and wine making region, southeast of San Francisco and appears to have significant potential for a range of private and institutional redevelopment uses.

Further explanation of these study drivers are found below.

1. **Healthcare Demand** - Due to a planning decision made by VA, Livermore's NHCU capacity of 120-Nursing Home beds is maintained over the 20-year forecast period. Additionally, VA expects to contract with regional providers to accommodate Nursing Home volume above this 120-bed capacity.

2. **Improving Access -** Access to the Livermore Division is constrained by its semi-rural setting, which is not serviced by public transport and requires patients and visitors to arrive by car or other special modes of transport, such as charter buses provided by Veterans Services Organizations (VSOs). The study considered opportunities to locate the NHCU facility in an area with high enrolled veteran population, as well as convenience to public transportation (e.g., bus, train).

3. **Surplus Land and Buildings -** According to the Secretary's Decision Document of May 2004, only the NHCU workload will be retained at the Livermore Division. All other healthcare services will be relocated to other VA facilities. Notwithstanding the increased space needs associated with modernizing the NHCU, the Livermore Division accommodates the current and projected level of building space. By 2023, the Livermore division will have at least 225,000 square feet of vacant space.
Renovated facilities will not provide the level of operating efficiencies that would be realized in a new integrated facility. Constructing a new NHCU on the Livermore campus requires a significant level of capital expenditure compared to renovating the existing buildings, but would make more of the campus available for re-use.

5. **Re-Use Potential -** Livermore Division is located within a desirable recreational and wine making area, within one hour of San Francisco, Oakland and San Jose airports. A market assessment completed by the re-use contractor has found that the Livermore campus will likely have numerous potential bidders (private and institutional), with a high probability of success for enhanced-use lease opportunities. Re-use proceeds associated with the redevelopment of portions or all of the Livermore Division campus have the potential to partially offset the capital investment needed for land acquisition and the construction costs of a new facility.

Summary of Stage I BPOs

BPOs Recommended by Team PwC for Further Study

The BPOs recommended for further study share some key similarities. All of them would:

- Provide an attractive solution to providing Nursing Home care services in a modern, safe and secure setting
- Right-size the campus for future demand
- Maintain or improve veteran access to healthcare
- Eliminate recurring maintenance costs for aging buildings
- Allow potential re-use/redevelopment of unused buildings and land

Table 1: BPOs Recommended by Team PwC for Further Study

BPO 1: Baseline
Current state projected out to 2013 and 2023 without any changes to facilities or programs (except as indicated in the Secretary's Decision). Conduct maintenance and upgrades necessary to provide a modern, safe, and secure environment for healthcare that is consistent with current NHCU building and safety codes. The NHCU will rely on functions located in Building 62, including but not limited to dietary and laboratory/pathology. The NHCU will also utilize existing infrastructure and campus support, including central plant, engineering, kitchen, administration, and logistics. Parking space around campus is considered adequate. The NHCU would be renovated in two phases, with each phase lasting 36 months. Combined, both phases would span from 2009 to 2014. The activation of the East Bay and Central Valley CBOCs is scheduled to occur in 2010 and 2012 respectively. Additional renovations of two administrative buildings and the boiler plant will occur in 2009 and will last 24 months. Finally, renovation of the balance of campus is scheduled to occur throughout 2011. There are no structures or parcels available for re-use in the Baseline option.
BPO 2: Build New Nursing Home on Livermore Campus
NHCU services will remain on the LVD campus replaced in a new stand-alone NHCU building on the upper portion of the LVD campus on Parcel 3. Existing NHCU will be demolished after opening of new NHCU to provide adequate access buffer and landscape zones. All support functions will be integrated into the new NHCU structure. Parcels 1, 2 and 4 will be available for re-use/redevelopment.
BPO 4: Build New Nursing Home in Central Valley and Co-locate with a CBOC
Relocates the NHCU off-site to a new stand-alone facility co-located with ambulatory care services. The new NHCU will be co-located with the expanded Central Valley CBOC. Parking will be available at the new site. Entire campus is available for re-use/redevelopment.

BPOs Not Recommended for Further Study

The BPOs which Team PwC eliminated from further consideration were BPOs 3, 6, and 7. This is because BPO 3, although similar to BPO 2, has a higher degree of implementation risk and is located in least convenient parcel on campus. BPO 6 has the most significant capital expenditure and is inconsistent with VA construction guidance in determining minimum bed capacity for free-standing NHCUs. BPO 7 is inconsistent with the Secretary's Decision to move outpatient services closer to where patients live.

Table 2: Stage II Study BPOs Not Recommended for Further Study

BPO 3: New NHCU On-Site In Parcel 1 (Lower Campus)
NHCU services will remain on the Livermore Division campus replaced in a new stand-alone NHCU building on the lower portion of the Livermore Division campus (Parcel 1). All support functions (central plant, administration, maintenance, storage, and logistics) will be integrated into the new NHCU structure. Parking space around campus is considered adequate and can be accommodated on the parcel. Construction of a new NHCU will occur over a 47-month period. The existing Modesto, Sonora, and Stockton CBOCs will be maintained. The activation of the East Bay and Central Valley CBOCs is scheduled to occur in 2010 and 2012 respectively. All existing buildings would be vacated and secured in 2012, after construction of the Nursing Home. Vacates the balance of the campus and leaves Parcels 2, 3, and 4 open for re-use/redevelopment. Such potential re-uses include: senior living, institutional (e.g., educational), and destination hospitality.

BPO 6: Two New NHCUs Co-located with CBOC in both the Central Valley and East Bay
Relocates the NHCU off-site to two new 60-bed Nursing Home facilities co-located with existing ambulatory programs, one in Central Valley and one in East Bay. Parking will be available at the new site. The existing Modesto, Sonora, and Stockton CBOCs will be maintained. Activation of the East Bay and Central Valley CBOCs is scheduled to occur in 2010 and 2012 respectively. All existing buildings would be vacated and secured in 2012, after construction of the NHCU. Vacates the entire campus and leaves Parcels 1, 2, 3, and 4 open for re-use/redevelopment. Such potential re-uses include: senior living, institutional (e.g., educational), destination hospitality, and recreational.
BPO 7: New NHCU Co-located with CBOC on Livermore Campus
NHCU services remain on campus, replaced in a newly constructed facility on an undetermined Livermore Division parcel. The to-be-constructed East Bay CBOC will be located on the Livermore Division campus[*]. Integration of all support functions (central plant, administration, maintenance, storage, and logistics) will be integrated into the new NHCU and/or CBOC structure. It is assumed that adequate parking can be accommodated. The existing Modesto, Sonora, and Stockton CBOCs will be maintained. Activation of the East Bay and Central Valley CBOCs is scheduled to occur in 2010 and 2012 respectively. All existing campus buildings would be vacated in 2012, after construction of the NHCU. Vacates a portion of the campus, but specific parcels are undetermined. Such potential re-uses include: senior living, institutional (e.g., educational), destination hospitality, and recreational.

[*] According to VA definitions, CBOC-like services provided at a VA medical center campus are defined as 'multi-specialty clinic' programs. However, for consistency in terminology and in understanding the intent of this BPO, the CBOC term is used in reference to mutli-specialty clinic programs proposed for the LVD campus.

Secretary's Stage I Decision

The Secretary reviewed the Team PwC Stage I report and the recommendations of the LAP, instructing Team PwC to proceed into Stage II of the analysis. The Secretary's 2004 Decision Document made the decision to realign primary care, specialty care and sub-acute inpatient services, and to focus on the future location of the current Nursing Home Care Unit (NHCU). The Secretary has directed Team PwC to develop a Master Plan that includes a comprehensive analysis of a new Nursing Home on a selected portion of the campus or the renovation of the current Nursing Home while consolidating all necessary logistics and support functions to the same location. A third option calls for consideration of a new off-site Nursing Home co-located with a Community Based Outpatient Clinic (CBOC) which may improve access for veterans. The Master Plan will also include a cost effectiveness analysis to ensure maximum effective use of VA resources as the Livermore campus has excellent re-use potential, either in its entirety or as part of the campus. The Secretary recommended that BPOs 1, 2, 4 and a new BPO 8 proceed into Stage II which renovates and expands the current Nursing Home on the Livermore campus.

Full Description of Stage II BPOs

Following the Secretary's Stage I decision announcement, Team PwC met with local VA representatives to review each BPO selected by the Secretary for further study. The purpose of these meetings was to:

- Understand the Secretary's recent decisions
- Clarify the Secretary's decision regarding changes to healthcare service delivery, facilities and availability of land/buildings for re-use
- Refine the BPO descriptions and site maps to take into account any information concerning the facility or the application of Stage II study assumptions
- Clarify the BPO descriptions for ease of understanding and consistency

The refined BPO descriptions of the options being considered for Livermore in Stage II are the following:

Table 3: Stage II Study BPOs

BPO 1: Baseline Option
BPO 1 (Baseline) is the option under which there would not be significant changes in either the location or type of services provided in the study site, other than those described in the Secretary's decision. In the Baseline, the Secretary's Decision and forecasted healthcare demand and trends from the demand forecast for 2023 are applied to the current healthcare provision solution for the study site. Additionally, capital improvements required to meet modern, safe, and secure standards, only where existing conditions allow, are factored into the current state assessment to develop this BPO. The Baseline updates the existing facility to current standards by substantial renovation of buildings 62 and 90 which are required to house the necessary services. In the process of renovation, the services are consolidated in a smaller number of buildings, thus vacating some buildings that are partially occupied. The Waste Water Treatment Plant (Building 69) and settling ponds will continue to service the existing buildings. As buildings and land become vacant over the forecast period, the study will assess the re-use potential of parcels 1, 4 and 5 as well as vacant buildings on Parcel 2.
BPO 2: Build New Nursing Home on Livermore Campus
NHCU services will remain on the LVD campus in a new stand-alone NHCU building on the upper portion of the LVD campus on Parcel 3. Existing NHCU will be demolished after opening of new NHCU to provide adequate access buffer and landscape zones. All support functions will be integrated into the new NHCU structure. Parcels 1, 2 and 4 will be available for re-use/redevelopment. The Waste Water Treatment Plant (Building 69) and settling ponds will continue to service the new NHCU building. New clinical care facilities utilizing this land will have multiple benefits for patients and staff including larger patient rooms, additional private rooms, private toilets in all patient rooms, additional treatment and therapy spaces, wider hallways, improved patient entries, walkways and parking, and larger support functions located in closer proximity to nursing space. Furthermore all support functions will be integrated into the new NHCU structure. Parcels 1, 2 and 4 will be available for re-use/redevelopment. The Waste Water Treatment Plant (Building 69) and settling ponds will continue to service the new NHCU building.
BPO 4 - Build New Nursing Home in Central Valley and Co-locate with a CBOC
BPO 4 relocates the NHCU off-site to a new stand-alone facility co-located with ambulatory care services. The new NHCU will be co-located with the expanded Central Valley Community Based Outpatient Clinic (CBOC). Entire campus is available for re-use/redevelopment. Co-location with a CBOC benefits patients through providing ambulatory services; specifically primary care and behavioral health. The new clinical care facilities will have several benefits for both patients and staff including larger patient rooms, additional private rooms, private toilets in all patient rooms, additional treatment and therapy spaces, wider hallways, improved patient entries, walkways and parking, and larger support functions located in closer proximity to nursing space.
BPO 8 - Renovate and Expand the Current Nursing Home on Livermore Campus
BPO 8 is an option added by the Secretary, to renovate and expand the existing NHCU (Building 90) on Parcel 3. All support functions will be integrated into the larger NHCU structure. Parcels 1, 2, 4 and 5 will be available for re-use/redevelopment. The Waste Water Treatment Plant (Building 69) and settling ponds will continue to service the renovated and expanded NHCU building. The renovated and expanded clinical care facilities will, where conditions allow, have several benefits for both patients and staff including larger patient rooms, additional private rooms, private toilets in all patient rooms, additional treatment and therapy spaces, wider hallways, improved patient entries, walkways and parking, and larger support functions located in closer proximity to nursing space.

The physical requirements for each of these BPOs are intended to provide an acceptable level of quality consistent with established VA standards, together with consolidation of functions through renovation and/or through construction of new freestanding buildings. Renovations to existing buildings will take several phases spread over several years since many of the existing buildings are occupied (fully or partially) and occupants will have to be relocated during renovation.

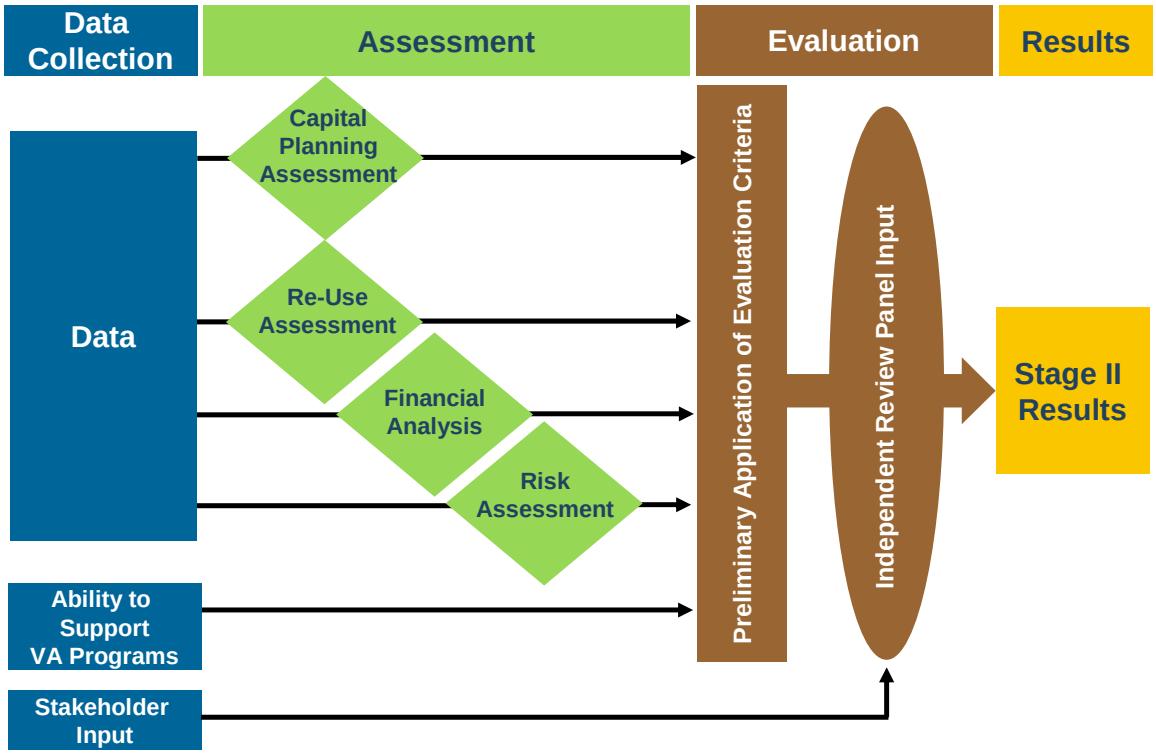
3.0 Summary of Stage II Methodology

Overview

This section provides an overview of the methodology employed by Team PwC in Stage II of the CARES study. The detailed Stage II Study Methodology is included in Appendix B of the report. In Stage II, Team PwC and the OGC conducted a more detailed assessment of the BPOs selected by the Secretary for further study. Team PwC and the OGC collected additional data on a set of evaluation criteria and conducted additional capital planning, re-use, and financial analysis for each BPO. The results are used to assess each BPO and to evaluate the relative strengths and weaknesses of each BPO.

The Stage II study process consists of four primary steps, Data Collection, Assessment, Evaluation, and Stage II Results, as depicted in Figure 1.

Figure 1: A Diagram of the Overview of Stage II Methodology



The Data Collection process was used to augment study data gathered in Stage I. This data provided the inputs to the BPO assessment. Parallel to the data gathering activities, Team PwC solicited input from stakeholders on their comments and concerns for each BPO. The Assessment step involved conducting more detailed analyses of the short-listed BPOs across each evaluation category.

During the Evaluation step the BPOs were compared against the Baseline option using five categories of evaluation criteria:

- Capital Planning
- Use of VA Resources
- Ability to Support Other VA Programs
- Re-Use
- Ease of Implementation

The following table lists the criteria used to measure each evaluation criteria together with the indicators.

Table 4: Stage II Evaluation Criteria and Indicators

Evaluation Criteria	Indicator
Capital Planning	
Timeliness of completion	Total duration (Years to complete)
Timeliness of urgent corrections	Duration (Years to correct code deficiencies, focusing on seismic deficiencies as identified in the CAI)
Consolidation of underutilized space	% Underutilized space
Consolidation of vacant space	% Vacant space
Re-use	
Market potential for re-use	Market potential for re-use
Financial feasibility	Financial feasibility
VA mission enhancement	VA mission enhancement
Execution risk	Execution risk
Use of VA Resources	
Total operating costs	Total operating costs ($)
Total capital investment costs	Total capital investment costs ($) net of reuse
Net present cost	Net present cost ($)
Total considerations	Total considerations (re-use revenues, in-kind, etc.) ($)
Total annual savings	Total annual savings ($)
Ease of Implementation	
Re-use considerations	Community support
	Legal / regulatory
Capital planning considerations	Size and complexity of capital plan
	Number and frequency of patient moves (quantity of clinical buildings altered)
	Number of historic buildings altered (total historic buildings altered)
Ability to Support Other VA Programs	
DoD sharing	MOUs impacted by BPO
One VA integration	VBA and NCA impacted by BPO
Specialized VA programs	Specialized Care/COE impacted by BPO
Enhancement of services to veterans	Services in kind

Team PwC and the OGC site teams conducted a preliminary evaluation of each BPO. To obtain greater input into the tradeoff evaluation of the options, Team PwC convened an Independent Review Panel (IRP; see Appendix B) to provide an in-process review of the Stage II analysis, including a review of the strengths and weaknesses that were identified for each business plan option. The IRP challenged and validated the assessment findings and evaluation of each BPO. The BPOs were evaluated against the evaluation criteria using a quantitative scale in order to discriminate between the BPOs. The evaluation results were used by site teams to discuss the relative strengths and weaknesses of each BPO.

Implementation plans will be developed for all Stage II BPOs. The purpose of each plan will be to provide a roadmap for the local site teams for implementing the BPO, noting critical transition and implementation activities. The plan will highlight key milestones associated with implementation functions such as budgeting and funding, procurement, contracting for care, construction, human resource transition, as well as building activation and occupancy. The plan will help to appropriately sequence the implementation activities accounting for dependencies among the various functions.

This report contains the evaluation results for each BPO and a tradeoff discussion of the strengths and weaknesses of each BPO. The Stage II results will be presented to the Secretary to make a final decision on a set of capital and re-use proposals.

4.0 Capital Planning Analysis

Current State

Size

The existing campus is approximately 112 acres of land, which includes a total of 12 buildings, comprised of 223,298 building gross square feet. Building gross square feet (BGSF) is the total building square footage contained within the outside walls. The building count is broken down into nine permanent buildings (214,598 BGSF), two temporary structures (8,700 BGSF) and a Connecting Corridor building (4,000 BGSF).

Age

Building 62, the original main hospital building, was constructed in 1949 and seismically retrofitted in 1992. Building 90, a 120-bed NHCU was constructed at the Livermore VAMC in 1982. The balance of the buildings were constructed between 1924 and 1978.

Construction type

The majority of smaller existing buildings are one and two-story wood frame structures with shingle roofs. Building 62, the original seven story main hospital, is poured in place concrete construction, comprised of seven floors. Building 88 and 90 are both two-story, steel frame structures, with stucco exterior walls.

Original Use

The Livermore Veterans Affairs Medical Center (VAMC) began operations in 1929 as a tuberculosis hospital. The Livermore VAMC operated as an independent medical center until the mid-1990s. In 1995, it was integrated into VA Palo Alto Health Care System (VAPAHCS) and was renamed Livermore Division (LVD). Today, LVD operates 120 Nursing Home care beds. In FY04, LVD's ambulatory care clinics provided inpatient and ambulatory care to 12,045 veterans.

Current Configuration, use and capacity

With relocation of the majority of clinical services to the Palo Alto campus, the current campus provides minimal services including inpatient Nursing Home care and some ambulatory care services.

Future Use

All buildings on campus are well maintained and the useful life of these buildings would allow future Nursing Home services and required support.

The design of a new Nursing Home has multiple benefits to patients. These include individual private bedrooms and bathrooms (see Figure 2), plan configurations with groupings of

"residential neighborhoods" rather than "long corridors of rooms", increased area for support facilities for supplies and equipment, comfortable and attractive social meeting and activity areas (see Figure 3), convenient physical access to amenities and custom variations of plans to accommodate special needs.

Figure 2: A Diagram of the Sample Private Bedroom/Bathroom Floor Plan[1]

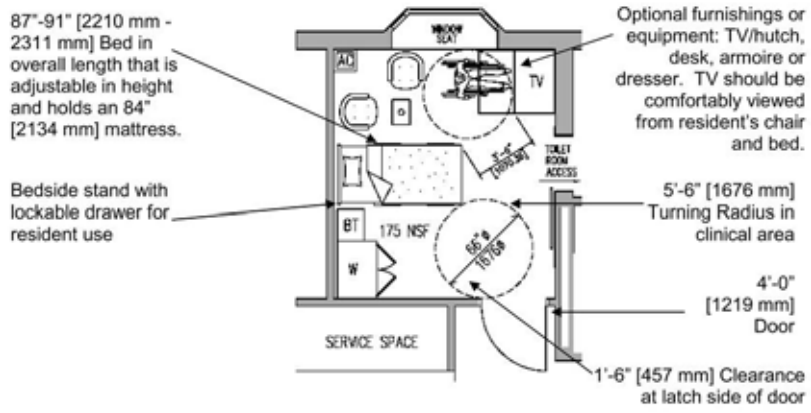
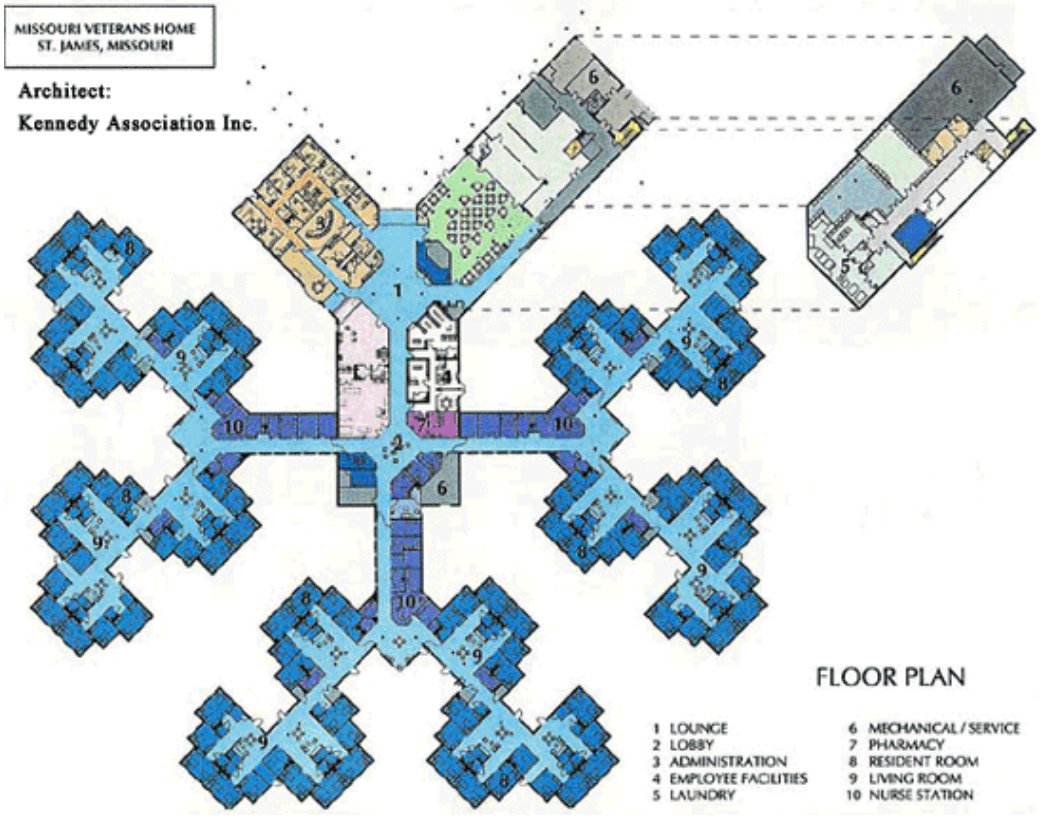


Figure 3: A Diagram of a Sample Cluster Grouping of "Residential Neighborhood" Floor Plan[1]



[1] Source: Department of Veterans Affairs, Office of Facilities Management, 2006 Nursing Home Design Guide

VA's Capital Asset Inventory (CAI) database includes an evaluation of most buildings on site; referred to as the Facility Condition Assessment (FCA). This evaluation data of existing conditions at the time of the survey was provided for use in this project. There were five components of the functional evaluation: Layout, Adjacencies, Code Compliance, Accessibility and Privacy. Evaluations for each component were performed by floor and scored between 1 to 5, with 5 being the optimum score and graduations in tenths as determined by the evaluation team. Assessment data as provided by the VA was compiled and averaged for each building as a measure to evaluate the complexity of renovation required for a particular building. A building "de-optimization value" is then assigned to the building based on the average score as identified in the De-Optimization Table in the approved assumptions. Buildings on the LVD campus were scored between 3.8 and 5 using this method, except for two small buildings (6 & 74) which had no score. Buildings scored between 4.0 - 5.0 are eligible for renovation for *clinical* occupancy. Building 62 (score 4.7) is included in BPO 1 (Baseline). Issues in Building 62 consist of structural bay size, narrow floor plates, low floor-to-floor heights, lack of bathrooms accessible from bedrooms and lack of single bedrooms. Building 69 (score 4.2) is included in BPO 1 (Baseline), BPO 4 and BPO 8. Building 90 (score 4.9) is included in BPO 1 (Baseline) and BPO 8. Issues in Building 90 mainly consist of lack of accessible bathrooms and single bedrooms.

Data on Size and Dates of Construction and Renovation

Table 5 shows date of construction, renovation, number of floors, major functions on each floor of Building 62, historic designation (if any), seismic designation and total gross area (gross square feet or GSF) of each building on the site as exported from the CAI database:

Table 5: Existing Buildings Table

Building Number	Floor	Building Name/Function	Year Built	Year Renovated	Historic (H) or Historically Eligible (E)	Seismic	Total Floors	Building Total GSF
6		Boiler Plant	1924		E	X	1	6,300
30		Resident Housing	1930		E	E0	1	1,035
62		Clinical/Inpatient Med	1949	1996	E	X	7	86,280
	B	Radiology, Linen Service & Environ. Management	1949	1996				
	1	ACS-Specialty Care, Pharmacy, Eye Clinic & ACS-Urgent Care	1949	1996				
	2	Dental, Nuclear Medicine, Pathology, Pulmonary, Rehab. Med. & Radiology	1949	1996				
	3	ACS-Primary Care & ACS-Specialty Care	1949	1996				
	4	ACS-Primary Care, Beds HOPTEL & Mental Health Clinic,	1949	1996				
	5	30 Beds Intermediate	1949	1996				
	6	Engineering, Rehab. Med. & SPD Service	1949	1996				
64		Administration	1951		E	X	2	27,400
65		Administration	1953		E	X	2	19,200
69		Engineering	1952		E	X	1	900

Building Number	Floor	Building Name/Function	Year Built	Year Renovated	Historic (H) or Historically Eligible (E)	Seismic	Total Floors	Building Total GSF
74		Engineering	1930		E	X	1	883
88		Administration	1978			E0	2	19,900
90		Nursing Home Care Unit	1982			X	2	48,700
T16		Engineering	1946	1972	E	X	1	5,100
T34		Temporary Bldg	1990			X	1	3,600
CC		Connecting Corridor 62/64	1940		E		2	4,000

Table 5 Definitions

Seismic

EO Non-Exempt

X Exempt

Site Plan

The current site plan (Figure 4) shows the present campus configuration and locations of buildings. The building color indicates the departmental group (zone) of the primary occupants of each building based on descriptions provided in the CAI and as assigned to departmental groups (Building Zones) from the Department to Zones Table in the assumptions and as indicated by the color key.

- Functional Distribution on the site: The Nursing Home Care Unit (Building 90) is located in the northwest corner of the campus adjacent to a large lawn area. Most of the balance of buildings are grouped in the center of campus and include Ambulatory Services, Administration and Logistics. The campus is served by a sewage treatment facility and settling ponds located on the east side of the campus.

- Topography: Topography is generally sloped with level graded pads at developed portions of the site around buildings. A steeply sloped area divides the campus into a lower area (around the sewage treatment facility and settling ponds) and an upper area (around the buildings in the center of the campus). Another steeply sloped area rises to the water tank, in the southwest corner of the campus. See Figure 4 for a graphic representation of these sloped areas.

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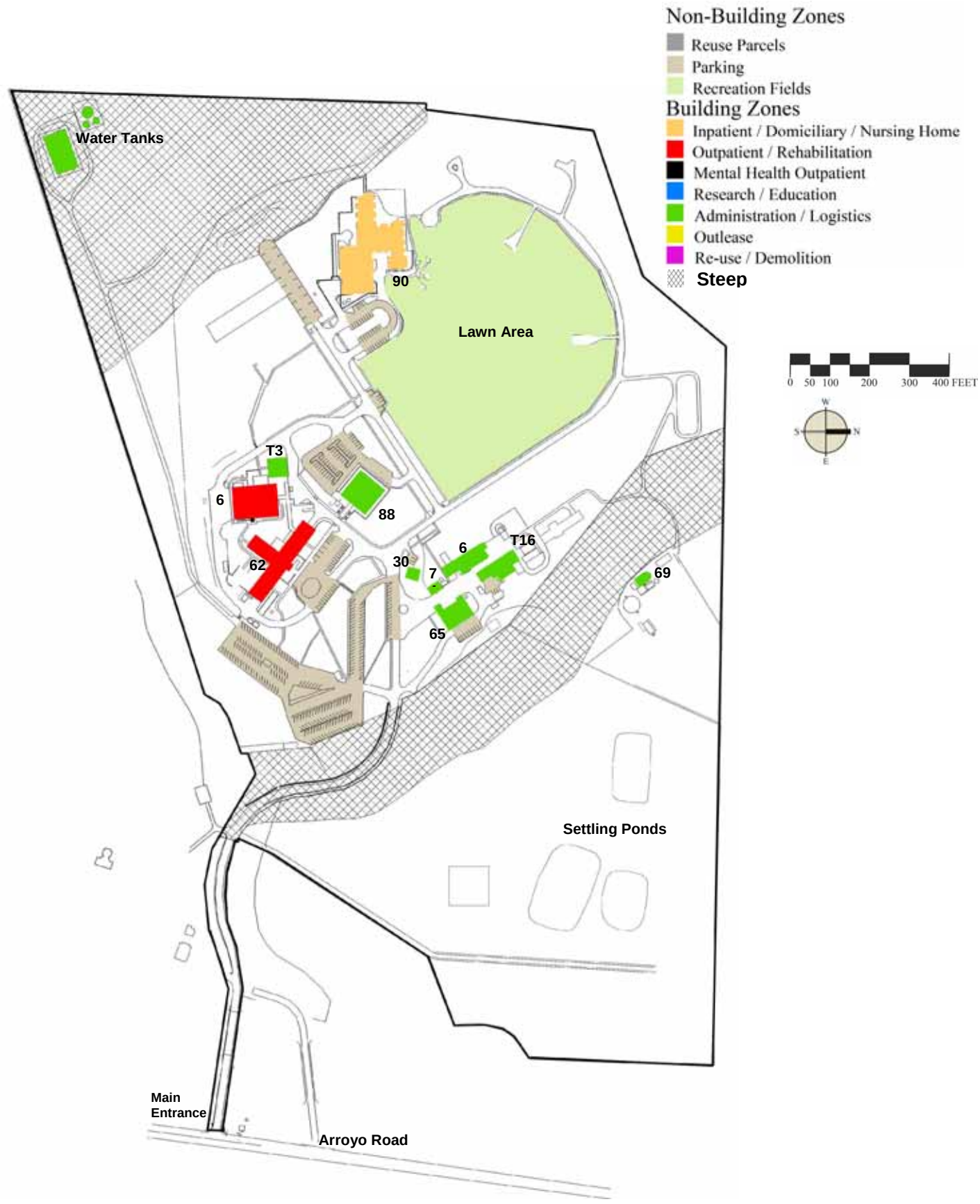
Figure 4: A Diagram of the Existing Current State Site Plan



- Landscaping: The site is divided into areas with developed landscape, mainly around buildings, and areas with natural vegetation, mainly at the steep slope zones, on the lower campus and perimeter of site. Vehicular circulation is by a network of paved roads that follow the contours of the site. Clusters of mature trees to are interspersed throughout the campus. The entrance to the site is along a single narrow drive up the slope from Arroyo Road. Subgrade utilities are generally located in proximity to the vehicular circulation paths.

- Historic Buildings: There are no *listed* historical buildings or parcels designated in the CAI located on LVD's campus by any local, state or federal agency. Nine buildings were built over 50 years ago and are eligible for historic designation due to their age. However, Alameda County has indicated the main hospital (Building 62) is a structure of "historical interest". Building 62 is designated for substantial renovation in the Baseline. Eligible buildings may require a ten-year process for approval to demolish or substantially alter their structural character. Of the eligible historic buildings, most are designated for re-use or demolition.

- Re-use of Historic Buildings: Each BPO includes the potential re-use of eligible historic buildings. None of the existing buildings are currently out-leased. Re-use is the first consideration for vacated historic buildings. However, if there is no re-use interest in historic buildings they are scheduled for demolition to reduce operating costs.

- Vacant Space: According to VA's Capital Asset Inventory (CAI) database, there is only approximately 630 BGSF of vacant space in buildings on the campus. However, as Clinical services are relocated to the Palo Alto campus, vacant and underutilized space will significantly increase over time, until only functions in support of the Nursing Home remain on campus.

CAI Scores and optimal use of the buildings

- Existing average building scores: According to VA's CAI database, the average FCA condition assessment scores of existing buildings are above 3.0 (per the evaluation scoring as described above), with the lowest building score 3.8 (Building T10) and the highest score 5 (Building 88). In general the lower the average building score, the greater the amount of area required for renovation. Floor plates that are too narrow and floor-to-floor heights that are too compressed demand more area to achieve the desired outcomes. Moreover, as the average score reduces, the likelihood of achieving the modern, safe and secure environment is diminished.

- Low scores require more space: All buildings that are proposed for renovation will require a high level of renovation to achieve the modern, safe and secure status as defined for this project. The extent of proposed renovation for an existing building is based on the average condition assessment scores and other factors as described in the Stage II Assumptions. As a result, new construction will be more likely to achieve optimal projected areas because the floor width, structural enclosure and engineering systems and egress paths may be designed to the present standard of care rather than to a previous delivery model (that required less area). Clinical areas have the greatest demands for

control of the environment, therefore, new construction or existing buildings with scores greater than 4.0 are recommended for these types of spaces. Administrative and support functions are a less demanding environment and as such existing buildings with average scores greater than 3.0 are targeted for these functions.

- Scores address Life Safety, ADA and Basic Functional Relationships: Upgrades to comply with current VA standards and applicable building codes will be necessary even on the buildings that rate relatively high since the rating does not address all aspects of modern care delivery practice such as modifications to accommodate single bed rooms, private bathrooms accessible from within a patient room, and other quality of health care environment issues.

- Specific additional issues at Livermore: Utilities will require considerable maintenance updates in the future. Based on the proposed configurations and phasing for the BPOs, consideration should be giving in the design phase to optimize the locations and extent of relocations that best serve each BPO's intent and minimize conflicts with re-use buildings and land parcels. Similarly, where utilities may not be relocated without undue hardship, agreements with re-use occupants should be included in the negotiations.

- Asbestos: Various test reports for this campus was provided by the VA. Asbestos containing material (ACM) types and quantities vary by building, but the five buildings identified in the reports as containing ACM are T16, 62, 64 and 90. Buildings 62 and 90 typically contain asbestos in floor tile mastic, and will require abatement and disposal during major renovations, but the quantities are very small. Where buildings containing hazardous materials are identified for demolition, similar appropriate abatement and disposal practices are required. Buildings containing asbestos are in good condition and the asbestos is being managed by the facility. Where these building are projected for renovation or demolition, costs are included for correction.

- Seismic: Livermore Division is located in Alameda County, which is a highly seismic zone. The Alameda County ground is a complex system of folds and faults. All existing Livermore Division buildings constructed before the adoption of the 1975 National Model Building Codes (H-08-8) are considered not seismically compliant , unless they meet the stipulated exempt criteria or are designated as high risk by function (see Table 5). Building 30 (resident housing) and Building 88 (Administration) are not exempt from the building code and would require seismic upgrades to comply. However these building are not slated for continued VA use under any BPO.

  Livermore Division's close proximity to potentially active faults warrants further investigation to determine if any new construction may be located on or near a fault. Review of existing maps of fault locations is necessary. Based upon the findings of the map review, additional investigation including fieldwork and/or other geologic investigation may be necessary to avoid areas with potential for surface fault rupture. If applicable, it is recommended that special measures be incorporated into the project design to reduce the potential for damage due to surface fault rupture.

- Complexity of Renovations: Renovations will be faster and less disruptive if an entire building can be renovated at once. This will be possible in Building 62 since there is spare inpatient Nursing Home bed capacity as well as existing underutilized logistics and administrative support. Building 90 will require phased renovations, as a limited number of clinical functions can be relocated into Building 62. Detailed phasing plans are beyond the scope of this study. However, every effort has been made to in the proposed implementation to reduce disruption to patient and staff functions where possible.

Projected space requirements

- Space requirements derived from projected workload: The VA's workload values projected to 2023 form the basis for the projected space requirements. The Projected Departmental Area Need in Department Gross Square Footage (DGSF) indicates departmental area, projected workload volumes and associated projected area need for the campus. Factors used in generating the projected area need are indicated in the Stage II Assumptions. Department Gross Square Footage (DGSF) includes all area within a department or service area. Mechanical shafts, building structure, corridors, stairs, exterior walls, etc., that are not within the confines of the department are excluded from DGSF. Projected area totals less than 1,000 BGSF are not considered significant. The only projected need being considered at Livermore is 120 beds of Nursing Home Care.

- Projected areas organized by Departmental Group: Projected areas are distributed to building Departmental Groups (Zone) and converted to BGSF as indicated in The Area Distribution by Departmental Group (Zone).

BPO 1 (Baseline)

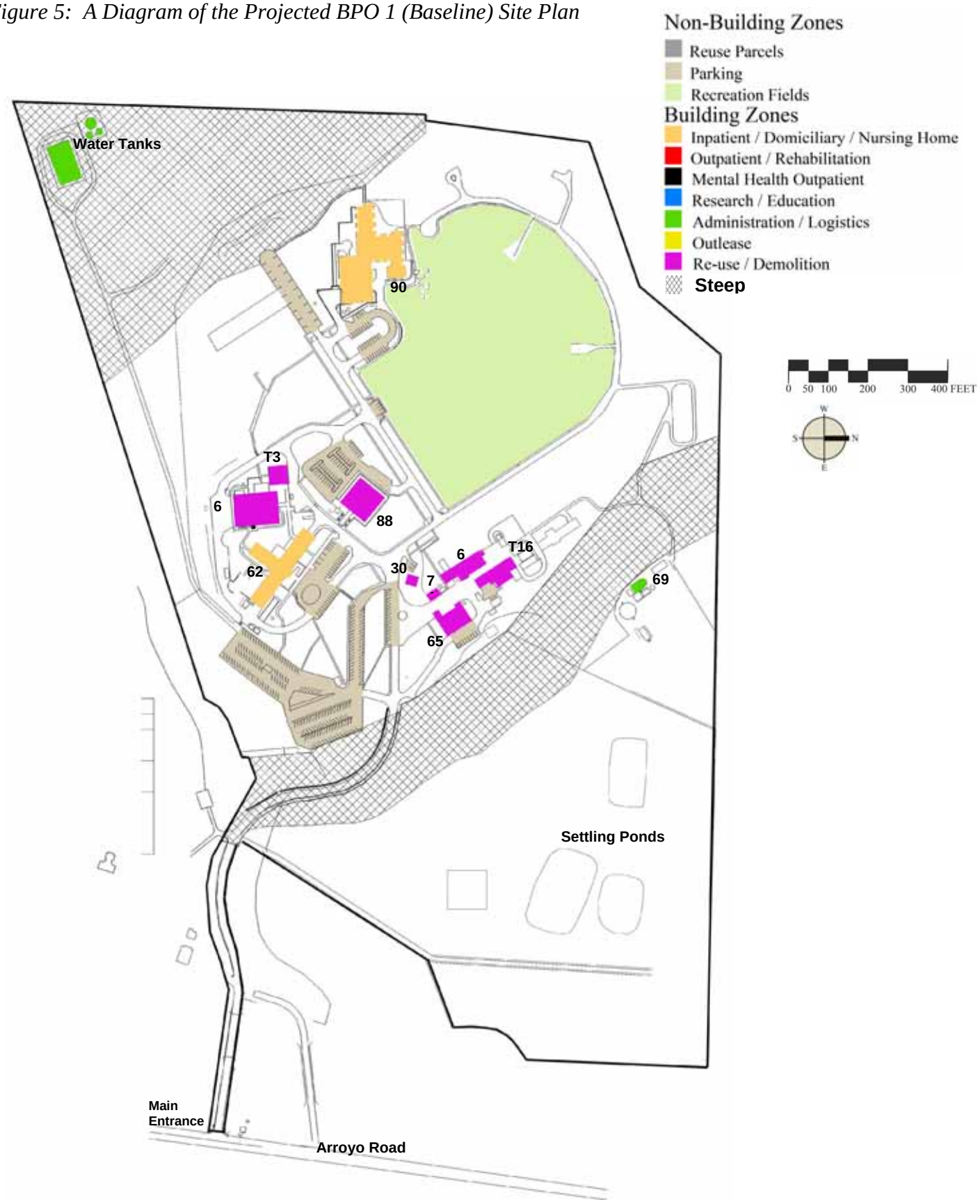
BPO 1 (Baseline) is the option under which there would not be significant changes in either the location or type of services provided in the study site, other than those contained in the Secretary's decision. In the Baseline, the Secretary's Decision and forecasted healthcare demand and trends from the demand forecast for 2023 are applied to the current healthcare provision solution for the study site. Additionally, capital improvements required to meet modern, safe, and secure standards, only where existing conditions allow, are factored into the current state assessment to develop this BPO.

The Baseline updates the existing facility to current standards by substantial renovation of the buildings required to contain the necessary services. In the process of renovation, the services are consolidated in a smaller number of buildings, thus vacating some buildings that are partially occupied. Existing Nursing Home Care Unit (Building 90) will be renovated. Existing support infrastructure (Kitchen, Administration, Engineering and Boiler Plant) as well as some inpatient Nursing Home care will be relocated into Building 62. Building 62 will also include several floors of vacant space. The Waste Water Treatment Plant (Building 69) and settling ponds will continue to service the existing buildings. Capital investment in the existing buildings is spread in three major phases to allow continued operations.

Analysis of Capital Planning Outputs

- Site Plan: The Projected BPO 1 (Baseline) Site Plan (Figure 5) illustrates the proposed campus configuration and locations of buildings.

Figure 5: A Diagram of the Projected BPO 1 (Baseline) Site Plan



- Building Color Code: Similar to the Existing Current Stage Site Plan, the building color indicates Departmental Group (Zone) of the primary occupants for each building. Matching the building color key used for the Existing Current State Site Plan, the proposed building color indicates the predominant occupancy of the building. Refer to the legend regarding the Departmental Group (Zone) contained therein.

- Site Impact during Construction: Repaving of existing parking areas and drives demand the greatest area and associated costs. Maintenance of the existing landscaped area is assumed.

- Campus Area and Uses: The Baseline campus configuration as indicated on the site plan is summarized in Table 6. The area totals for primary activities on the portions of the site to be retained exclusively for VA-related functions are indicated in the Campus Area Total Acreage below.

  Table 6: Campus Area Total Acreage – BPO 1 (Baseline)

Campus Area	Acres
Recreation	~10
Parking	~5
Buildings and Landscaping	~96
BPO Total	~112
Existing Campus Total	~112

- Land Parcels Available for Re-Use: BPO 1 (Baseline) assumptions do not allow land parcels to be designated for re-use. Alternative BPO 1 (Baseline) addresses potential re-use.

- Buildings Available for Re-Use: BPO 1 (Baseline) does not identify specific buildings for re-use. Where buildings are not required to accommodate the projected area need, they are marked for re-use or demolition and may be considered for re-use prior to the targeted demolition date.

- Relocation of Functions: In BPO 1 (Baseline), the use of existing buildings and reduction of vacant space therein is achieved to the extent possible. Functions have been relocated so the Nursing Home care and support are consolidated into three buildings. However the compression of functions results in *more* vacant space than the existing condition, because of the utilization of part of Building 62 for Nursing Home functions, which contains more square footage than required. Nursing Home functions will continue to be mainly located in Building 90, with a minimum of 30 Nursing Home beds relocated to Building 62 at any time. The relocation of nursing beds from Building 90 is required due to redistribution of patients into private and semi-private rooms, resulting in fewer beds in Building 90. Administration, Logistics, Boiler Plant and Kitchen will also be relocated and consolidated into vacant space in Building 62. These support functions include an appropriately sized kitchen and boiler plant, with more energy efficient equipment to service the smaller campus. The on site sewage treatment facility (Building 69) and settling ponds will continue to service Buildings 62 and 90. Phasing of construction of Building 90 will minimize disruption, but require temporary relocation of

various functions into existing buildings. Table 7 indicates the projected area need as assigned to each building on the campus. Departmental Group area totals are provided for each building. Where the Building Group name is omitted, a mathematical distribution of space was assigned to accommodate the de-optimization value of the building and provide an appropriate renovation value.

Table 7: Functional Distribution BPO 1 (Baseline)

Building No.	Building Name	Building Group	Existing BGSF	Proposed BGSF
30	Resident housing	Acute Care	1,035	0
6	Boiler House	Logistics	6,300	0
62	Clinical/Inpatient Med	Acute Care	22,518	0
62	Clinical/Inpatient Med	Administration	4,550	0
62	Clinical/Inpatient Med	Ambulatory Services	46,102	0
62	Clinical/Inpatient Med	Behavioral Health	5,803	0
62	Clinical/Inpatient Med	Domiciliary	1,260	0
62	Clinical/Inpatient Med	Logistics	2,886	0
62	Clinical/Inpatient Med	Nursing Home	2,185	48,324
62	Clinical/Inpatient Med	Out Lease	20	0
62	Clinical/Inpatient Med	Research	20	0
64	Administration	Acute Care	8,311	0
64	Administration	Administration	5,383	0
64	Administration	Ambulatory Services	10,436	0
64	Administration	Behavioral Health	246	0
64	Administration	Domiciliary	246	0
64	Administration	Logistics	636	0
64	Administration	Nursing Home	2,141	0
65	Administration	Logistics	19,200	0
69	Engineering	Logistics	900	900
74	Engineering	Administration	294	0
74	Engineering	Ambulatory Services	294	0
74	Engineering	Out Lease	294	0
88	Administration	Acute Care	17	0
88	Administration	Administration	15,504	0
88	Administration	Ambulatory Services	17	0
88	Administration	Behavioral Health	17	0
88	Administration	Domiciliary	17	0
88	Administration	Logistics	3,120	0
88	Administration	Nursing Home	17	0
88	Administration	Out Lease	1,174	0
88	Administration	Research	17	0
90	Nursing Home Care Unit	Acute Care	2,264	0
90	Nursing Home Care Unit	Administration	35	0
90	Nursing Home Care Unit	Ambulatory Services	5,341	0
90	Nursing Home Care Unit	Behavioral Health	35	0
90	Nursing Home Care Unit	Domiciliary	35	0
90	Nursing Home Care Unit	Logistics	1,107	0
90	Nursing Home Care Unit	Nursing Home	39,815	48,700
90	Nursing Home Care Unit	Out Lease	35	0

Building No.	Building Name	Building Group	Existing BGSF	Proposed BGSF
90	Nursing Home Care Unit	Research	35	0
T16	Engineering	Logistics	5,100	0
T34	Temporary Bldg	Administration	3,600	0

Note: If building group is blank it identifies unassigned space

- Optimal Use of Existing Buildings: Building 62 was designed more than 57 years ago. Because of the evolved standards for patient clinical care buildings, this building is not well suited to be used for Nursing Home care. The floor plates are too small (resulting in poor functional adjacencies); the floor-to-floor heights are too low (resulting in mechanical systems with insufficient air volume) and with a few exceptions, the bedrooms do not have ADA accessible toilets. Building 90 was designed 25 years ago and the main issues relate to the standard of care for room occupancy and ADA requirements. The result of these deficiencies is that proposed renovations to achieve the projected workload require additional area. Since BPO 1 seeks to optimize use of existing buildings without new construction, the area totals for this BPO are larger than those BPOs that include new construction.

- Projected Workload Volumes for 2023: The projected areas as derived from workload volumes (Stage II Assumptions are described in a separate document provided to VA) indicate the desired Nursing Home care functions require more square footage than is currently being utilized on the campus. This is mainly due to the current VA standard of care requiring increased square footage. However due to relocation of all other services off site, Nursing Home care can be accommodated in space currently available on the campus.

  Parking: Portions of the existing surface parking areas will be repaved to provide parking in the most convenient locations adjacent to building entries. Where existing parking is not required, it will be removed and new landscape will be provided. Distribution of parking by departmental group is indicated in Table 8. There is no structured parking projected for this campus.

  Table 8: Parking Distribution

Parking Area	Total Surface Spaces	Total Structured Spaces	Surface Area (SF)	Structured Area (SF)	Location
Nursing Home-1	48	0	74,400	0	Adjacent to Building 90
Nursing Home-2	32	0	22,000	0	North of Building 62
Nursing Home-3	24	0	8,831	0	Adjacent to Building 88
Total	104	0	105,231	0	

- Conclusion from the Space Analyses: The projected area need for the campus is approximately 89,753 BGSF. Because BPO 1 (Baseline) involves renovation of existing space, the space required is approximately 97,025 BGSF. Compared with the existing area of 223,298 BGSF, there is an anticipated reduction of required campus space of up to 60%. However, BPO 1 also includes 37,919 BGSF of vacant space in Building 62. Therefore, actual realized utilization of the existing campus is 144,944 BGSF. This

represents a total reduction to campus area of approximately 36%. This allows re-use or demolition of buildings not favorable or not required for VA service functions. See discussions on "Vacant Space" (below on this page) and "Consolidation of Underutilized Space" (Page 31) for fuller explanation.

- Construction Phasing: In BPO 1(Baseline), disruptions from renovations to existing occupied buildings will be reduced based on the relocation of most Ambulatory services to the Palo Alto campus. This move allows for renovation of Building 62 after much of the space is vacated. Many functions, including patient care from Building 90 can then be temporarily relocated into Building 62 while Building 90 is renovated in two major phases. However, Building 90 will still be partially occupied during renovation and the phasing of mechanical, electrical and plumbing system work will be problematic.

- Construction Schedule: Schedules for construction activities are intended to identify relative duration of new construction or renovation work in order to calculate occupancy date for utilization of space and escalation costs. These schedules provide a base on which the implementation plan activities will be incorporated. Commissioning of engineering systems will occur during the last 20% of each project's duration.

- Existing Building Maintenance Costs: Existing unaltered buildings retained on the campus for the Baseline require ongoing and periodic maintenance costs, including buildings which are scheduled for either re-use or demolition, until re-use or demolition begins.

- Capital Cost Estimate: The Capital costs are based on campus-wide area projections by Departmental Group (Zone) as indicated in the Projected BPO areas by Departmental Group (Zone). These are further described in Chapter 5.

- Construction Cost Depends on Function: Construction costs are derived from projected area requirements by Building and non-Building Departmental Groups (Zones).

- Soft Costs Standardized: Approved factors for "soft cost" (design fees, equipment, administrative costs, furniture, etc) are based on consultant experience and VA standards.

Change in Percentage of Vacant Space:

- Vacant Space: The area totals for BPO 1 (Baseline) indicate a nearly 560% increase in vacant space in buildings on the campus (see Table 9). The "Existing Campus Vacant" value indicates the area designated in the CAI as vacant space. Existing vacant square footage at Livermore as designated by the CAI is a very nominal 663 square feet and not significant. However, Building 62 will contain 37,919 square feet of vacant space after BPO 1 (Baseline) is implemented and represents a significant increase. Additional projected vacant space, due to relocation of functions to Palo Alto, will be eliminated by re-use or demolition of vacated buildings.

Table 9: Percentage of Vacant Space – BPO 1 (Baseline)

Title	Vacant BGSF
Existing Campus Vacant Area	663
Projected BPO Vacant Area	37,919
Difference (by Area)	37,256
Difference (by Percentage)	560%

- Consolidation of Underutilized Space: Underutilized space is space not used to its full potential because of physical constraints. Because there is a substantial amount of renovation required for this BPO, additional area is required to achieve a modern, safe and secure environment, resulting in an increase of underutilized space. Comparing the ideal space requirements for the workload to the square footage need for this option results in an 11% overall increase in area need (See Table 10).

Table 10: Percentage of Underutilized Space – BPO 1 (Baseline)[2]

Title	Total
Projected Ideal BGSF Based on In-House Workload	89,752
Projected BPO BGSF	97,025
Underutilized Space	7,273
Variance (by Percentage)	11%

- Timeliness of Completion: BPO 1 (Baseline) requires an eight-year, six-month (102 month) total project duration from initiation in January 2009, with design starting in January 2010 and multi-phased renovation completed in July 2017 (See Table 11). Key assumptions include:

Table 11: Total Construction Duration – BPO 1 (Baseline)

	Start	Complete	Months
Total Construction Activity	01/01/2009	07/01/2017	102

- Timeliness of Urgent Seismic Corrections: Only buildings 30 and 88 are classified as "Seismic Non-exempt" and these facilities are not included within BPO 1. Buildings with seismic deficient status that are not projected for VA occupancy will be re-used or demolished as they become eligible based on the implementation schedule. Therefore, the evaluation criteria "Timeliness of Urgent Seismic Corrections" is not assessed for the Livermore BPOs.

- Campus Area Change: Projected utilization volumes indicate that Nursing Home services require additional square footage in 2023. The area of the existing Nursing Home service is 44,159 BGSF. Compared with the projected area need of 97,025 BGSF the resultant is a net *increase* for Nursing Home services of 52,866 BGSF. All other services are relocated off campus and not included within the study.

[2] The figure projections are within a 5% rounding error, which is acceptable to VA.

- Patient Moves: Of the existing twelve buildings on the campus, in BPO 1 (Baseline), two buildings with clinical or clinical-related functions will be renovated to some extent. The key buildings accommodating patients are limited to Buildings 62 & 90. Patient care functions currently in Building 62 are being relocated to the Palo Alto campus. This will leave Building 62 available for renovation, without impacting existing nursing care patients. It is anticipated that construction phasing for renovations to Buildings 90 will be complex and that patients will be inconvenienced but care may continue within the building during renovation. These will be further described in the implementation plans. The overview of primary patient moves will be as follows:

    - Some nursing home patients in Building 90 will temporarily move to Building 62. Note: Some of these patient moves to Building 62 will be permanent; whereas others will only be temporary.
    - Move Nursing Home patients from non-renovated portion of Building 90 into renovated portion of Building 90.
    - Move the Nursing Home patients that were temporarily moved to Building 62 back to Building 90.

- Historic Buildings Altered: There are nine buildings identified as historic or historically eligible in the CAI. For this BPO, all nine will be renovated, re-used or demolished (See Table 12). The National Historic Preservation Act requires that a federal agency must assume responsibility for historic properties and requires federal agencies to consider historic properties as it plans a project and to consult with the Advisory Council on Historic Preservation. The approval process for renovation can take more than a year and may need to be considered in the implementation planning efforts.

Table 12: Historic Buildings Altered – BPO 1 (Baseline)

Title	Building Count
Total Historic or Historically Eligible	9
Altered Historic Buildings	9

Alternative BPO 1 (Baseline)

Alternative BPO 1 (Baseline), also referred to BPO 1A, is identical to BPO-1, except for consideration of Re-Use opportunities. Only specific changes to BPO-1 are presented as follows. In Alternate BPO 1 (Baseline), access for patients, staff and visitors to the VA facilities will be via the existing network of on-site paved roads. These roads from Arroyo Road to each VA Building/Function will remain under VA control.

Analysis of Capital Planning Outputs

- Site Plan: The Projected Alternative BPO-1 (Baseline) Site Plan (Figure 6) illustrates the proposed campus configuration and locations of buildings.

- Land Parcels Available for Re-Use: Alternate BPO 1 (Baseline) makes available approximately 66 acres in 3 land parcels which can be designed for re-use. The campus totals (see Table 13) indicate that for Alternate BPO 1 (Baseline), 58% (Parcels 1, 4 & 5) of the present campus is available for re-use.

  Table 13: Land Parcels Available for Re-use

Re-Use Parcels	Acres	Comment
Parcel 1	38.80	Except the on-site treatment plant and settling ponds must remain
Parcel 4	7.84	
Parcel 5	19.78	

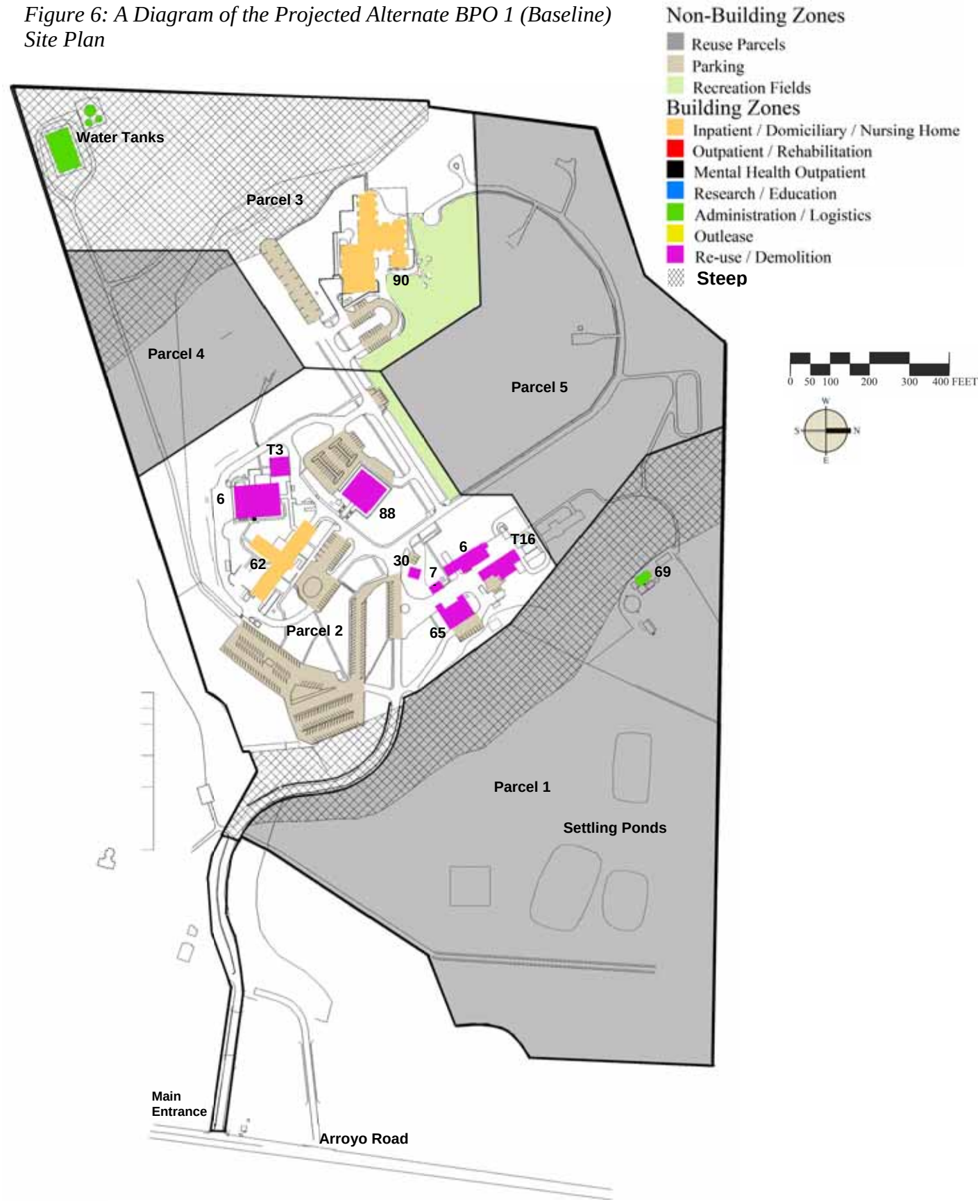
- Buildings Available for Re-Use: Buildings that are 100% vacated and identified for Re-Use/Demolition may be considered for re-use prior to the targeted demolition date. However, the existing on-site Sewage Treatment Plant and settling ponds must remain to service VA facilities, unless a sewer connection to city of Livermore is obtained. The buildings that offer the greatest re-use potential, based on size, are Building's 88 and 64. Building 62's vacant square footage could potentially be re-used with a complementary use, resulted in blended VA and non-VA uses in the same building.

- Campus Area and Uses: The Alternate BPO 1 (Baseline) campus configuration as indicated on the site plan (Figure 6) is summarized in Table 14. There is no dedicated exterior VA program recreation area defined. However, there is ample land available for recreational activities. The area totals for primary activities on the portions of the site to be retained exclusively for VA-related functions are indicated in the Campus Area Total below.

  Table 14: Campus Area Total Acreage – Alternate BPO 1(Baseline)

Campus Area	Acres
Recreation	~2
Parking	~2
Buildings and Landscaping	~42
BPO Total	~46
Existing Campus Total	~112

Figure 6: A Diagram of the Projected Alternate BPO 1 (Baseline) Site Plan



BPO 2- Build New Nursing Home on Livermore Campus

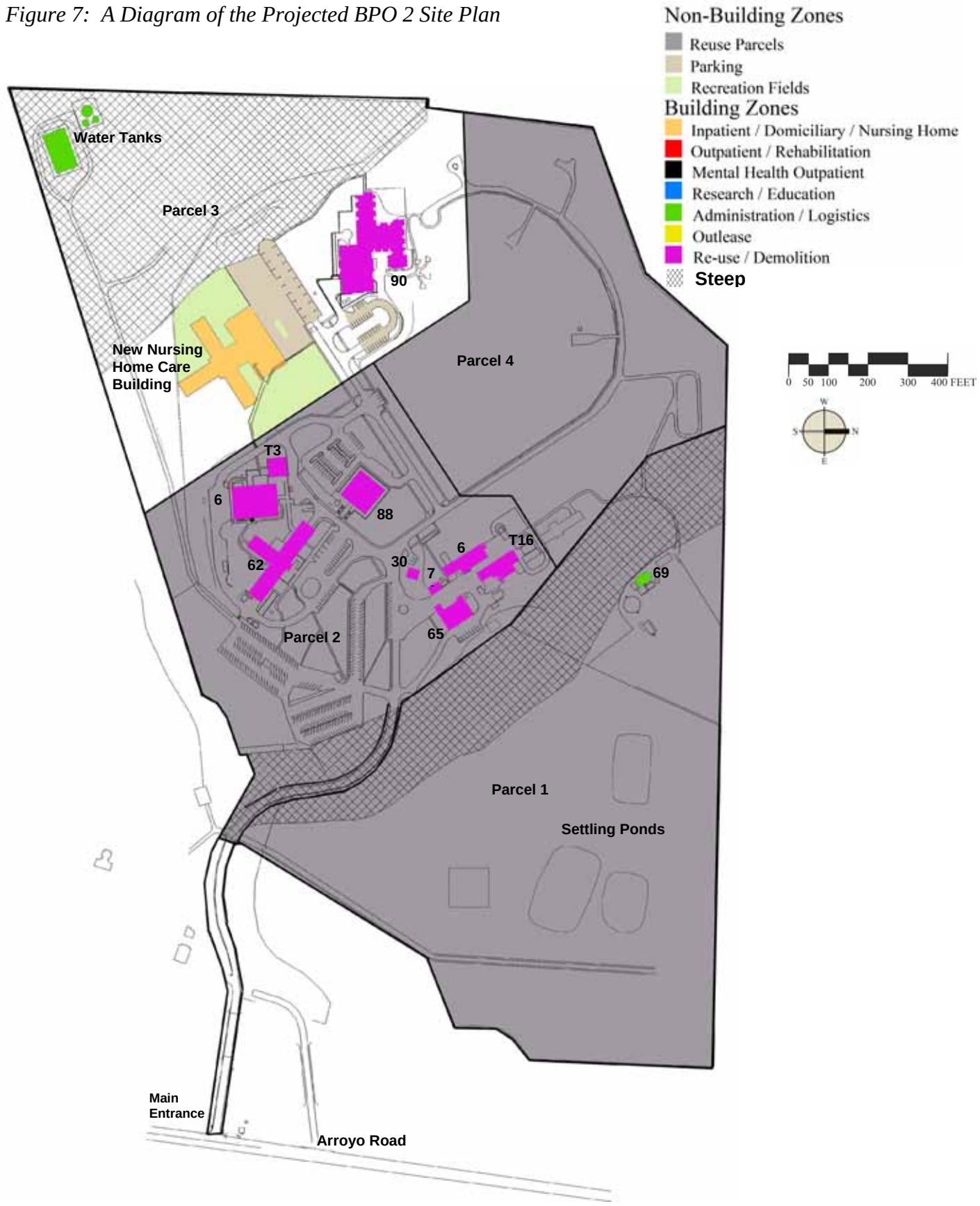
NHCU services will remain on the LVD campus replaced in a new stand-alone NHCU building on the upper portion of the LVD campus on Parcel 3. Existing NHCU will be demolished after opening of new NHCU to provide adequate access buffer and landscape zones. All support functions will be integrated into the new NHCU structure. The Waste Water Treatment Plant (Building 69) and settling ponds will service the new building. Access for patients, staff and visitors to the VA facilities will be via the existing network of on-site paved roads. These roads from Arroyo Road to each VA Building will remain under VA control.

Remaining acreage identified as Parcels 1, 2 and 4 will be available for re-use/redevelopment.

Analysis of Capital Planning Outputs

- Site Plan: The Projected BPO 2 Site Plan (Figure 7) illustrates the proposed campus configuration and locations of buildings.

Figure 7: A Diagram of the Projected BPO 2 Site Plan



- Relocation of Functions*:* In BPO 2, construction of a replacement Nursing Home is on the southwest corner of the site. The replacement Nursing Home contains all required support functions, including dietetics, administration and logistics. This optimizes re-use opportunities on the current campus. Construction of the new building would be achieved in less time than renovation to existing facilities. Building design would optimize current delivery of care practices and disruption to existing patient care would be minimized. Occupancy would be phased at completion of the construction period so that services could transfer directly from the existing buildings to the new building with minimum time and effort. Projected area of 89,752 BGSF is based on the 2023 workloads with no vacant space. Existing entrance drive, water tanks, sewage treatment plant and settling ponds would continue to service campus and remain under VA control.

Table 15: Functional Distribution BPO 2

Building No.	Building Name	Building Group	Existing BGSF	Proposed BGSF
30	Resident housing		0	0
30	Resident housing	Acute Care	1,035	0
6	Boiler House		0	0
6	Boiler House	Acute Care	0	0
6	Boiler House	Ambulatory Services	0	0
6	Boiler House	Behavioral Health	0	0
6	Boiler House	Domiciliary	0	0
6	Boiler House	Logistics	6,300	0
6	Boiler House	Nursing Home	0	0
62	Clinical/Inpatient Med		0	0
62	Clinical/Inpatient Med	Acute Care	22,518	0
62	Clinical/Inpatient Med	Administration	4,550	0
62	Clinical/Inpatient Med	Ambulatory Services	46,102	0
62	Clinical/Inpatient Med	Behavioral Health	5,803	0
62	Clinical/Inpatient Med	Domiciliary	1,260	0
62	Clinical/Inpatient Med	Logistics	2,886	0
62	Clinical/Inpatient Med	Nursing Home	2,185	0
62	Clinical/Inpatient Med	Out Lease	20	0
62	Clinical/Inpatient Med	Research	20	0
64	Administration		0	0
64	Administration	Acute Care	8,311	0
64	Administration	Administration	5,383	0
64	Administration	Ambulatory Services	10,436	0
64	Administration	Behavioral Health	246	0
64	Administration	Domiciliary	246	0
64	Administration	Logistics	636	0
64	Administration	Nursing Home	2,141	0
65	Administration		0	0
65	Administration	Logistics	19,200	0
69	Engineering		0	0
69	Engineering	Logistics	900	900
74	Engineering		0	0
74	Engineering	Administration	294	0

Building No.	Building Name	Building Group	Existing BGSF	Proposed BGSF
74	Engineering	Ambulatory Services	294	0
74	Engineering	Out Lease	294	0
88	Administration		0	0
88	Administration	Acute Care	17	0
88	Administration	Administration	15,504	0
88	Administration	Ambulatory Services	17	0
88	Administration	Behavioral Health	17	0
88	Administration	Domiciliary	17	0
88	Administration	Logistics	3,120	0
88	Administration	Nursing Home	17	0
88	Administration	Out Lease	1,174	0
88	Administration	Research	17	0
90	Nursing Home Care Unit		0	0
90	Nursing Home Care Unit	Acute Care	2,264	0
90	Nursing Home Care Unit	Administration	35	0
90	Nursing Home Care Unit	Ambulatory Services	5,341	0
90	Nursing Home Care Unit	Behavioral Health	35	0
90	Nursing Home Care Unit	Domiciliary	35	0
90	Nursing Home Care Unit	Logistics	1,107	0
90	Nursing Home Care Unit	Nursing Home	39,815	0
90	Nursing Home Care Unit	Out Lease	35	0
90	Nursing Home Care Unit	Research	35	0
T16	Engineering		0	0
T16	Engineering	Logistics	5,100	0
T34	Temporary Bldg		0	0
T34	Temporary Bldg	Administration	3,600	0
Z-3	Zone Nursing Home	Nursing Home	0	89,752
Z-3-11S	Surface Parking for Zone Nursing Home	Nursing Home	0	30,000
Total Site	Site Information	Logistics	0	699,498

Note: If building group is blank it identifies unassigned space

- Building Color Code: Similar to the Existing Current Stage Site Plan, the building color indicates the Departmental Group (Zone) of the primary occupants for each building. Matching the building color key used for the Existing Current State Site Plan, the proposed building color indicates the predominant occupancy of the building. Refer to the legend regarding the Departmental Group (Zone) contained therein.

- Site Impact during Construction: Repaving of existing parking areas and drives demand the greatest area and associated costs. Maintenance of the existing landscaped area is assumed.

- Campus Area and Uses: The BPO 2 campus configuration as indicated on the site plan (Figure 7) is summarized in Tables 16 & 17. The area totals for primary activities on the portions of the site to be retained exclusively for VA-related functions are indicated in the Campus Area Total below. The designated land total of 30 acres is driven by site topography and inclusion of land around Building 90. Building 90 and acreage

surrounding Building 90 in Parcel 3 may be available for re-use based on the final VA Nursing Home's programmatic requirements and building configuration.

Table 16: Campus Area Total Acreage - BPO 2

Campus Area	Acres
Recreation	~2
Parking	~2
Buildings and Landscaping	~26
BPO Total	~30
Existing Campus Total	~112

Land Parcels Available for Re-Use: BPO 2 makes available approximately 82 acres in 3 land parcels available for re-use. The Campus and Re-Use Area Totals (see Table 17) indicate that for BPO 2, 73% of the present campus is available for re-use.

Table 17: Land Parcels Available for Re-use

Re-Use Parcels	Acres	Comment
Parcel 1	38.80	Except the on-site treatment plant and settling ponds must remain
Parcel 2	23.47	
Parcel 4	19.78	

- Buildings Available for Re-Use: Parcels 1, 2 and 4, including but not limited to Buildings 6, 62, 64, 88 and 90, are available for re-use in this option as well as existing utility structures required for service to the proposed new Nursing Home construction. Identification of specific utilities required to be maintained or relocated to serve the new construction is beyond the scope of this study. However, the water tanks and the on-site Sewage Treatment Plant and settling ponds will be required to service VA facilities, unless a sewer connection to city of Livermore is obtained.

- Projected Workload Volumes for 2023: The projected areas as derived from workload volumes (See Stage II Assumptions) indicate the desired Nursing Home care functions require additional square footage than is currently being utilized on the campus. This is due to current VA standard of care requirements which require increased square footage.

- Parking: New surface parking would be designed to be convenient to the new building. Existing surface parking areas near the new building will be repaved to provide parking in the most convenient locations adjacent to building entries.

Table 18: Parking Distribution

Parking Area	Total Surface Spaces	Total Structured Spaces	Surface Area (SF)	Structured Area (SF)
Nursing Home	104	0	41,600	0
Total	104	0	41,600	0

- Conclusion from the Space Analyses: The functions on this site would best be accommodated in a building designed expressly for these uses. The existing campus is not well laid out for a modern Nursing Home Care Unit. Much of the existing main campus would be available for re-use following occupancy of the new building. Buildings throughout the existing campus are identified for re-use or demolition as they become available to eliminate their ongoing maintenance and security costs.

- Construction Phasing: The entire new facility could be constructed in one phase and move-in would be a matter of days.

- Construction Schedule: Schedules for construction of the new building provides for occupancy of the facility by 2014. Commissioning of engineering systems will occur during the last 20% of the project's duration.

- Existing Building Maintenance Costs: If the exiting campus is re-used, maintenance costs will be covered by the re-use contractor, not the VA.

- Capital Cost Estimate: The Capital costs are based on campus-wide area projections by Departmental Group (Zone) as indicated in the Projected BPO areas by Departmental Group (Zone). These are further described in Chapter 5.

- Construction Cost Depends on Function: Construction costs are derived from projected area requirements by Building and non-Building Departmental Groups (Zones).

- Soft Costs Standardized: Approved factors for "soft costs" (design fees, equipment, administrative costs, furniture, etc) are based on consultant experience and VA standards.

Change in Percentage of Vacant Space:

- Vacant Space: The area total indicates that there will be no vacant space in 2023 for BPO 2 since the new facilities will be constructed to meet the utilization requirements for that year. Projected vacant space, due to relocation of functions to Palo Alto, will also be eliminated by re-use or demolition of vacated buildings.

Table 19: Percentage of Vacant Space - BPO 2

Title	Vacant BGSF
Existing Campus Vacant Area	663
Projected BPO Vacant Area	0
Difference (by Area)	-663
Difference (by Percent)	-100%

- Consolidation of Underutilized Space: Since BPO 2 involves the construction of all new facilities, this BPO will need approximately the same amount of space as an ideal campus. The figures in Table 20 indicate that BPO 2 will require approximately the same space.

Table 20: Percentage of Underutilized Space - BPO 2[3]

Title	Total
Projected Ideal BGSF Based on In-House Workload	89,752
Proposed BPO BGSF	89,752
Underutilized Space	0
Variance by Percentage	0%

- Timeliness of Completion: BPO 2 requires a five-year, ten-month (70 month) period of total project duration from initiation in January 2009, with design starting in January 2010 and construction completed in November 2014 (See Table 21).

Table 21: Total Construction Duration - BPO 2

	Start	Complete	Months
Total Construction Activity	01/01/09	11/03/2014	70

- Size and Complexity of Capital Plan: Projected utilization volumes indicate that Nursing Home services require additional square footage in 2023. The area of the existing Nursing Home Service is 44,159 BGSF. Compared with the projected area need of 89,752 BGSF the resultant is a net *increase* for Nursing Home services of 45,593 BGSF. All other services are relocated off campus and not included within the study.

[3] The figure projections are within a 5% rounding error, which is acceptable to VA.

- Patient Moves: In BPO 2, all existing buildings will be available for re-use, two of which contain clinical services. Although all clinical buildings are considered altered, the patients from these buildings will be moving into one newly constructed facility within several days once the new building is ready for occupancy. This will be further described in the implementation plans.

- Historic Buildings Altered: There are nine buildings identified as historic or historically eligible in the CAI. For this BPO, all nine will be either re-used or demolished (See Table 22)

  .

  Table 22: Historic Buildings Altered – BPO 2

Title	Building Count
Total Historic or Historically Eligible	9
Altered Historic Buildings	9

BPO 4 - Build New Nursing Home in Central Valley and Co-locate with a CBOC

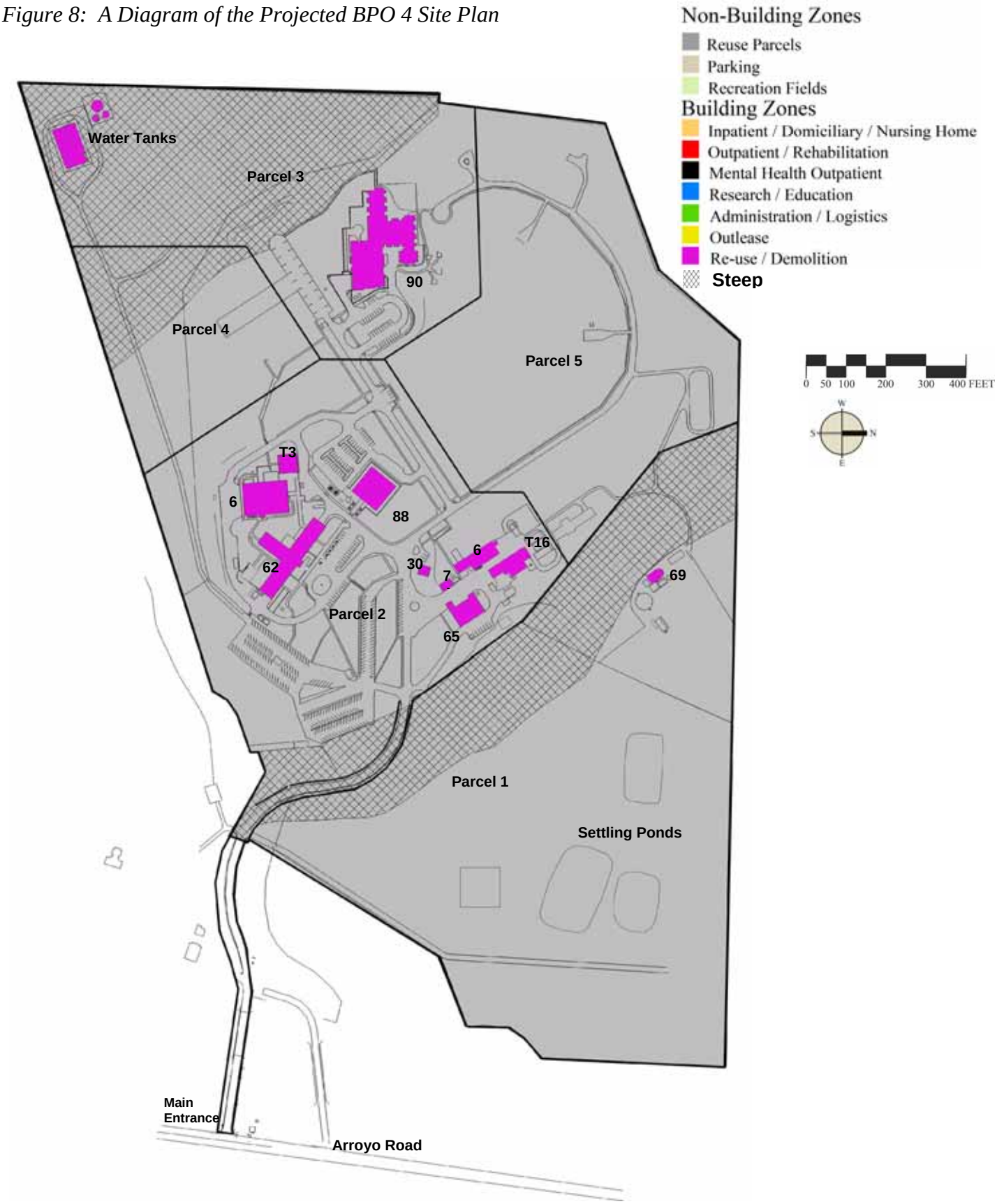
Relocate the NHCU off-site to a new stand-alone facility co-located with ambulatory care services. The new NHCU will be co-located with the expanded Central Valley Community Based Outpatient Clinic (CBOC).

Entire Livermore Division campus is available for re-use/redevelopment.

Analysis of Capital Planning Outputs

- Site Plan: The Projected Baseline Site Plan (Figure 8) illustrates the proposed campus configuration and locations of buildings.

Figure 8: A Diagram of the Projected BPO 4 Site Plan



- Relocation of Functions: In BPO 4, construction of a replacement Nursing Home is on a new site, co-located with a CBOC. This option maximizes re-use opportunities on the current campus. Construction of the new campus would be achieved in less time than renovation to existing facilities, building design would optimize current delivery of care practices and disruption to existing patient care would be minimized. Occupancy would be phased at completion of the construction period so that services could transfer directly from the existing building to new campus with minimum time and effort. Projected area of 89,752 BGSF for the NHCU is based on the 2023 workloads with no vacant space.

Table 23: Functional Distribution BPO 4

Building No.	Building Name	Building Group	Existing BGSF	Proposed BGSF
30	Resident housing		0	0
30	Resident housing	Acute Care	1,035	0
6	Boiler House		0	0
6	Boiler House	Acute Care	0	0
6	Boiler House	Ambulatory Services	0	0
6	Boiler House	Behavioral Health	0	0
6	Boiler House	Domiciliary	0	0
6	Boiler House	Logistics	6,300	0
6	Boiler House	Nursing Home	0	0
62	Clinical/Inpatient Med		0	0
62	Clinical/Inpatient Med	Acute Care	22,518	0
62	Clinical/Inpatient Med	Administration	4,550	0
62	Clinical/Inpatient Med	Ambulatory Services	46,102	0
62	Clinical/Inpatient Med	Behavioral Health	5,803	0
62	Clinical/Inpatient Med	Domiciliary	1,260	0
62	Clinical/Inpatient Med	Logistics	2,886	0
62	Clinical/Inpatient Med	Nursing Home	2,185	0
62	Clinical/Inpatient Med	Out Lease	20	0
62	Clinical/Inpatient Med	Research	20	0
64	Administration		0	0
64	Administration	Acute Care	8,311	0
64	Administration	Administration	5,383	0
64	Administration	Ambulatory Services	10,436	0
64	Administration	Behavioral Health	246	0
64	Administration	Domiciliary	246	0
64	Administration	Logistics	636	0
64	Administration	Nursing Home	2,141	0
65	Administration		0	0
65	Administration	Logistics	19,200	0
69	Engineering		0	0
69	Engineering	Logistics	900	0
74	Engineering		0	0
74	Engineering	Administration	294	0
74	Engineering	Ambulatory Services	294	0
74	Engineering	Out Lease	294	0
88	Administration		0	0

Building No.	Building Name	Building Group	Existing BGSF	Proposed BGSF
88	Administration	Acute Care	17	0
88	Administration	Administration	15,504	0
88	Administration	Ambulatory Services	17	0
88	Administration	Behavioral Health	17	0
88	Administration	Domiciliary	17	0
88	Administration	Logistics	3,120	0
88	Administration	Nursing Home	17	0
88	Administration	Out Lease	1,174	0
88	Administration	Research	17	0
90	Nursing Home Care Unit		0	0
90	Nursing Home Care Unit	Acute Care	2,264	0
90	Nursing Home Care Unit	Administration	35	0
90	Nursing Home Care Unit	Ambulatory Services	5,341	0
90	Nursing Home Care Unit	Behavioral Health	35	0
90	Nursing Home Care Unit	Domiciliary	35	0
90	Nursing Home Care Unit	Logistics	1,107	0
90	Nursing Home Care Unit	Nursing Home	39,815	0
90	Nursing Home Care Unit	Out Lease	35	0
90	Nursing Home Care Unit	Research	35	0
Site	Site Information	Logistics	0	0
T16	Engineering		0	0
T16	Engineering	Logistics	5,100	0
T34	Temporary Bldg		0	0
T34	Temporary Bldg	Administration	3,600	0
Z-3	Zone Nursing Home	Nursing Home	0	89,755
Z-3-11S	Surface Parking for Zone Nursing Home	Nursing Home	0	69,200
Total Site	Site Information	Logistics	0	109,423

Note: If building group is blank it identifies unassigned space

- Building Color Code: Similar to the Existing Current Stage Site Plan, the building color indicates the Departmental Group (Zone) of the primary occupants for each building. Matching the building color key used for the Existing Current State Site Plan, the proposed building color indicates the predominant occupancy of the building. Refer to the legend regarding the Departmental Group (Zone) contained therein.

- Site Impact during Construction: This factor is not applicable for BPO 4 since BPO makes available for re-use all 112 acres of the campus.

- Campus Area and Uses: The BPO 4 campus configuration as indicated on the Livermore site is summarized in Tables 24 and 25.

Table 24: Campus Area Total Acreage - BPO 4 – Existing Livermore Campus

Campus Area	Acres
Recreation	0
Parking	0
Buildings and Landscaping	0
BPO Total	0
Existing Campus Total	112

- Campus Area and Uses: The BPO 4 campus configuration as indicated on a *new* site is summarized in Table 25. The 3.5 acres noted is considered minimal and based on the site footprint of a multistory Nursing Home Building. Additional acreage could be required to accommodate the new Nursing Home based on constraints of the selected site, programmatic requirements, a single story structure, etc.

Table 25: Campus Area Total Acreage - BPO 4 – New Nursing Home Campus

Campus Area	Acres
Recreation	~1.5
Parking	~1
Buildings and Landscaping	~1
BPO Total	~3.5
Existing Campus Total	~3.5

- Land Parcels Available for Re-Use: BPO 4 makes available for re-use all 112 acres in six land parcels which can be designated for re-use. The Campus and Re-Use Area Totals (see Table 26) indicate that for BPO 4, 100% of the present campus is available for re-use.

Table 26: Land Parcels Available for Re-use

Re-Use Parcels	Acres
Parcel 1	38.80
Parcel 2	25.33
Parcel 3	19.75
Parcel 4	7.84
Parcel 5	19.78
Entry Drive	00.50
Total	112.00

- Buildings Available for Re-Use: The entire campus is available for re-use in this option.

- Projected Workload Volumes for 2023: The projected areas as derived from VA workload volumes (Stage II Assumptions are described in a separate document provided to VA) indicate the desired Nursing Home care functions require more square footage

than is currently being utilized on the campus. This is mainly due to current VA standard of care requirements utilizing increased square footage.

- Parking: New surface parking would be designed to be convenient to the new building.

Table 27: Parking Distribution

Parking Area	Total Surface Spaces	Total Structured Spaces	Surface Area (SF)	Structured Area (SF)
Nursing Home	104	0	41,600	0
Total	104	0	41,600	0

- Conclusion from the Space Analyses: The functions on this site would best be accommodated in a new site and building designed expressly for these uses. The existing campus is not well laid out for a modern Nursing Home Care Unit. The existing campus would be available for re-use following occupancy of the new campus. Buildings throughout the existing campus are identified for re-use or demolition as they become available to eliminate their ongoing maintenance and security costs.

- Construction Phasing: The entire new facility could be constructed in one phase and move-in could take place within two weeks, depending on the distance from the existing campus.

- Construction Schedule: Schedules for construction of the new campus provides for occupancy of the facility by 2014. Commissioning of engineering systems will occur during the last 20% of the project's duration.

- Existing Building Maintenance Costs: If the exiting campus is re-used, maintenance costs for re-use buildings will be covered by the re-use contractor, not the VA.

- Capital Cost Estimate: Capital costs are based on campus-wide area projections by Departmental Group (Zone) as indicated in the Projected BPO areas by Departmental Group (Zone). These are further described in Chapter 5.

- Construction Cost Depends on Function: Construction costs are derived from projected area requirements by Building and non-Building Departmental Groups (Zones).

- Soft Costs Standardized: Approved factors for "soft costs" (design fees, equipment, administrative costs, furniture, etc.) based on consultant experience and VA standards.

Change in Percentage of Vacant Space:

- Vacant Space: The area total indicates that there will be no vacant space in 2023 for BPO 4 since the new facilities will be constructed to meet the utilization requirements for this year. Projected vacant space, due to relocation of functions to Palo Alto, will also be eliminated by re-use or demolition of vacated buildings.

Table 28: Percentage of Vacant Space - BPO 4

Title	Vacant BGSF
Existing Campus Vacant Area	663
Projected BPO Vacant Area	0
Difference (by Area)	-663
Difference (by Percentage)	-100%

- Consolidation of Underutilized Space: Since BPO 4 involves the construction of all new facilities, this BPO will need approximately the same amount of space as an ideal campus. Figures in Table 29 indicate that BPO 4 will require approximately the same space.

Table 29: Percentage of Underutilized Space - BPO 4[4]

Title	Total
Projected Ideal BGSF Based on In-House Workload	89,752
Proposed BPO BGSF	89,752
Underutilized Space	0
Variance by Percentage	0%

- Timeliness of Completion: BPO 4 requires a six year-four month (76 month) period of total project duration from initiation in January 2009, with design starting in January 2010 and construction completed in May 2015 (See Table 30).

Table 30: Total Construction Duration - BPO 4

	Start	Complete	Months
Total Construction Activity	01/01/09	05/01/2015	76

- Size and Complexity of Capital Plan: Projected utilization volumes indicate that Nursing Home services require additional square footage in 2023. The area of the existing Nursing Home in Building 90 is 44,159 BGSF. Compared with the projected area need of 89,755 BGSF the resultant is a net *increase* for Nursing Home services of 45,596 BGSF. All other services are not included in the new Nursing Home campus and are not addressed within the study.

- Patient Moves: In BPO 4, all existing buildings will be available for re-use, two of which contain clinical services. Although all clinical buildings are considered altered, the patients from these buildings will be moving into fewer, newly constructed facilities in about a week once the new building/site is ready for occupancy. This will be further described in the implementation plans.

- Historic Buildings Altered: There are nine buildings identified as historic or historically eligible in the CAI. For this BPO, all nine will be either re-used or demolished (See Table 31).

[4] The figure projections are within a 5% rounding error, which is acceptable to VA.

Table 31: Historic Buildings Altered – BPO 4

Title	Building Count
Total Historic or Historically Eligible	9
Altered Historic Buildings	9

BPO 8-Renovate and Expand the Current Nursing Home on Livermore Campus

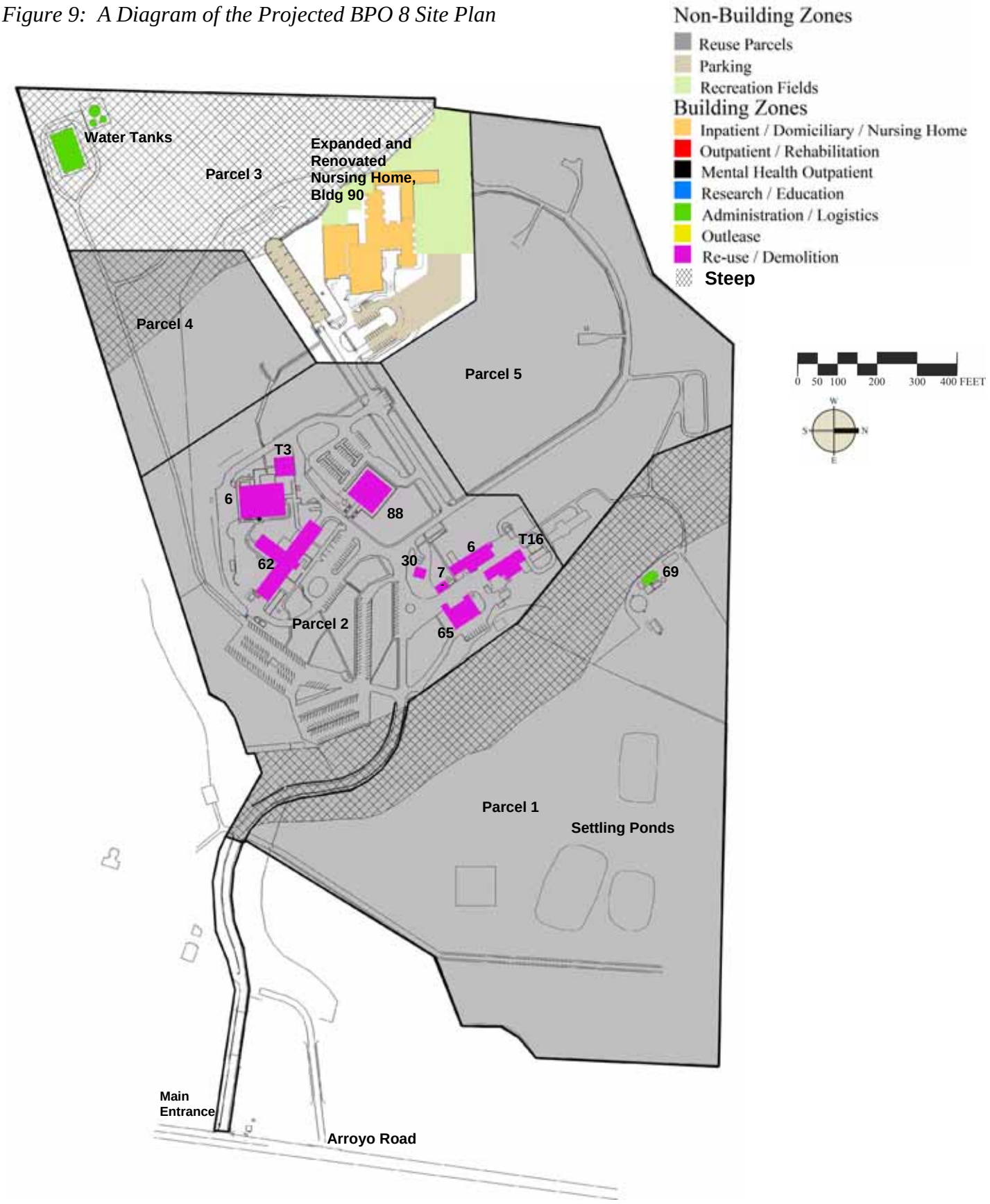
BPO 8 is an option added by the Secretary to renovate and expand the existing Nursing Home Care Unit, Building 90 on Parcel 3. All support functions will be integrated into the NHCU structure. The Waste Water Treatment Plant (Building 69) and settling ponds will continue to service the existing building. Access for patients, staff and visitors to the VA facilities will be via the existing network of on-site paved roads. These roads from Arroyo Road to each VA Building will remain under VA control.

Remaining acreage identified as Parcels 1, 2, 4 and 5 will be available for re-use/redevelopment.

Analysis of Capital Planning Outputs

- Site Plan: The Projected Baseline Site Plan (Figure 9) illustrates the proposed campus configuration and locations of buildings.

Figure 9: A Diagram of the Projected BPO 8 Site Plan



- Relocation of Functions: In BPO 8, functions have been relocated so that the Nursing Home care and support are in one building, yielding less vacant space than the existing condition. All Nursing Home Care, Administration, Logistics, Boiler Plant and Kitchen functions will be consolidated into the expanded Building 90. Building 69 which is part of the on-site sewage treatment plant and settling ponds will continue to service Building 90. Phasing of construction of Building 90 will minimize disruption, but require temporary relocation of various functions into existing buildings. Projected area of 92,674 BGSF is based on the 2023 workloads with no vacant space. Existing entrance drive, sewage treatment plant and settling ponds in Parcel 1 would remain under VA control.

Table 32: Functional Distribution BPO 8

Building No.	Building Name	Building Group	Existing BGSF	Proposed BGSF
30	Resident housing		0	0
30	Resident housing	Acute Care	1,035	0
6	Boiler House		0	0
6	Boiler House	Acute Care	0	0
6	Boiler House	Ambulatory Services	0	0
6	Boiler House	Behavioral Health	0	0
6	Boiler House	Domiciliary	0	0
6	Boiler House	Logistics	6,300	0
6	Boiler House	Nursing Home	0	0
62	Clinical/Inpatient Med		0	0
62	Clinical/Inpatient Med	Acute Care	22,518	0
62	Clinical/Inpatient Med	Administration	4,550	0
62	Clinical/Inpatient Med	Ambulatory Services	46,102	0
62	Clinical/Inpatient Med	Behavioral Health	5,803	0
62	Clinical/Inpatient Med	Domiciliary	1,260	0
62	Clinical/Inpatient Med	Logistics	2,886	0
62	Clinical/Inpatient Med	Nursing Home	2,185	0
62	Clinical/Inpatient Med	Out Lease	20	0
62	Clinical/Inpatient Med	Research	20	0
64	Administration		0	0
64	Administration	Acute Care	8,311	0
64	Administration	Administration	5,383	0
64	Administration	Ambulatory Services	10,436	0
64	Administration	Behavioral Health	246	0
64	Administration	Domiciliary	246	0
64	Administration	Logistics	636	0
64	Administration	Nursing Home	2,141	0
65	Administration		0	0
65	Administration	Logistics	19,200	0
69	Engineering		0	0
69	Engineering	Logistics	900	900
74	Engineering		0	0
74	Engineering	Administration	294	0
74	Engineering	Ambulatory Services	294	0

Building No.	Building Name	Building Group	Existing BGSF	Proposed BGSF
74	Engineering	Out Lease	294	0
88	Administration		0	0
88	Administration	Acute Care	17	0
88	Administration	Administration	15,504	0
88	Administration	Ambulatory Services	17	0
88	Administration	Behavioral Health	17	0
88	Administration	Domiciliary	17	0
88	Administration	Logistics	3,120	0
88	Administration	Nursing Home	17	0
88	Administration	Out Lease	1,174	0
88	Administration	Research	17	0
90	Nursing Home Care Unit	Acute Care	2,264	0
90	Nursing Home Care Unit	Administration	35	0
90	Nursing Home Care Unit	Ambulatory Services	5,341	0
90	Nursing Home Care Unit	Behavioral Health	35	0
90	Nursing Home Care Unit	Domiciliary	35	0
90	Nursing Home Care Unit	Logistics	1,107	0
90	Nursing Home Care Unit	Nursing Home	39,815	48,700
90	Nursing Home Care Unit	Out Lease	35	0
90	Nursing Home Care Unit	Research	35	0
T16	Engineering		0	0
T16	Engineering	Logistics	5,100	0
T34	Temporary Bldg		0	0
T34	Temporary Bldg	Administration	3,600	0
Z-3	Zone Nursing Home	Nursing Home	0	43,974
Z-3-11S	Surface Parking for Zone Nursing Home	Nursing Home	0	30,000
Total Site	Site Information	Logistics	0	606,847

Note: If building group is blank it identifies unassigned space

- Building Color Code: Similar to the Existing Current Stage Site Plan, the building color indicates the Departmental Group (Zone) of the primary occupants for each building. Matching the building color key used for the Existing Current State Site Plan, the proposed building color indicates the predominant occupancy of the building. Refer to the legend regarding the Departmental Group (Zone) contained therein

- Site Impact during Construction: Repaving of existing parking areas and drives demand the greatest area and associated costs. Maintenance of the existing landscaped area is assumed.

- Campus Area and Uses: The campus configuration as indicated on the site plan is summarized in Tables 33 & 34. The area totals for primary activities on the portions of the site to be retained exclusively for VA-related functions are indicated in the Campus Area Total below.

Table 33: Campus Area Total Acreage – BPO 8

Campus Area	Acres
Recreation	~1.7
Parking	~1.5
Buildings and Landscaping	~17
BPO Total	~20
Existing Campus Total	~112

- Land Parcels Available for Re-Use: BPO 8 makes available approximately 92 acres in four land parcels which can be designated for re-use. The Campus and Re-Use Area Totals (see Table 34) indicate that for BPO 8, 82% of the present campus is available for re-use.

Table 34: Land Parcels Available for Re-use

Re-Use Parcels	Acres	Comments
Parcel 1	38.80	Except on-site treatment plant and settling ponds must remain
Parcel 2	25.33	
Parcel 4	19.78	
Parcel 5	7.84	

- Buildings Available for Re-Use: The entire occupied campus is available for re-use in this option with the exception of except for Building 90 and existing utility structures required for service to the proposed new construction. Identification of specific utilities required to be maintained or relocated to serve the new construction is beyond the scope of this study. However, the on-site Sewage Treatment Plant, Settling Ponds and Water Tank will be required to service VA facilities, unless a sewer connection to city of Livermore is established.

- Projected Workload Volumes for 2023: The projected areas as derived from workload volumes (See Stage II Assumptions) indicate the desired Nursing Home care functions require more square footage than is currently being utilized on the campus. This is mainly due to current VA standard of care requirements utilizing increased square footage.

- Parking: Additional surface parking would be designed to be convenient to the expanded Building 90. Existing surface parking areas near the Building 90 will be repaved. Where existing parking is not required, it will be removed and new landscape will be provided. There is no structured parking projected for this campus. Distribution is indicated in Table 35.

Table 35: Parking Distribution

Parking Area	Total Surface Spaces	Total Structured Spaces	Surface Area (SF)	Structured Area (SF)	Location
Nursing Home	104	0	75,000	0	Adjacent to Building 90
Total	104	0	75,000	0	

- Conclusion from the Space Analyses: BPO 8 proposes an expansion and renovation of Building 90; a relatively modern building designed expressly for Nursing Home Care. Much of the existing campus would be available for re-use following occupancy of the renovated and expanded Building 90. Buildings throughout the existing campus are identified for re-use or demolition as they become available to eliminate their ongoing maintenance and security costs.

- Optimal Use of Existing Buildings: Building 90, the existing Nursing Home care building was designed only 25 years ago and the main issues relate to the standard of care for room occupancy and ADA requirement. The result of these deficiencies is that proposed renovations to achieve the projected workload require additional area to achieve the same goal. Since BPO 8 seeks to optimize use of the Building 90, the area totals for this BPO are larger than those BPOs that include only new construction.

- Construction Phasing: In BPO 8, disruptions from renovations to existing occupied buildings will be reduced based on the relocation of Ambulatory services to the Palo Alto campus. Many functions, including patient care, from Building 90 can then be temporarily relocated into Building 62 while Building 90 is being renovated. However, Building 90 will still be partially occupied during construction and phasing the work will be difficult.

- Construction Schedule: Schedules for construction of the new campus provides for occupancy of the facility by 2018. Commissioning of engineering systems will occur during the last 20% of the project's duration.

- Existing Building Maintenance Costs: Existing unaltered buildings retained on the campus for BPO 8 require ongoing and periodic maintenance costs including buildings which are designated for re-use or demolition.

- Capital Cost Estimate: Capital costs are based on campus-wide area projections by Departmental Group (Zone) as indicated in the Projected BPO areas by Departmental Group (Zone). These are further described in Chapter 5.

- Construction Cost depends on Function: Construction costs are derived from projected area requirements by Building and non-Building Departmental Groups (Zones).

- Soft Costs Standardized: Approved factors for "soft costs" (design fees, equipment, administrative costs, furniture, etc) based on consultant experience and VA standards.

Change in Percentage of Vacant Space:

- Vacant Space: The area total indicates that there will be no vacant space in 2023 for BPO 8 since the new facilities will be constructed to meet the utilization requirements for this year. Projected vacant space, due to relocation of functions to Palo Alto, will also be eliminated by re-use or demolition of vacated buildings.

Table 36: Percentage of Vacant Space – BPO 8

Title	Vacant BGSF
Existing Campus Vacant Area	663
Projected BPO Vacant Area	0
Difference (by Area)	-663
Difference (by Percentage)	-100%

- Consolidation of Underutilized Space: Since BPO 8 involves renovation as well as new construction, this BPO will need slightly more space compared to an ideal campus. The figures in Table 37 indicate that BPO 8 will require approximately the same space.

Table 37: Percentage of Underutilized Space – BPO 8[5]

	BGSF
Projected Ideal BGSF Based on In-House Workload	89,752
Projected BPO BGSF	92,674
Underutilized Space	2,922
Variance (by Percentage)	3.15%

- Timeliness of Completion: BPO 8 requires a nine-year (108 month) total project duration from initiation in January 2009, with design starting in January 2010 and multi-phased construction completed in July 2018 (See Table 38).

Table 38: Total Construction Duration – BPO 8

	Start	Complete	Months
Total Construction Activity	01/01/2009	01/01/2018	108

- Size and Complexity of Capital Plan: Projected utilization volumes indicate that Nursing Home services require additional square footage in 2023. The area of the existing Nursing Home in Building 90 is 44,159 BGSF. Compared with the projected area need of 92,674 BGSF the resultant is a net *increase* for Nursing Home services of 48,515 BGSF. All other services are relocated off campus and not included within the study.

- Patient Moves: Of the existing twelve buildings on the campus, in BPO 8, one building with clinical or clinical-related functions will be renovated. Currently, the key building accommodating patients is limited to Buildings 90. It is anticipated that construction phasing for renovation of Building 90 will be complex and that patients will be inconvenienced, but patient care may continue within the building during renovations. These will be further described in the implementation plans.

[5] The figure projections are within a 5% rounding error, which is acceptable to VA.

The overview of primary patient moves will be as follows:

- After expansion of Building 90 addition is complete, patients move into new nursing unit. Patient rooms could be designed to accommodate 2-patients per room to allow temporary relocation of patients into new nursing units during subsequent renovations. These patient rooms will then be used as single bed rooms after renovations are complete.
- After the first phase of Building 90 renovation is complete, Nursing Home patients are moved into completed areas.
- After the second phase of Building 90 renovation is complete, a final move of patients from the nursing unit addition into the renovated nursing unit.

- Historic Buildings Altered: There are nine buildings identified as historic or historically eligible in the CAI. For this BPO, all nine will be either re-used or demolished (See Table 39).

Table 39: Historic Buildings Altered – BPO 8

Title	Building Count
Total Historic or Historically Eligible	9
Altered Historic Buildings	9

5.0 Financial Analysis

A financial analysis, based on the requirements of the VA's cost effectiveness analysis (CEA) tool, was performed for each of the Stage II BPOs for the Livermore VAMC. The chapter first describes key assumptions of the financial analysis at Livermore, followed by a high level comparison of the BPOs. The remainder of the chapter describes the detailed financial outputs for each BPO together with the primary factors influencing the results.

Key Assumptions for Livermore

The following key assumptions were considered for the financial analysis of BPOs at Livermore. A comprehensive description of financial assumptions can be found in a separate document entitled Stage II Assumptions, Inputs and Outputs.

- For all of the BPOs, only nursing home workload is considered for this analysis. All other clinical services currently provided at the Livermore Division, will be relocated to other VA facilities, creating unused space at the Livermore campus.
- Facilities are sized to meet the 2023 forecasted workload. Due to a planning decision made by VA, Livermore's NHCU capacity of 120-nursing home beds is maintained over the 20-year period.
- Changes in the way healthcare is provided each year, e.g., provided in-house in the same, renovated or newly constructed facility; timing of occupying renovated or new facilities; modified square feet both in building or land; and other factors result in changes to the operating costs.
- There was no need for short-term contracting in the analysis.
- The capital plan assumptions, e.g., renovated or new construction, modified square feet requirements, timing of occupying new space, etc. affect the capital investment costs.
- Re-use assumptions regarding the type of re-use, availability of land and buildings, etc. affect the re-use financial assumptions.
- Capital investment costs (for options other than the baseline), as shown in the report, are offset by revenue from re-use or other in-kind considerations.

BPO Comparison

Table 40 presents a comparison of the key financial outputs for each BPO. Three primary components are considered in this analysis: recurring operating costs, non-recurring capital costs and non-recurring considerations (costs/revenues). Recurring operating costs include direct variable, fixed indirect and fixed direct costs. All of the costs are discussed in terms of net present dollars. This term refers to the process of discounting the dollars from each year over the study period (2003 to 2033) to the year 2003 dollars. The intent is to allow for the costs to be compared across BPOs independent of what year the expense or revenue occurs.

Table 40: BPO Comparison

BPO Comparison 2003 Net Present Dollars ($000) Reflects 30 year period 2003- 2033	BPO 1	BPO 2	BPO 4	BPO 8
Recurring Operating Cost	$ 648,649	$ 593,643	$ 591,443	$ 622,296
Non-recurring Capital Investment Offset by Re-use	$ 62,555	$ 65,450	$ 63,722	$ 54,601
Non-recurring Periodic Maintenance	$ 6,266	$ 2,060	$ 2,060	$ 2,114
Total Net Present Cost	$ 717,470	$ 661,153	$ 657,225	$ 679,011
Operating Cost Efficiencies Compared to BPO 1	N/A	$ 55,006	$ 57,206	$ 26,353
Total NPC Savings As Compared to BPO 1	N/A	$ 56,317	$ 60,245	$ 38,459

*Capital Investment Costs for BPO 1 are not offset by re-use. The Net Present Cost (NPC) is the sum of the annual discounted expense for each BPO over the 30 year study period. Discounting allows the NPC for each BPO to be compared to the other BPOs for the study site. The NPC is the sum of the operating costs, the capital costs (both capital investments and periodic maintenance/replacement costs), and the considerations in discounted dollars. Capital costs are net or re-use revenue and savings. A 5.2% Treasury nominal discount rate is assumed to derive the NPCs in FY2003 dollars.

In terms of the Net Present Cost (NPC), BPO 1 is most expensive option at $717 million over the 30 year planning horizon. BPO 4 is the least expensive with a NPC of $657 million, which is 8 percent lower than the baseline option. The underlying cost drivers affecting the NPC of each BPO are described in detail later in this chapter.

The Recurring Operating Costs represent the majority, about 90 to 92 percent, of the NPC for each of the BPOs. The baseline option has the highest operating cost, at $649 million over the 30 year period. BPO 4 has the lowest operating cost, at $594 million. As can be seen in Table 40, the operating costs fluctuate across the BPOs and are the most significant cost drivers. These fluctuations will be discussed in the individual BPO descriptions.

With respect to the Non-Recurring Capital Investments, BPO 2 has the highest capital investment cost at $65 million (including re-use considerations). BPO 8 has the lowest capital investment cost at $55 million (including re-use considerations). Non-recurring periodic maintenance/replacement costs are highest for BPO 1 at $6 million which is to be expected with a baseline renovation, while this cost is about $2 million for the other three BPOs. Although there is a significant amount of land available for non-recurring considerations (re-use, in-kind, etc.), the re-use revenue is a relatively small amount when compared to operating costs.

Table 41 presents a breakdown of the operating costs for each BPO categorized by direct variable, fixed indirect and fixed direct costs.

Table 41: Operating Cost Breakdown by BPO ($ in thousands)

	BPO 1		BPO 2		BPO 4		BPO 8	
	$000	%	$000	%	$000	%	$000	%
Direct Variable	$ 317,274	49%	$ 317,274	54%	$ 317,274	54%	$ 317,274	51%
Fixed Indirect	$ 294,883	45%	$ 239,877	40%	$ 237,677	40%	$ 268,530	43%
Fixed Direct	$ 36,492	6%	$ 36,492	6%	$ 36,492	6%	$ 36,492	6%
Total Operating Costs	$ 648,649	100%	$ 593,643	100%	$ 591,443	100%	$ 622,296	100%

Direct variable costs (i.e., costs of direct patient care that vary directly and proportionately with fluctuations in workload, such as salaries of nurses and providers) account for the largest proportion (49-54%) of total operating costs. These costs fluctuate proportionately as the forecasted workload changes. As agreed in the assumptions, direct variable costs are not affected by efficiencies (see Stage II Assumptions, Inputs and Outputs).

Fixed indirect costs account for the second largest proportion (40-45%) of total operating costs. These represent costs not directly related to patient care, such as utilities and maintenance. Fixed indirect costs are adjusted during the 30-year study period based on changes in building square footage and changes in the overall size (acreage) of the campus.

Fixed direct costs represent a smaller proportion (6%) of the total operating costs. These are costs of direct patient care that do not vary in direct proportion to the volume of patient activity, such as depreciation of medical equipment and salaries of administrative personnel. Although fixed direct costs do not fluctuate in direct proportion to volume, etc., this does not mean that they do not change. Adjustments to fixed direct costs occur during the 30-year study period as workload changes (not in direct proportion).

BPO 1 - Baseline

BPO 1 is the option under which there would not be significant changes in either the location or type of services provided in the study site, other than those described in the Secretary's Decision. BPO 1 updates the existing nursing home facility to modern, safe and secure standards through renovation of selected buildings required to house the necessary services. Services are consolidated in a smaller number of buildings which reduces the square feet required.

Inputs and Assumptions

The workload for BPO 1 is limited to providing nursing home care for 120 veterans at the Livermore site. The newly renovated facility is planned to be completed in 2017 and is sized to meet the workload demand projection for 2023. No additional land purchases are required. A comprehensive description of financial assumptions can be found in a separate document entitled Stage II Assumptions, Inputs and Outputs.

Outputs

Net Present Cost (NPC)

Table 42 summarizes NPC, total operating costs, non-recurring capital investment costs (baseline option does not include re-use considerations), and non-recurring periodic maintenance costs for BPO 1.

Table 42: BPO 1 Financial Summary Outputs ($ in thousands)

Costs:	BPO 1	
Total Recurring Operating Costs	$ 648,649	90%
Non-Recurring Capital Investment	$ 62,555	9%
Non-Recurring Periodic Maintenance	$ 6,266	1%
Total Net Present Costs	**$ 717,470**	**100%**

The Net Present Cost (NPC) is the sum of the annual discounted expense for each BPO over the 30 year study period. Discounting allows the NPC for each BPO to be compared to the other BPOs for the study site. The NPC is the sum of the operating costs, the capital costs (both capital investments and periodic maintenance/replacement costs), and the considerations in discounted dollars. A 5.2% Treasury nominal discount rate is assumed to derive the NPCs in FY2003 dollars.

The NPC of BPO 1 is estimated at $717 million for the 30-year period. The NPC of BPO 1 is highest among the four BPOs. Adjustments to the operating costs associated with providing healthcare (utilities, maintenance, administration costs, etc.) over a 30 year period have a much greater impact on NPC than any changes to capital expenditures. Approximately $649 million (90%) of the NPC of BPO 1 are recurring operating costs. Operating costs for BPO 1 are higher over the 30-year period due to fixed indirect costs being higher than the other three options. Because the campus and buildings undergo the least amount of change in BPO 1, the cost savings due to operating efficiencies (reflected in fixed indirect costs) of a right-sized campus that are present in BPOs 2, 4, and 8 are not reflected in BPO 1.

Capital investment costs of $63 million are required to update the campus. Capital investment costs are incurred at the beginning of the construction phases, in 2010 through 2013. Starting in 2020 through 2033, $6 million of periodic maintenance (nonrecurring capital) costs are incurred.

BPO 1 does not include revenues and savings from re-use in the financial assessment. BPO 1 (the baseline) is an option intended to preserve the campus and buildings as the veterans and others know it. However, due to the configuration of the buildings in the capital plan for the proposed BPO, portions of the site may be considered for re-use as an Alternate BPO 1 (Baseline). The campus and re-use area total for this Alternate BPO 1 (Baseline) indicates approximately 58% (Parcels 1, 4 & 5) of the present campus may be available for re-use, however a portion of that land is considered “non-developable” due to the presence of a waste water treatment facility, steep terrain, and other site constraints.

Total Operating Costs

BPO 1's total operating costs of $649 million are the largest cost within the overall NPC, accounting for approximately 90% of the NPC. As a percentage of total operating costs for the 30-year period, direct variable, fixed indirect, and fixed direct costs account for 49% ($317 million), 45% ($295 million), and 6% ($36 million), respectively.

Direct variable costs fluctuate as a proportion of NPC as the forecasted workload demand changes. The total direct variable costs of $317 million for the 30-year study timeframe are the same for all four BPOs. This is because the workload is constant and there is no need to contract out for service provision.

Fixed indirect costs (i.e., costs not directly related to patient care such as utilities and maintenance) account for about 39% to 50% of total operating costs each year over the 30 year period. Fixed indirect costs remain constant from 2003 until 2016. Upon completion of the renovation, fixed indirect costs are adjusted to consider the change in costs that result from the change in Livermore's campus design (i.e., reduced square footage and acreage requirements). Fixed indirect cost adjustments are driven by a drop in square footage from 223,928 to 134,944 square feet (campus acreage stays the same). Fixed indirect costs for years 2017 through 2033 are adjusted to 63% of 2016 fixed indirect costs to consider decreases in maintenance, administration and utility costs.

Fixed direct costs are costs of direct patient care that do not vary in direct proportion to the volume of patient activity. These costs account for about 5% to 6% of total operating costs for the 30-year period. Nursing home workload is constant at Livermore for the 30-year study period, so fixed direct costs do not change. The fluctuation in fixed direct costs as a percentage of total operating costs are due to the operating costs and other cost categories changing during the 30-year study period. As the other costs change, fixed direct costs account for a different percentage of total operating costs. The total fixed direct costs of $36 million for the 30-year study timeframe are the same for all four BPOs.

Capital Costs

The non-recurring capital investment costs for BPO 1 are associated with the renovation on the campus. The non-recurring capital investment costs are estimated to be $63 million to renovate 134,944 square feet. These costs are incurred between 2010 and 2013. Capital investment costs are incurred at the beginning of the construction phases. The capital investment costs include activation costs (start-up equipment, furnishings, moving costs, etc) of 20% of total capital investment costs in the last year of renovation / construction for each building.

There are periodic maintenance / replacement costs of $6 million beginning in FY2020 through FY2033. Periodic maintenance and replacement costs are driven by the maintenance/replacement schedule (15, 25, 30 years) of major items or projects. Based on the new construction and renovation schedule for each BPO, the dates of periodic maintenance and replacement vary by BPO. These costs do not include periodic maintenance / replacement of buildings that are not needed. The total capital costs of $69 million account for approximately 10% of the NPC. If re-use potential were considered as part of this option, it is projected that this option would provide the least amount of revenue potential.

BPO 2 - Build New Nursing Home on Livermore Campus

In BPO 2, the option is a complete replacement facility. The nursing home care services remain on the Livermore campus in a new stand-alone building. The existing nursing home will be demolished after the opening of the new nursing home to provide adequate access buffer and landscape ones. All support functions are planned to be integrated into the new nursing home structure.

Inputs and Assumptions

The workload for BPO 2 is limited to providing nursing home care for 120 veterans on the Livermore site. The newly constructed facility is planned to be started in 2010 and completed in 2014. It is sized to meet the workload demand projection for 2023. A comprehensive description of financial assumptions can be found in a separate document entitled Stage II Assumptions, Inputs and Outputs.

Outputs

Net Present Cost (NPC)

Table 43 summarizes NPC, total operating costs, non-recurring capital investment costs including re-use considerations, and non-recurring periodic maintenance costs for BPO 2.

Table 43: BPO 2 Financial Summary Outputs ($ in thousands)

Costs:		BPO 2	
Total Recurring Operating Costs	$	593,643	90%
Non-Recurring Capital Investment Offset by Re-use	$	65,450	10%
Non-Recurring Periodic Maintenance	$	2,060	0%
Total Net Present Costs	**$**	**661,153**	**100%**
Operating Cost Efficiencies Compared to BPO 1	$	55,006	

The Net Present Cost (NPC) is the sum of the annual discounted expense for each BPO over the 30 year study period. Discounting allows the NPC for each BPO to be compared to the other BPOs for the study site. The NPC is the sum of the operating costs, the capital costs (both capital investments and periodic maintenance/replacement costs), and the considerations in discounted dollars. A 5.2% Treasury nominal discount rate is assumed to derive the NPCs in FY2003 dollars.

The NPC for BPO 2 is estimated at $661 million for the 30 year period from 2003 to 2033. This is comprised of $594 million (90%) in recurring operating costs, $65 million (10%) in non-recurring capital investment costs (including re-use considerations) and $2 million in non-recurring periodic maintenance/replacement costs.

BPO 2's NPC of $661 million is approximately $56 million less than BPO 1, which represents approximately 8% in cost savings. The primary driver of these cost savings is a $55 million reduction in operating costs as compared to BPO 1. The lower operating costs of BPO 2 are due to operating efficiencies that are reflected in lower fixed indirect costs (maintenance, utilities, etc.) due to a smaller, right-sized campus.

Starting in 2010 through 2014, capital investment dollars of $65 million (including re-use considerations) are spent to build the new nursing home and other related facilities. BPO 2's capital costs are approximately $3 million more than BPO 1 due to all new construction. Capital investment dollars are incurred at the beginning of the construction phases. This includes a 20% activation cost (moving costs, start-up equipment, furnishings, etc.) incurred in the final year of construction. In 2029, $2 million of periodic maintenance (nonrecurring capital costs) are spent to maintain the facility. Together, these costs represent about 10% of the NPC.

Total Operating Costs

BPO 2's total operating costs of $594 million are the largest cost within the overall NPC, accounting for about 90% of the NPC. As a percentage of total operating costs for the 30-year period, direct variable, fixed indirect, and fixed direct costs account for 54% ($317 million), 40% ($240 million), and 6% ($36 million), respectively.

Direct variable costs fluctuate proportionately as the forecasted workload demand changes. The total direct variable costs of $317 million for the 30-year study period are the same for all four BPOs. This is because the workload is constant and there is no need to contract out for service provision.

Fixed indirect costs (i.e., costs not directly related to patient care) account for 29 to 50% of total operating costs each year over the 30 year period. Fixed indirect costs remain constant from 2003 until 2014. Upon completion of the construction, fixed indirect costs are adjusted to consider the change in costs that result from the smaller campus design, both facilities and acreage. Fixed indirect costs are adjusted beginning in 2014 at the completion of construction. Indirect fixed costs fall to 40% of 2013 values (savings of $7 million in 2014 as compared to BPO 1). Fixed indirect cost adjustments are driven by a drop in square footage from 223,928 to 89,752 sq ft, and the reduction in campus size from 112 to 30 acres. This is the primary driver of the operating cost savings.

Fixed direct costs, i.e., costs of direct patient care which do not vary in direct proportion to the volume of patient activity, account for about 6% of total operating costs for the 30-year period. Nursing home work load is constant at Livermore for the 30-year study period, so fixed direct costs do not change. The total fixed direct costs of $36 million for the 30-year study timeframe are the same for all four BPOs.

Capital Costs

The non-recurring capital investment costs for BPO 2 are associated with the construction and periodic maintenance/replacement costs on the campus for the nursing home. The non-recurring capital investment costs, which are offset by re-use considerations, are estimated to be $65 million for construction and $2 million for periodic maintenance/replacement. Although re-use revenues are significant, these revenues do not have a material impact on the NPC of BPO 2.

The construction costs are primarily incurred in 2010. Capital investment costs are incurred at the beginning of the construction phases. The periodic maintenance/replacement costs of $2 million are incurred in FY2029.

Periodic maintenance and replacement costs are driven by the maintenance/ replacement schedule (15, 25, 30 years) of major items or projects. Based on the new construction and renovation schedule for each BPO, the dates of periodic maintenance and replacement will vary by BPO. The total net capital costs of $67 million represent about 10% of the net present cost.

BPO 4 - Build New Nursing Home in Central Valley and Co-locate with a CBOC

In BPO 4, the nursing home care unit is relocated to a new stand-alone facility co-located with ambulatory care services off the Livermore campus. The new nursing home care unit is co-located with the expanded Central Valley Community Based Outpatient Clinic (CBOC). The entire campus is available for re-use. The BPO involves new construction (including land acquisition) for the nursing home.

Inputs and Assumptions

The workload for BPO 4 is performed on the new site. The newly constructed facility is planned to begin construction in 2010 and be completed in 2014. It is sized to meet the workload demand projection for 2023. A comprehensive description of financial assumptions can be found in a separate document entitled Stage II Assumptions, Inputs and Outputs.

Outputs

Net Present Cost (NPC)

Table 44 summarizes NPC, total operating costs, non-recurring capital investment costs including re-use considerations, and non-recurring periodic maintenance costs for BPO 4.

Table 44: BPO 4 Financial Summary Outputs ($ in thousands)

Costs:		BPO 4	
Total Recurring Operating Costs	$	591,443	90%
Non-Recurring Capital Investment Offset by Re-use	$	63,722	10%
Non-Recurring Periodic Maintenance	$	2,060	0%
Total Net Present Costs	**$**	**657,225**	**100%**
Operating Cost Efficiencies Compared to BPO 1	$	57,206	

The Net Present Cost (NPC) is the sum of the annual discounted expense for each BPO over the 30 year study period. Discounting allows the NPC for each BPO to be compared to the other BPOs for the study site. The NPC is the sum of the operating costs, the capital costs (both capital investments and periodic maintenance/replacement costs), and the considerations in discounted dollars. A 5.2% Treasury nominal discount rate is assumed to derive the NPCs in FY2003 dollars.

The NPC of BPO 4 is estimated at $657 million over the 30-year period. The NPC for BPO 4 is about $60 million (9%) less than BPO 1. This is comprised of $591 million (90%) for recurring operating costs, $64 million in non-recurring capital investment costs (including re-use considerations) and $2 million in non-recurring periodic maintenance/replacement costs. The primary driver of BPO 4's lower NPC is the $57 million reduction in operating expenses as compared to BPO 1. The lower operating costs of BPO 4 are due to operating efficiencies that are reflected in lower fixed indirect costs (maintenance, utilities, etc.) due to a smaller, right-sized healthcare environment.

Capital investment costs of $64 million (offset by re-use considerations) are required to build the new facility. Combined with non-recurring periodic maintenance/replacement costs, the total capital costs account for about 10% ($66 million) of the NPC for BPO 4. The capital investment costs are about the same as BPO 1 and are lower than BPO 2. Construction of the new nursing home at an offsite location would be less complex and achieved in less time than constructing a new nursing home at the current Livermore site. This fact, coupled with the greater re-use potential of BPO 4 is why capital investment costs including re-use are lower for BPO 4 as compared to BPO 2 (new construction at the existing site).

Total Operating Costs

BPO 4's total operating costs of $591 million are the largest cost within the overall NPC, accounting for approximately 90% of the NPC. As a percentage of total operating costs for the 30-year period, direct variable, fixed indirect, and fixed direct costs account for 54% ($317 million), 40% ($238 million), and 6% ($36 million), or respectively.

Direct variable costs fluctuate proportionately as the forecasted workload demand changes. The total direct variable costs of $317 million for the 30-year study timeframe are the same for all four BPOs.

Fixed indirect costs account for about 29 to 50% of total operating costs each year over the 30 year period. Fixed indirect costs remain constant from 2003 until 2015. Upon completion of the new construction, fixed indirect costs are adjusted to consider the change in costs that result from the move to the new site. Fixed indirect costs are adjusted beginning in 2015 at the completion of construction. Indirect fixed costs fall to 38% of 2013 values (savings of $7 million in 2015 as compared to BPO 1). Fixed indirect cost adjustments are driven by a drop in square footage from 223,928 to 89,750 sq ft. The campus acreage drops from 112 to 3.5 acres.

Fixed direct costs are costs of direct patient care that do not vary in direct proportion to the volume of patient activity. These costs account for about 5 to 7% of total operating costs for the 30-year period. Nursing home workload is constant at Livermore for the 30-year study period, so fixed direct costs do not change. The fluctuation in fixed direct costs as a percentage of total operating costs is due to the operating costs and other cost categories changing during the 30-year study period. As the other costs change, fixed direct costs account for a different percentage of total operating costs. The total fixed direct costs of $36 million for the 30-year study period are the same between all four BPOs.

Capital Costs

The non-recurring capital investment costs (including re-use considerations) for BPO 4 are associated with the construction of the nursing home on the new site and the periodic maintenance / replacement costs of approximately $64 million and $2 million, respectively. The capital investment costs are scheduled to begin in 2010 with the completion of the nursing home in 2015. Capital investment costs are incurred at the beginning of the construction phases. Although re-use revenues are significant, these revenues do not have a material impact on the NPC of BPO 4.

The periodic maintenance/ replacement costs are scheduled to occur in 2029. Periodic maintenance and replacement costs are driven by the maintenance/replacement schedule (15, 25, 30 years) of major items or projects. Based on the new construction and renovation schedule for each BPO, the dates of periodic maintenance and replacement vary by BPO. Land acquisition costs of $787,500 (2003 value) are added in 2010 for the purchase of land for a building site.

Land acquisition costs have a nominal impact on the capital investment costs of $64 million (if land acquisition costs were completely removed from the analysis - for instance, a local government proposal is to provide land to VA for a $1 annual lease - there would not be a material impact on capital costs).

The total capital costs of approximately $66 million, which are offset by re-use considerations, do not account for as large of a portion of NPC as total operating costs, but do account for about 10% of NPC.

BPO 8- Renovate and Expand the Current Nursing Home on Livermore Campus

In BPO 8, the nursing home services remain on campus. Building 90, the current nursing home care unit, is renovated and expanded. All support functions are integrated into the larger building. Parcels 1, 2, 4 and 5 are available for re-use.

Inputs and Assumptions

The workload for BPO 8 is performed on the Livermore site, with a renovated and expanded nursing home building and a right-sized facility, both in terms of the building square feet and the acreage. The newly constructed and renovated facility is planned to be started in 2014 and completed in 2018. A comprehensive description of financial assumptions can be found in a separate document entitled Stage II Assumptions, Inputs and Outputs

Outputs

Net Present Cost (NPC)

Table 45 summarizes NPC, total operating costs, non-recurring capital investment costs including re-use considerations, and non-recurring periodic maintenance costs for BPO 8.

Table 45: BPO 8 Financial Summary Outputs ($ in thousands)

Costs:		BPO 8	
Total Recurring Operating Costs	$	622,296	92%
Non-Recurring Capital Investment Offset by Re-use	$	54,601	8%
Non-Recurring Periodic Maintenance	$	2,114	0%
Total Net Present Costs	**$**	**679,011**	**100%**
Operating Cost Efficiencies Compared to BPO 1	$	26,353	

The Net Present Cost (NPC) is the sum of the annual discounted expense for each BPO over the 30 year study period. Discounting allows the NPC for each BPO to be compared to the other BPOs for the study site. The NPC is the sum of the operating costs, the capital costs (both capital investments and periodic maintenance/replacement costs), and the considerations in discounted dollars. A 5.2% Treasury nominal discount rate is assumed to derive the NPCs in FY2003 dollars.

The NPC for BPO 8 is estimated at $679 million over the 30 year period. The NPC for BPO 8 is about $38 million (5%) less than BPO 1. This is comprised of $622 million (92%) in recurring operating costs, $55 million (8%) in non-recurring capital investment costs (including re-use considerations) and $2 million in non-recurring periodic maintenance/replacement costs. The primary driver of the savings is the $26 million reduction in operating expenses. The lower operating costs of BPO 8 are due to operating efficiencies that are reflected in lower indirect costs (maintenance, utilities, etc.) due to a smaller, right-sized campus.

Capital investment costs of $55 million (offset by re-use considerations) are required by BPO 8. These costs (combined with $2 million in periodic maintenance costs) account for 8% of the NPC. BPO 8 involves renovating and enlarging the current nursing home while right-sizing the rest of the facility and the grounds of the campus. The difference between BPO 8 and BPO 1 is

the consolidation of logistics and support functions and the re-use considerations. The new campus results in operating cost efficiencies that are reflected in operating costs and subsequently lower NPC.

Total Operating Costs

BPO 8's total operating costs of $622 million are the largest cost within the overall NPC, accounting for approximately 92% of the NPC. As a percentage of total operating costs for the 30-year period, direct variable, fixed indirect, and fixed direct costs account for 51% ($317 million), 43% ($269 million), and 6% ($36 million), respectively.

Direct variable costs fluctuate proportionately as the forecasted workload demand changes. The total direct variable costs of $317 million for the 30-year study period are the same for all four BPOs.

Fixed indirect costs account for about 30% to 50% of total operating costs each year over the 30 year period. Fixed indirect costs remain constant from 2003 until 2018. Upon completion of the new construction, fixed indirect costs are adjusted to consider the change in costs that result from the change in Livermore's campus redesign. Fixed indirect costs fall to 40% of 2017 values beginning in 2018 (savings of $2 million in 2018 as compared to BPO 1). Fixed indirect cost adjustments are driven by a drop in square footage from 223,928 to 92,674 sq ft. and the campus size decreasing from 112 to 21 acres.

BPO 8's operating costs are higher than BPO's 2 and 4 due to the timing of the adjustments made to fixed indirect costs. Fixed indirect costs are not adjusted until 2018 at the completion of construction. Fixed indirect costs are adjusted in 2014 for BPO's 2 and 4. The longer construction schedule of BPO 8 results in higher fixed indirect costs when compared to BPO's 2 and 4.

Fixed direct costs are costs of direct patient care that do not vary in direct proportion to the volume of patient activity. These costs account for about 5% to 7% of total operating costs for the 30-year period. Nursing home workload is constant at Livermore for the 30-year study period, so fixed direct costs do not change. The fluctuation in fixed direct costs as a percentage of total operating costs are due to the operating costs and other cost categories changing during the 30-year study period. As the other costs change, fixed direct costs accounted for a different percentage of total operating costs.

Capital Costs

The non-recurring capital investment costs (including re-use considerations) for BPO 8 are associated with the construction and major renovation on the resized campus and the periodic maintenance/replacement costs of approximately $55 million and $2 million, respectively. The capital investment costs are scheduled to begin in 2010, but the facilities do not become available until between 2014 and 2018.

The periodic maintenance/replacement costs are scheduled to occur in 2029 through 2033. Periodic maintenance and replacement costs are driven by the maintenance/replacement schedule

(15, 25, 30 years) of major items or projects. Based on the new construction and renovation schedule for each BPO, the dates of periodic maintenance and replacement will vary by BPO.

The total capital costs of approximately $57 million, which are offset by re-use considerations, do not account for as large of a portion of NPC as total operating costs, but do account for nearly 8% of NPC. Although re-use revenues are significant, these revenues do not have a material impact on the NPC of BPO 8.

6.0 Stakeholder and LAP Input Analysis

The purpose of the stakeholder element in the CARES study was to encourage a meaningful dialogue among veterans, veterans advocacy groups, employees, elected officials, and other interested parties about the options being considered for the LVD site. Feedback from stakeholders was considered by Team PwC in developing and evaluating BPOs and in developing implementation plans and risk mitigation strategies for each BPO. This feedback will also be used by VA decision makers in weighing the advantages and disadvantages of each BPO and its associated implementation plans.

VA determined at the beginning of the CARES process that it would use the Federal Advisory Committee Act (FACA) process to solicit stakeholder input and to provide a public forum for discussion of stakeholder concerns because "[t]he gathering and consideration of stakeholder input in this scope of work is of great importance." According to the Statement of Work, the purpose of the Local Advisory Panel (LAP) appointed under the FACA is to:

> provide the Contractor with a perspective on previous CARES local planning products, facility mission and workload, facility clinical issues, environmental factors, VISN referral and cross cutting issues in order to assist the Contractor in the refinement of the options the Contractor shall recommend. The Federal Advisory Committee will also provide feedback to the Contractor on proposed options and recommendations.

The Livermore LAP consists of six members: Al Perry (Chair), Director of the VA Central California Healthcare System; Ellen Shibata, M.D., ACOS Livermore, William Ed Schoonover, Veterans Service Organization representative; Beverly Finley, Former Director of Stanislaus County Health Services; Tom Vargas, Divisional Vice President of First American Title Insurance Company; and Guy Houston, State Assemblyman. The members of the LAP are VA staff, representatives of the community, or members of a veteran service organization.

The LAP held public meetings at which stakeholders had an opportunity to present testimony and comment on the work performed by Team PwC and the deliberations of the LAP. The LAP public meetings were one of a series of communication channels provided to stakeholders to express their interests, concerns, and priorities for the study. Stakeholders could give oral and written testimony at the LAP meetings, submit written comments or proposals to the central mailing address, or complete one of the comment forms specific to the options being studied in Stage I or Stage II.

Recap of LAP Meeting 2 Stakeholder and LAP Input

Approximately 140 members of the public attended the second LAP meeting held on September 14, 2005 during Stage I of the CARES study. At this LAP meeting, stakeholders were given the opportunity to provide feedback regarding the specific BPOs being considered for further study in Stage II by Team PwC. Through the VA CARES website and comment forms distributed at the public meeting, stakeholders were able to indicate if they “favor”, are “neutral”, or are “not in favor” of each of the BPOs. The results of this written and electronic feedback on the BPOs being considered for further study in Stage II are provided in the table below:

Table 46: LAP Meeting 2 Stakeholder Comment Form Results for Stage II Study BPOs

BPO	Label	Favor	Neutral	Not Favor
1	Baseline	7	1	3
2	New NHCU On-Site in Parcel 3 (Upper Campus)	5	4	2
4	New off-site NHCU Co-located with VA CBOC	2	0	9

Overall the small number of comment forms received indicated that stakeholders showed support for BPOs 1 and 2 which keep the NHCU on the current Livermore campus, and did not support BPO 4 which moves the NHCU off-site to be co-located with a VA CBOC. The comment form feedback received during the stakeholder input period around the second LAP was limited, a considerable number of veterans, veteran advocates, elected officials, and other interested parties provided oral testimony at the second LAP meeting. There was a range of views expressed about the merits of maintaining the existing campus. Many stakeholders expressed their desire to maintain the current facility. Others testified that access to care could be enhanced through options that co-locate a NHCU with outpatient services in the Central Valley, East Bay, or other nearby locations.

Following the presentation of public comments at the second LAP meeting, the LAP conducted its deliberation on the BPOs presented by Team PwC. The following table presents the results of LAP deliberations at the second public meeting on the BPOs being considered for further study in Stage II (excluding BPO 8 which was added by the Secretary as a new option for Stage II study):

Table 47: LAP Meeting 2 BPO Voting Results

BPO	Label	Yes	No
1	Baseline	0	5
2	New NHCU On-Site in Parcel 3 (Upper Campus)	1	4
4	New off-site NHCU Co-located with VA CBOC	5	0

Overall at the second public meeting, the LAP shared the concerns of the public with regard to maintaining services and addressing veterans' access and travel-time concerns. The LAP agreed that Livermore's beautiful campus should be preserved if possible, but was open to consideration of other options which would better address the issues of access and travel-time, provide new state of the art facilities, and co-locate the NHCU with other VA services.

Summary of LAP Meeting 3 Stakeholder and LAP Input

A third period for submitting electronic or written comments on the BPOs began July 13, 2006, the day of the Secretary's study announcement for Stage II, and ended on September 22, 2006, 14 days after the third LAP meeting. Approximately 50-60 members of the public attended the third LAP meeting held on September 8, 2006. A total of 59 forms of stakeholder input (oral, written, and electronic) were received between July 13 and September 22, 2006. The concerns of stakeholders who submitted general comments are summarized in the following table:

Table 48: General Stakeholder Concerns for Stakeholder Input Period 3

Key Concern	Total Times Stakeholders Voiced General Concerns	Percentage of Total General Concerns Voiced
Adequate Facilities	6	10%
Timeliness	0	0%
Availability of Care	2	3%
Use of Facility	18	29%
Campus Environment	9	14%
Other	28	44%

Similar to Stage I, during Stage II stakeholders were provided a comment form that described the options being studied. This comment form was available electronically on the VA CARES project website (www.va.gov/CARES) as well as in paper form at the third LAP public meeting, and asked stakeholders to indicate if they have any of the concerns defined in the following table for each option:

Table 49: Comment Form Categories of Stakeholder Concern for each BPO:

Category of Concern	Definition
Adequate Facilities	Concerns about whether this option would provide a modern facility capable of meeting healthcare demands in the future.
Timeliness	Concerns about the length of time to finish construction called for by this option.
Availability of Care	Concerns that construction will disrupt the healthcare currently provided
Use of Facility	Concerns about whether this option makes good use of existing land and facilities.
Campus Environment	Concerns that this option will disrupt the historic quality or the natural setting of the current campus.

Of the 59 forms of stakeholders input received during the input collection period, 23 of those were electronic and paper comment forms specific to the Stage II study options. The feedback received from these comment forms is summarized in the following tables:

Table 50: LAP Meeting 3 Stakeholder Comment Form Results - Number of Concerns

	Number of Concerns by BPO			
Concerns	**BPO 1:** Baseline Option	**BPO 2:** New NHCU On-Site in Parcel 3 (Upper Campus)	**BPO 4:** New off-site NHCU Co-located with VA CBOC	**BPO 8:** Renovate and expand the existing NHCU on Parcel 3
Adequate Facilities	4	10	15	6
Timeliness	5	10	14	8
Availability of Care	4	10	13	9
Use of Facility	7	14	16	12
Campus Environment	6	13	14	11
Total Concerns:	**26**	**57**	**72**	**46**

As was previously the case, only a limited number of stakeholders chose the comment form as their method of providing input to the study. The 23 stakeholders who used this method expressed the most concerns about BPO 4, which moves the NHCU to a new facility co-located with a VA CBOC. For BPO 4, stakeholder concerns were fairly evenly distributed among all

concern categories, with the highest number of concerns about "Use of Facility". Stakeholders expressed the fewest number of concerns overall about BPO 1 which is the baseline option.

For all BPOs the "Use of Facility" category received the largest number of concerns (concerns about whether the option makes good use of existing land and facilities). For all options that keep the NHCU on the current Livermore Campus (BPOs 1, 2 and 8), stakeholders indicated concerns about "Campus Environment" (concerns that this option will disrupt the historic quality or the natural setting of the current campus) with the second highest frequency. The limited number of submitted comment forms indicates that for all options, stakeholders are most concerned about reuse possibilities and there is unease about possible changes in the campus environment at Livermore.

A considerable number of veterans, veteran advocates, elected officials, and other interested parties provided oral testimony at the third LAP meeting. This testimony and other written input received conveyed two notable views of the stakeholders:

1. Many stakeholders greatly value the scenic quality of the current Livermore campus and conveyed their desire to maintain the current facility. Although most stakeholders did not directly voice support for a particular option, stakeholders with this viewpoint would be more supportive of the options that keep the NHCU on the current campus (BPOs 1, 2 and 8). The following excerpts from input received are representative of this stakeholder viewpoint:

   "With additional veterans returning [from Operation Iraqi Freedom to the Livermore area], the need for a beautiful, peaceful setting for this facility increases. The Central Valley is hot, unlovely and can never match this one. There is value beyond the facilities and if this land is otherwise developed it will not benefit citizens in the way this will if it remains here!" - Excerpt from comment form received

   "I believe the Livermore site offers unique benefits to convalescing veterans. The country location, close to the major San Francisco Bay Area communities, offers a quiet, Eden-like atmosphere away from busy streets and hustle and bustle of daily activities and a place where veterans can reduce stress." - Excerpt from letter received

2. Several stakeholders testified that access to care could be enhanced through options that co-locate a NHCU with outpatient services in the Central Valley; many specifically requested French Camp in San Joaquin County as the desired site for a new facility. Although most stakeholders did not directly voice support for a particular option, stakeholders with this viewpoint would be more supportive of BPO 4 which moves the NHCU to a new facility co-located with a VA CBOC. Some of the stakeholders that expressed this viewpoint also indicated that although they support the construction of a new facility in the Central Valley, if possible the Livermore campus should be preserved for uses that directly benefit veterans. The following excerpts from input receive are representative of this stakeholder viewpoint:

   "I am in strong support of locating a Veterans Administration Nursing Home and Regional Clinic in French Camp, San Joaquin County, California. The proposed site, on the grounds of San Joaquin General Hospital, is supported by the [San Joaquin County]

Board of Supervisors and the local community. It is well positioned to provide the highest quality of support to the greatest number of veterans."
- Barbara Matthews, Assembly Member, 17th District

"This letter is in full support of locating the VA Regional Clinic and Nursing Home in French Camp, California, a site proposed by the Board of Supervisors of San Joaquin County. As the home to over 44,000 veterans, this location is the most logical, cost effective, and accessible location for these facilities."
- Raul Rodriguez, Superintendent/President of San Joaquin Delta College

Summary of LAP Meeting 4 Stakeholder and LAP Input

A fourth and final period for submitting electronic or written comments on the Livermore BPOs began January 24, 2007 on the day that the Team PwC Stage II Preliminary Report was posted to the website and released to the public, and ended on February 23, 2007, 14 days after the fourth LAP meeting. Approximately 130 members of the public attended the fourth LAP meeting held on February 9, 2007, and a total of 2,596 forms of stakeholder input (oral, written, and electronic) were received between January 24 and February 23, 2007. The following table summarizes general stakeholders comments received during this period:

Table 51: General Stakeholder Comments for Stakeholder Input Period 4

Comment Topic	Total Times Stakeholders Voiced General Comments	Percentage of Total General Comments Voiced
Adequate Facilities	2343	32%
Availability of Care	2470	34%
Campus Environment	15	0%
Use of Government Resources	2350	32%
Use of Facility	85	1%
Other	77	1%

For the fourth LAP meeting, a comment form similar to one used during earlier input periods was available to stakeholders describing the options being studied in Stage II. This comment form was available electronically on the VA CARES project website (www.va.gov/CARES) as well as in paper form at the fourth LAP public meeting, and it invited stakeholders to indicate support for each option and if they agree with the following attributes of each option.

Table 52: Comment Form Categories of Stakeholder Support for BPOs

Category of Support	Definition
Adequate Facilities	The option will provide a modern facility that will meet future healthcare needs.
Availability of Care	The option will make care received more convenient.
Campus Environment	The option will maintain or enhance the campus setting.
Use of Government Resources	The option makes good use of government resources.
Use of Facility	The option will make good use of land and facilities.
Other	Any other reason to support or not support this option.

Of the 2,596 forms of stakeholder input received during the input collection period, only 122 of those were electronic and paper comment forms specific to the Stage II study options. The feedback received from these comment forms shows a different stakeholder viewpoint than what

stakeholders communicated through written letters and other forms of input. The comment form feedback is summarized in the following tables:

Table 53: LAP Meeting 4 Comment Form Results - Stakeholder Support for BPOs

		Support by BPO			
Stakeholder Support		**BPO 1:** Baseline Option	**BPO 2:** New NHCU On-Site in Parcel 3 (Upper Campus)	**BPO 4:** New off-site NHCU Co-located with VA CBOC	**BPO 8:** Renovate and expand the existing NHCU on Parcel 3
Stakeholders who support the BPO	Number	24	78	34	35
	% of Total Forms (122)	20%	64%	28%	29%
Stakeholders who do not support the BPO	Number	36	22	37	34
	% of Total Forms (122)	30%	18%	30%	28%

Table 54: LAP Meeting 4 Comment Form Results - Categories Stakeholder Support for BPOs

	Reasons why stakeholders support the BPOs			
Categories of Support	**BPO 1:** Baseline Option	**BPO 2:** New NHCU On-Site in Parcel 3 (Upper Campus)	**BPO 4:** New off-site NHCU Co-located with VA CBOC	**BPO 8:** Renovate and expand the existing NHCU on Parcel 3
Adequate Facilities	25	82	37	34
Availability of Care	25	77	33	34
Campus Environment	27	80	30	36
Use of Government Resources	27	78	32	34
Use of Facility	25	76	30	33
Other	21	35	30	21
Total:	**150**	**428**	**192**	**192**

As compared with input from the previous LAP meetings, considerably more stakeholders selected to use a comment form to provide input during the fourth LAP meeting input period. The 122 stakeholders who used this method expressed the most support for BPO 2, which builds a new NHCU on the upper portion of the Livermore campus. Stakeholders indicated multiple reasons for supporting BPO 2, including that it provides modern facilities that meet future healthcare needs, makes care received more convenient, and maintains the Livermore campus setting. Stakeholders showed less support for BPOs 1, 4 and 8, indicating that this group of stakeholders prefer the construction of new facilities on the Parcel 3 of the Livermore campus.

Fifty one veterans, veteran advocates, and other interested parties provided oral testimony at the third LAP meeting. Unlike the comment form results, this testimony and other written input received conveyed two very differing stakeholder viewpoints:

1. Some stakeholders greatly value the scenic quality of the current Livermore campus and conveyed their desire for the NHCU to remain on-site. Stakeholders with this viewpoint showed the most support for BPO 2 which builds a new NHCU on the upper portion of the Livermore campus, but would be more supportive of the other options that keep the NHCU on the current campus (BPOs 1 and 8) than BPO 4 which makes the current

Livermore campus available for reuse. The following excerpts from input received are representative of this stakeholder viewpoint:

"A Tri-Valley regional needs assessment (considering Livermore and the surrounding cities of Pleasanton and Dublin) found the top service gap in our community is the lack of affordable and accessible physical and mental healthcare. The loss of this hospital and nursing home would increase this unmet need for services, creating new barriers for our veterans seeking vital healthcare assistance. We should not expect our veterans to travel long hours to obtain basic, necessary medical and mental health services. Closing the Livermore Veterans Hospital would create many additional public healthcare issues than could possibly be solved by relocating services." - Excerpt from letter received from Livermore Mayor Marshall Kamena

"Please take into consideration building a new modern nursing care facility at Livermore, CA. Our elderly vets need it and our young vets returning from the Middle East need it desperately. This is an ever growing population of veterans, please do not forget them. Please do not close the Livermore facility. The Central Valley is too far to go for families in the San Francisco Bay Ares, Livermore Valley and surrounding areas."
- Excerpt from comment form received

2. Although the comment forms received show the most support for BPO 2, the majority of stakeholders who provided input showed support for BPO 4 and communicated that access to care could be enhanced through options that co-locate a NHCU with outpatient services in the Central Valley. The following excerpt from input received is representative of this stakeholder viewpoint:

   "Please build the site next to the present facility in French Camp, CA. This would be much more convenient for many of us in the valley region. The traffic problems and time schedules related to Livermore and Palo Alto appointments leads some of us to forgo treatment." - Excerpt from comment form received

   After the fourth LAP meeting, a large amount of input was received from an organized campaign that produced over 2300 letters from San Joaquin County residents who "lend support to the San Joaquin County Board of Supervisors and the local Veteran and Community Services Organizations in their effort to bring a full-service Veteran Health Care Facility to French Camp, California." As depicted in the following table, this letter-writing campaign, in addition to other input received, conveyed that stakeholders who provided input during the fourth LAP meeting input period most support BPO 4 that constructs a new NHCU in the Central Valley:

Table 55: Stakeholder Preference for the NHCU Location

Stakeholder Viewpoint	Total Stakeholders	Percentage of Total Input Received
The NHCU should remain in new or renovated facilities on the Livermore campus (BPOs 1, 2 and 8)	172	7%
A new NHCU should be constructed in the Central Valley, co-located with a VA CBOC (BPO 4)	2,382	91%
The NHCU should remain on the Livermore campus and a new NHCU should be constructed in the Central Valley	41	2%

Summary

Aggregate analysis of the stakeholder and LAP feedback from the input periods surrounding the second, third and fourth LAP meetings input indicates the level of overall support as well as considerations for implementation of each of the BPOs studied in Stage II. Presented below are summaries of stakeholder and LAP support for each option.

Table 56: Summary of Stakeholder and LAP Support for Options

BPO	LAP MEETING 2	LAP MEETING 3	LAP MEETING 4
BPO 1: Baseline Option	**Stakeholder Input:**		
	▪ Stakeholders conveyed support for the baseline option and remarked that they value the scenic quality of the current Livermore campus and desire to maintain the current facility. ▪ The comment form results indicate that stakeholders most support the baseline option.	▪ Stakeholders reiterated support for the baseline option and remarked that they value the scenic quality of the current Livermore campus and desire to maintain the current facility. ▪ The comment form results indicate that the fewest number of stakeholders expressed concerns regarding the baseline option.	▪ The majority of stakeholders did not show support for the Baseline option as it does not provide new state-of-the-art facilities.
	LAP Input:		
	▪ The LAP members voted unanimously against the baseline option. ▪ Some members of the LAP commented on the advantages of the baseline option such as the maintenance of the scenic Livermore campus and access to healthcare services for Livermore area veterans.	▪ The LAP expressed concern regarding continuity of care issues during renovation and operating efficiency issues associated with use of an aging facility. ▪ Some members of the LAP reiterated the advantages of the baseline option such as the maintenance of the scenic Livermore campus and access to healthcare services for Livermore area veterans.	▪ The LAP did not support for BPO 1 as it does not provide new state-of-the-art facilities, and again the LAP expressed concern regarding continuity of care issues during renovation and operating efficiency issues associated with use of an aging facility.
BPO 2: New NHCU On-Site in Parcel 3 (Upper Campus)	**Stakeholder Input:**		
	▪ Stakeholders showed support for BPO 2 by communicating that they value the scenic quality of the current Livermore campus and want nursing home services to remain on-site. ▪ Comment form input indicated support for this option	▪ The comment form input indicates that the second highest number of stakeholders expressed concerns about BPO 2.	▪ Some stakeholders showed support for BPO 2 as it keeps the NHCU on the scenic Livermore campus and provides new state-of-the-art facilities. ▪ Comment form input indicated the most support for this option.
	LAP Input:		
	▪ The LAP members voted 4-1 against supporting BPO 2 for further study in Stage II.	▪ Some members of the LAP expressed concern with BPO 2 regarding continuity of care issues during transfer of services to the new facility, and implications of a stand-alone NHCU without opportunity to co-locate with other services. ▪ Some LAP members also stated that BPO 2 is preferred of all the options that keep the NHCU on the LVD campus.	▪ Some LAP members indicated that BPO 2 is their preferred option as it provides new state-of-the-art facilities. ▪ All LAP members agree that BPO 2 is the best of all the options that keep the NHCU on the LVD campus. ▪ Some members of the LAP expressed concern with BPO 2 regarding implications of a stand-alone NHCU without opportunity to co-locate with other services.

BPO 4: New off-site NHCU Co-located with VA CBOC	**Stakeholder Input:**		
	▪ The comment form data indicates that stakeholders are not in favor of BPO 4. ▪ Many of the stakeholders that spoke at the LAP public meetings and submitted written letters and comments showed support for BPO 4 by encouraging an option that relocates the NHCU in the Central Valley.	▪ Many of the stakeholders that spoke at the LAP public meetings and submitted written letters and comments reiterated support for BPO 4 by encouraging an option that relocates the NHCU in the Central Valley. ▪ The comment form data indicates that the highest number of stakeholders expressed concerns regarding this option.	▪ The majority of stakeholders who provided input showed support for BPO 4, and reiterated the need for a NHCU in the Central Valley, co-located with a VA CBOC.
	LAP Input:		
	▪ The LAP voted unanimously to support BPO 4 for further study in Stage II.	▪ The LAP discussed positive attributes of this option in the third LAP public meeting including the opportunity to co-locate the NHCU with outpatient services.	▪ Some members of the LAP indicated that BPO 4 is their preferred option as it provides new state-of-the-art facilities, and allows for co-location with a VA CBOC.
BPO 8: Renovate and expand the existing NHCU on Parcel 3	**Stakeholder Input:**		
	▪ This option was added to the Stage II study by the Secretary and was not discussed by stakeholders at the second LAP meeting.	▪ Stakeholder input indicated support for BPO 8 by communicating that stakeholders value the scenic quality of the current Livermore campus and want nursing home services to remain on-site. ▪ The comment form results indicate that, other than the baseline, the fewest number of stakeholders expressed concerns regarding BPO 8.	▪ The majority of stakeholders did not show support for BPO 8 as it does not provide new state-of-the-art facilities.
	LAP Input:		
	This option was added to the Stage II study by the Secretary and was not discussed with the LAP at the second LAP meeting.	▪ The LAP view of this option was similar to its view of the baseline option (BPO 1), expressing concern regarding continuity of care issues during renovation and operating efficiency issues associated with use of an aging facility.	▪ The LAP did not show support for BPO 8 as it does not provide new state-of-the-art facilities, and again the LAP expressed concern regarding continuity of care issues during renovation and operating efficiency issues associated with use of an aging facility.

Implementation Considerations for BPOs:

Stakeholders and the LAP conveyed concerns regarding the BPOs that would need to be addressed for successful implementation of each option. These concerns were concentrated around four specific issues:

Reuse of Land and Facilities:
One issue affecting all options is the topic of possible reuse of the Livermore land and facilities. Feedback received indicated that this is a major area of interest in the community, and stakeholders and the LAP both articulated that use of the land and facility should align as closely as possible with the VA mission, and there is high resistance to commercial uses. The local community regards the Livermore campus as a beautiful and highly desired property that should be preserved for uses that directly benefit veterans if possible. This should be a consideration for successful implementation of all BPOs.

Stand-Alone NHCU:
For all BPOs that keep the NHCU on the current Livermore campus (BPOs 1, 2 and 8) stakeholders and the LAP expressed concerns regarding the implications of operating a stand-alone NHCU. If the NHCU remains on the Livermore campus, it will not benefit from co-location with other VA services. Stakeholders and the LAP indicated that this is an issue that should be considered for successful implementation of BPOs 1, 2 and 8.

Continuity of Care:
The LAP expressed concerns about BPOs 1 and 8 regarding continuity of care during the renovation of the existing NHCU. A successful implementation plan for these options should include provisions for continuing care throughout all phases of required renovation and new construction.

Access and Travel Time:
Lastly, concerns were expressed by stakeholders and the LAP about BPO 4 regarding access and travel-time. If the NHCU is relocated to the Central Valley, there is concern that travel time will be affected for many East Bay and Tri-Valley area veterans making it potentially more difficult for them to access services. For successful implementation of BPO 4, stakeholders and the LAP agree that this issue must be considered.

7.0 BPO Assessment Summary

The purpose of the Stage II evaluation process was to further compare and contrast the options based upon more detailed analysis of several evaluation criteria. It should be noted that each of the options selected for study in Stage II were previously assessed to be capable of meeting the threshold criteria of: maintaining or improving quality of health care, patient access and cost effectiveness (see Stage I Report).

Working collaboratively with VA management, Team PwC developed five categories of evaluation criteria that were deemed appropriate for Stage II evaluation. The five categories of evaluation criteria are: Capital Planning, Re-use, Use of VA Resources, Ease of Implementation, and Ability to Support VA Programs. The fifth evaluation category (Ability to Support VA Programs) was determined to be not applicable to the Livermore study. The following tables show the results of the comparative assessment of the BPOs against the evaluation criteria using a quantitative scale. The evaluation results were used by Team PwC to conduct a trade-off analysis of the relative strengths and weaknesses of each option (see Chapter 8) and to develop implementation plans (described in a separate report).

Capital Planning Assessment

The Capital Planning Assessment involves four evaluation criteria with measurement indicators defined as the following:

1. **Timeliness of completion**
   - **Indicator:** Total duration (Years to complete)
     - The amount of time to complete construction of new or renovated facilities.
2. **Timeliness of urgent corrections:**
   - **Indicator:** Duration (Years to correct code deficiencies, focusing on seismic deficiencies as identified in the CAI)
     - The amount of time to complete safety improvements and render facilities compliant with modern seismic standards. Implements seismic corrections for buildings designated by VA as seismic non-exempt. Where seismic non-exempt buildings are not identified for occupancy in the BPO, these corrections will not be implemented.
3. **Consolidation of underutilized space:**
   - **Indicator:** Percentage of underutilized space
     - The extent to which campus space is used for healthcare delivery. Assesses the percentage variance between the projected ideal total campus BGSF and the projected BPO area. The projected BPO BSGF is a function of the facility condition assessment scores and quantity of the existing buildings altered in the BPO.
4. **Consolidation of vacant space:**
   - **Indicator:** Percentage of vacant space
     - The extent of vacant space remaining on campus at completion of the proposed construction.

The options were assigned scores for each Capital Planning indicator based on the following evaluation scales:

Table 57: BPO Capital Planning Assessment

Evaluation Criteria	BPO 1: Baseline Option	BPO 2: Build New Nursing Home on Livermore Campus	BPO 4: Build New Nursing Home in Central Valley and Co-locate with a CBOC	BPO 8: Renovate and Expand the Current Nursing Home on Livermore Campus
Timeliness to Completion	-	5	5	3
Total Duration	102 months	70 months	76 months	108 months
Scale	1 = Significantly longer duration than the Baseline BPO (>24 months longer) 2 = Longer duration than the Baseline BPO (>6 and ≤ 24 months longer) 3 = Similar duration as the Baseline BPO (+/- 6 months) 4 = Shorter duration than the Baseline BPO (>6 and ≤ 24 months shorter) 5 = Significantly shorter duration than the Baseline BPO (>24 months shorter)			
Narrative	Options 2 and 4 have significantly shorter duration (>24 months shorter) than options 1 and 8. This is due to options 1 and 8 requiring multi-phased renovation/construction whereas options 2 and 4 construct new facilities.			
Timeliness of urgent seismic corrections	N/A	N/A	N/A	N/A
Duration	N/A	N/A	N/A	N/A
Scale	1 = Significantly longer duration than the Baseline BPO (>24 months longer) 2 = Longer duration than the Baseline BPO (>6 and ≤ 24 months longer) 3 = Similar duration as the Baseline BPO (+/- 6 months) 4 = Shorter duration than the Baseline BPO (>6 and ≤ 24 months shorter) 5 = Significantly shorter duration than the Baseline BPO (>24 months shorter)			
Narrative	There are no seismic non-exempt buildings slated for continued VA use under any option.			
Consolidation of underutilized space	-	4	4	4
% Change in Underutilized Space	11%	0%	0%	3%
Scale	1 = Significantly less reduction in underutilized space than the Baseline BPO (>20% higher) 2 = Less reduction in underutilized space than the Baseline BPO (>5 and ≤ 20% higher) 3 = Similar reduction in underutilized space as the Baseline BPO (+/- 5%) 4 = Greater reduction in underutilized space than the Baseline BPO (>5 and ≤ 20% lower) 5 = Significantly greater reduction in underutilized space than the Baseline BPO (>20% lower)			
Narrative	Options 2, 4 and 8 have less underutilized space than the Baseline as these campuses are comprised of newly renovated/constructed buildings designed to provide ideal configurations for providing healthcare services at the campus.			
Consolidation of vacant space	-	5	5	5
% Change in Vacant Space	560% increase	100% decrease	100% decrease	100% decrease
Scale	1 = Significantly less reduction in vacant space than the Baseline BPO (>20% higher) 2 = Less reduction in vacant space than the Baseline BPO (>5 and ≤ 20% higher) 3 = Similar reduction in vacant space as the Baseline BPO (+/- 5%)			

Evaluation Criteria	BPO 1: Baseline Option	BPO 2: Build New Nursing Home on Livermore Campus	BPO 4: Build New Nursing Home in Central Valley and Co-locate with a CBOC	BPO 8: Renovate and Expand the Current Nursing Home on Livermore Campus
	4 = Greater reduction in vacant space than the Baseline BPO (>5 and ≤ 20% lower) 5 = Significantly greater reduction in vacant space than the Baseline BPO (>20% lower)			
Narrative	Options 2, 4 and 8 have a significantly greater reduction in vacant space as compared to the Baseline because these campuses are comprised of newly renovated/constructed facilities that will meet the utilization requirements for 2023. In option 1, Building 62 will contain 37,919 BGSF of vacant space representing a significant % increase.			

Re-use Assessment (Source: OGC)

The Re-use Assessment involves four evaluation criteria with measurement indicators defined as the following:

1. **Market potential for re-use:**
   - **Indicator:** Market potential for re-use
     - Reflects the strength of the local real estate market. Gauges the market appeal of each BPO as well as the overall market appetite for similar projects.
2. **Financial feasibility:**
   - **Indicator:** Financial feasibility
     - The total cash flows each BPO will yield to VA. The financial feasibility utilizes market data to determine a value for each BPO and to generate projected net re-use cash flows for each BPO. A range of financial factors will be considered including demolition costs, capital market conditions, required VA investments, etc.
3. **VA mission enhancement:**
   - **Indicator:** VA mission enhancement
     - A qualitative assessment of how the overall re-use solution may support VA mission. This can include the degree of compatibility that the re-use option has with the existing Medical Center activities, the existence of synergies that benefit both parties, and other potential complimentary elements of the BPO.
4. **Execution Risk:**
   - **Indicator:** Execution Risk
     - The level of complexity and risk required from a real estate perspective to accomplish the deal and deliver the cash flows presented in the highest and best use and financial feasibility option analysis. It encompasses risk factors associated with both market and financial issues, taking into account the local context.

The options were assigned scores for each Re-use indicator based on the following evaluation scales:

Table 58: BPO Re-use Assessment

Evaluation Criteria	BPO 1: Baseline Option	BPO 2: Build New Nursing Home on Livermore Campus	BPO 4: Build New Nursing Home in Central Valley and Co-locate with a CBOC	BPO 8: Renovate and Expand the Current Nursing Home on Livermore Campus
Market potential for re-use	2	2	4	2
Scale	1 = Re-use would not be well received by the market 2 = Market is weak for re-use 3 = Market is adequate for re-use 4 = Market exhibits strength 5 = Market is very strong for re-use			
Narrative	The surrounding area is moderate in size and is projected to grow steadily through the year 2011. It is heavily agriculture/viticulture focused, has seen consistent growth in the number of wineries and is predicted to experience increased winery growth. Livermore's 65 and over population is lower than Alameda County and California, but it is expected to gain a significant 65+ population within the next 15 years.			
Financial feasibility	2	3	4	3
Scale	1 = Transaction expected to result in negative cash flow 2 = Transaction will generate less than satisfactory cash flows 3 = Transaction will generate marginal cash flows 4 = Transaction will generate material cash flows 5 = Transaction will generate significant cash flows			
Narrative	BPO 1A makes the least amount of land available for re-use and offers poor road access. BPO 4 makes available for re-use the most amount of land and because the number of re-use options increase the site's development and leasing potential are enhanced.			
VA mission enhancement	2	3	4	3
Scale	1 = Least compatible with / provides least enhancement of VA mission 2 = Less compatible with / provides less enhancement of VA mission 3 = Similar compatibility / enhancement of VA mission as other BPOs 4 = More compatible with / provides more enhancement of VA mission 5 = Most compatible with / provides best enhancement of VA mission			
Narrative	The primary sources of mission enhancement identified here are opportunities for VA to generate revenues from enhanced use leasing to finance primary care, specialized care and the related medical and social support services it provides to veterans. Moreover, the development of a complementary use could benefit the VA.			
Execution risk	3	3	3	3
Scale	1 = Option presents barriers that cannot be resolved 2 = Option presents significant obstacles that may not be resolvable 3 = Option may present obstacles that are resolvable with some difficulty 4 = Option may have some obstacles, but they should be reasonably resolvable 5 = Option presents no significant obstacles or barriers to execution			
Narrative	Any proposed re-use option must navigate an intense local political and regulatory environment. Site layout and existing environmental conditions also pose obstacles that could provide difficulty for the site.			

Use of VA Resources Assessment:

The Use of VA Resources Assessment involves three evaluation criteria with measurement indicators defined as the following:

1. **Total operating costs:**
   - **Indicator:** Total operating costs ($)
     - Total operating costs in $ including direct variable, fixed direct, and fixed indirect costs associated with a BPO. Operating costs are aggregated for the 30-year study period.
2. **Total capital investment costs:**
   - **Indicator:** Total capital investment costs ($)
     - Total capital investment costs (net of reuse) in $ for each BPO over the 30-year study period.
3. **Net present cost:**
   - **Indicator:** Net present cost ($)
     - Annual cash outflow discounted using the overall discount rate so that a particular BPO's cash outflows can be valued on a relative basis as compared to other BPOs.

The options were assigned scores for each Use of VA Resources indicator based on the following evaluation scales:

Table 59: BPO Use of VA Resources

Evaluation Criteria	BPO 1: Baseline Option	BPO 2: Build New Nursing Home on Livermore Campus	BPO 4: Build New Nursing Home in Central Valley and Co-locate with a CBOC	BPO 8: Renovate and Expand the Current Nursing Home on Livermore Campus
Total operating costs	-	4	4	3
Actual Value	$648,649,000	$593,643,000	$591,443,000	$622,296,000
Scale	1 = Financial analysis metric for the BPO is greater than 114% of the Baseline BPO 2 = Financial analysis metric for the BPO is 105 - 114% of the Baseline BPO 3 = Financial analysis metric for the BPO is 95 - 104% of the Baseline BPO 4 = Financial analysis metric for the BPO is 85 - 94% of the Baseline BPO 5 = Financial analysis metric for the BPO is less than 85% of the Baseline BPO			
Narrative	Options BPO 2 and 4 have the lowest operating costs. The lower operating costs of BPO 2 and 4 are due to the operating efficiencies (e.g., reduced maintenance, utilities) of a smaller, right-sized campus.			
Total capital investment costs	-	2	3	4
Actual Value	$62,555,000	$65,450,000	$63,722,000	$54,601,000
Scale	1 = Financial analysis metric for the BPO is greater than 114% of the Baseline BPO 2 = Financial analysis metric for the BPO is 105 - 114% of the Baseline BPO 3 = Financial analysis metric for the BPO is 95 - 104% of the Baseline BPO 4 = Financial analysis metric for the BPO is 85 - 94% of the Baseline BPO 5 = Financial analysis metric for the BPO is less than 85% of the Baseline BPO			
Narrative	New construction option 2 has higher non-recurring capital investment costs (non-recurring capital investment offset by re-use) than both renovation options 1 and 8. New construction option 4 has higher non-recurring capital investment costs (non-recurring capital investment offset by re-use) than renovation option 8. This is because the estimated cost per square foot of new construction is higher than the cost of renovation.			
Net present cost	-	4	4	3
Actual Value	$717,470,000	$661,153,,000	$657,225,000	$679,011,000
Scale	1 = Financial analysis metric for the BPO is greater than 114% of the Baseline BPO 2 = Financial analysis metric for the BPO is 105 - 114% of the Baseline BPO 3 = Financial analysis metric for the BPO is 95 - 104% of the Baseline BPO 4 = Financial analysis metric for the BPO is 85 - 94% of the Baseline BPO 5 = Financial analysis metric for the BPO is less than 85% of the Baseline BPO			
Narrative	The Baseline NPC is primarily driven by operating costs with adjustments to these costs associated with providing healthcare having a much greater impact than any changes to capital expenditures. The difference in the operating costs of BPO 2, 4 and 8 from Baseline more than offset the increased non-recurring capital investment costs over Baseline. Additionally the re-use revenue generated by BPO 2, 4 and 8 further drive down the NPC as compared to Baseline. BPO 2's % of operating costs from NPC is lower than Baseline as a result from higher non-recurring capital investment costs incurred by new construction and reduction of campus size. BPO 4's % of operating costs from the NPC is lower than Baseline due to efficiencies realized with the new campus and the reduction of campus size. BPO 8's % of operating costs from the NPC is lower than Baseline due to efficiencies realized with the new campus layout and the reduction of fixed indirect costs.			

Ease of Implementation

The Livermore Ease of Implementation Assessment involves two evaluation criteria with measurement indicators defined as the following:

1. **Re-use considerations:**
   - **Indicators:**
     a) Community Support:
        - A qualitative assessment reflecting the degree of community support for the option. This includes the potential use of the option and how that fits with what the community perceives as its needs. Community support also reflects political support or opposition to each option.

     b) Legal / regulatory
        - This captures all legal and regulatory issues faced by each option, including zoning, environmental, historic considerations, title encumbrances and any other site restrictions that may impact the option.

2. **Capital planning considerations:**
   - **Indicators:**
     a) Size and complexity of capital plan
        - This captures four indicators of the extent to which campus facilities will be impacted by the capital plans for a given BPO: The number of capital projects associated with the BPO; the percentage campus area change as projected by the BPO; the total duration of the capital projects; and the overall capital investment cost for the BPO.

     b) Number and frequency of patient moves (quantity of clinical buildings altered)
        - The extent to which clinical buildings will be impacted by the capital plans for a given BPO. Provides an assessment of the total quantity of buildings altered in the BPO where patients (clinical space) are impacted. It is assumed that any construction activities in existing buildings will disrupt typical patient care activities and that these activities will require relocation to maintain acceptable levels of patient satisfaction.

     c) Number of historic buildings altered (total historic buildings altered)
        - The extent to which there are historical considerations in implementing the capital plans for a given BPO. Assesses the total quantity of historic buildings altered in the BPO.

The options were assigned scores for each Ease of Implementation indicator based on the following evaluation scales. Each indicator was given a score for "Negative Impact" as well as "Likelihood of Negative Impact":

Table 60: BPO Ease of Implementation Assessment

Evaluation Criteria	BPO 1: Baseline Option	BPO 2: Build New Nursing Home on Livermore Campus	BPO 4: Build New Nursing Home in Central Valley and Co-locate with a CBOC	BPO 8: Renovate and Expand the Current Nursing Home on Livermore Campus
Re-use Consideration: Community support (Source: OGC S&S/ACG Joint Venture)				
Score for Negative Impact	3	3	2	3
Scale for Negative Impact	For Community Support: 1 = Option has strong community resistance with at most limited support 2 = Option has greater community resistance than support 3 = Option has a balance of community support and resistance 4 = Option has greater community support than resistance 5 = Option has strong community support with at most limited resistance			
Score for Likelihood of Negative Impact	3	3	2	3
Scale for Likelihood of Negative Impact	1 = Option has high likelihood of community resistance 3 = Option has moderate likelihood of community resistance 5 = Option has low likelihood of community resistance			
Narrative	BPO 1 is supported by the local community whereas BPO 4 is opposed by certain parts of the local community. BPO 2 is the second most favorable, after BPO 1, by the local community. The surrounding community is highly sensitive to commercial growth determined to be outside of what are considered acceptable uses. Indications are that the community will support development that complements the area's growing wine industry. Based on commentary at the third LAP meeting, senior living also might receive favorable support if the land is made available to re-use.			
Re-use Consideration: Legal / regulatory (Source: OGC S&S/ACG Joint Venture)				
Score for Negative Impact	2	2	2	2
Scale for Negative Impact	1 = Option has obstacles that cannot be resolved 2 = Option has significant obstacles that may not be resolvable 3 = Option may have obstacles that are resolvable with some difficulty 4 = Option may have some obstacles, but they should be reasonably resolvable 5 = Option has no significant legal/regulatory obstacles			
Score for Likelihood of Negative Impact	2	2	2	2
Scale for Likelihood of Negative Impact	For Legal and Regulatory: 1 = Option has high likelihood of encountering legal or regulatory obstacles 3 = Option has moderate likelihood of encountering legal or regulatory obstacles 5 = Option has a low likelihood of encountering legal or regulatory obstacles			
Narrative	Zoning in the area is highly restrictive and limits commercial development to only those uses that support agriculture/viticulture. Although all options presented for re-use either complement current site use or are in accordance with local zoning, the VA should expect some level of resistance regardless of the option that is chosen.			

Evaluation Criteria	BPO 1: Baseline Option	BPO 2: Build New Nursing Home on Livermore Campus	BPO 4: Build New Nursing Home in Central Valley and Co-locate with a CBOC	BPO 8: Renovate and Expand the Current Nursing Home on Livermore Campus
Capital Planning Considerations: Size and complexity of capital plan				
Score for Negative Impact	3	5	5	2
Scale for Negative Impact	1 = High potential negative impact 3 = Medium potential negative impact 5 = Low potential negative impact			
Score for Likelihood of Negative Impact	3	5	5	2
Scale for Likelihood of Negative Impact	1 = High likelihood of occurrence of negative impact 3 = Medium likelihood of occurrence of negative impact 5 = Low likelihood of occurrence of negative impact			
Narrative	Options 1 and 8 have the greatest degree of complexity. Both have the highest number of projects and longest duration. Options 2 and 4 have the least degree of complexity, as they have shorter duration and only a single project to implement.			
Capital Planning Considerations: Number of historic buildings altered				
Score for Negative Impact	3	3	3	3
Scale for Negative Impact	1 = High potential negative impact 3 = Medium potential negative impact 5 = Low potential negative impact			
Score for Likelihood of Negative Impact	3	3	3	3
Scale for Likelihood of Negative Impact	1 = High likelihood of occurrence of negative impact 3 = Medium likelihood of occurrence of negative impact 5 = Low likelihood of occurrence of negative impact			
Narrative	The same number (9) of historic or historically buildings are renovated, demolished or made available fore re-use under each option. The nine historic/historically eligible buildings involved in each option assume a moderate likelihood of negative impact to the time and cost of implementation.			
Capital Planning Considerations: Number and frequency of patient moves				
Score for Negative Impact	3	5	5	3
Scale for Negative Impact	1 = High potential negative impact 3 = Medium potential negative impact 5 = Low potential negative impact			
Score for Likelihood of Negative Impact	1	5	5	1
Scale for Likelihood of Negative Impact	1 = High likelihood of occurrence of negative impact 3 = Medium likelihood of occurrence of negative impact 5 = Low likelihood of occurrence of negative impact			
Narrative	Options 1 and 8 have comparatively higher risk of patient disruption than the other options because they involve multiple patient moves due to in-place renovations; although option 8 allows for more flexibility than the Baseline. Options 2 and 4 require one patient move to the new site.			

8.0 BPO Tradeoff Analysis

The purpose of the Trade-off Analysis is to provide VA decision makers with a balanced discussion of the strengths and weaknesses to be considered in deciding upon an option to implement. Team PwC compared and contrasted the evaluation criteria for each option (presented in Chapter 8) together with the results of stakeholder and LAP input. Note that each of the options selected for study in Stage II were previously assessed to be capable of meeting the threshold criteria of: maintaining or improving quality of health care, patient access and cost effectiveness (see Stage I Report).

The following section displays each option's relative strengths and weaknesses in the evaluation categories of: Capital Planning, Re-use, Use of VA Resources, Ease of Implementation, and Stakeholder and LAP Input. A fifth evaluation category, Support for VA Programs (see Chapter 2), was determined to be not applicable to the Livermore study.

BPO 1: Baseline Option

Table 61: Tradeoff Analysis

Capital Planning	
Strengths	• There are no strengths in the baseline relative to the other options.
Weaknesses	• The construction schedule has a total duration of 102 months which is 32 and 26 months longer than the new construction options 2 and 4 respectively. • Baseline results in 8%-11% more underutilized space than the other options. • Baseline results in significantly more vacant space (38,000 square feet) than the other options which eliminate all vacant space.
Use of VA Resources	
Strengths	• Requires less capital investment than BPO 2 ($3 million)
Weaknesses	• Baseline has the highest operating cost at $649 million which is $55-$57 million more than the new construction options 4 and 2 respectively and the highest net present cost at $717 million.
Ease of Implementation	
Strengths	• There are no strengths in the baseline relative to the other options.
Weaknesses	• Only two clinical buildings are renovated, however, this still causes a comparatively higher risk of patient disruption for NHCU patients in Building 90 due to more patient moves. These would be avoided with new NHCU construction.
Stakeholder & LAP Input	
Strengths	• There are no strengths in the baseline relative to the other options.
Weaknesses	• Majority of stakeholders and the LAP did not ultimately support the baseline option because it does not provide efficient, state-of-the-art NHCU facilities and because of concerns about continuity of care during renovations.

BPO 1A: Baseline Option with Re-Use

Table 62: Tradeoff Analysis

Re-Use	
Strengths	• Greater likelihood for local community support due to continued VA presence.
Weaknesses	• Least amount of land made available for re-use. • Generates least amount of potential re-use proceeds.
Ease of Implementation	
Strengths	• There are no strengths in BPO 1a relative to the other options.
Weaknesses	• There are no weaknesses in BPO 1a relative to the other options.

BPO 2: Build New Nursing Home on Livermore Campus

Table 63: Tradeoff Analysis

Capital Planning	
Strengths	• Option 2 has a total duration of 70 months which is 32-38 months shorter than the renovation options 1 and 8 respectively. • This option results in 11% less underutilized space than option 1 and eliminates all vacant space.
Weaknesses	• There are no weaknesses in option 2 relative to the other options.
Re-Use	
Strengths	• Moving the NHCU provides for a better campus master plan. • Greater likelihood for community support due to continued VA presence.
Weaknesses	• Third highest amount of land and improvements available for re-use. • Generates the third highest amount of potential re-use proceeds.
Use of VA Resources	
Strengths	• Option 2 has operating cost of $29-$55 million lower than the renovation options 8 and 1 respectively, which are similar to those of option 4. • The net present cost for option 2 is $18 – $56 million lower than renovation options 8 and 1 respectively.
Weaknesses	• In terms of capital investment required, BPO 2 is comparatively more expensive than renovation option BPO 8
Ease of Implementation	
Strengths	• Options 2 and 4 have the least degree of complexity with one project. • Options 2 and 4 cause the least patient disruption with only one coordinated move needed into the newly constructed facility. • A continued VA presence would increase local community support for re-use for BPO 2.
Weaknesses	• There are no weaknesses in option 2 relative to the other options.
Stakeholder & LAP Input	
Strengths	• Some support from stakeholders who favor keeping the NHCU at Livermore. • LAP members believe that this option is the preferred of all of the options that maintain the NHCU on the Livermore campus.
Weaknesses	• Some members of the LAP expressed concern regarding the implications of a stand-alone nursing home without the opportunity to co-locate with primary care services.

BPO 4: Build New Nursing Home in Central Valley and Co-locate with a CBOC

Table 64: Tradeoff Analysis

Capital Planning	
Strengths	• Option 4 has a total duration of 76 months which is 26-32 months shorter than the renovation options 1 and 8 respectively. • This option results in 11% less underutilized space than option 1 and eliminates all vacant space.
Weaknesses	• There are no weaknesses in option 4 relative to the other options.
Re-Use	
Strengths	• Most land and improvements made available for re-use. • Market potential for re-use supports senior care with an expected gain to the 65+ population within the next 15 years. • Generates highest amount of potential re-use proceeds.
Weaknesses	• Re-use could be subject to significant community opposition due to VA vacating the site.
Use of VA Resources	
Strengths	• This option has the lowest operating cost at $591 million ($2 million less than the next lowest which is option 2). • Option 4 requires similar capital investment as baseline and option 2. • Option 4 has the lowest net present cost of $657 million which is $4-60 million less than the other options.
Weaknesses	• Option 4 has requires a comparatively higher capital investment than renovation option BPO 8
Ease of Implementation	
Strengths	• Options 2 and 4 have the least degree of complexity with one project. • Options 2 and 4 cause the least patient disruption with only one coordinated move needed into the newly constructed facility.
Weaknesses	• Re-use could be subject to significant community opposition due to VA vacating the site.
Stakeholder & LAP Input	
Strengths	• Large majority of stakeholders and several LAP members supported a new state-of-the-art NHCU facility co-located with a CBOC in the Central Valley. • The LAP believes that this option will provide a cost effective solution and by collocating with a CBOC enhance access to primary care. They also believe this option improves proximity to emergency care services in an urban area.
Weaknesses	• A smaller number of stakeholders do not want to relocate away from the current campus and/or do not believe that this option will improve access.

BPO 8: Renovate and Expand the Current Nursing Home on Livermore Campus

Table 65: Tradeoff Analysis

Capital Planning	
Strengths	• Results in 8% less underutilized space than option 1 and eliminates vacant space as do options 2 and 4.
Weaknesses	• Has the longest total duration (108 months) of any option. This makes the construction schedule for option 8 six months longer than baseline and 32-38 months longer than options 2 and 4.
Re-Use	
Strengths	• Second highest amount of land and improvements available for re-use. • Generates the second highest amount of potential re-use proceeds. • Greater likelihood for community support due to continued VA presence.
Weaknesses	• There are no weaknesses in BPO 8 relative to other options.
Use of VA Resources	
Strengths	• The operating costs are approximately $26 million lower and net present costs are approximately $38 million lower than the baseline. • Lowest capital investment required at $55 million.
Weaknesses	• The operating costs are $29-$31 million higher than the new construction options 2 & 4 respectively.
Ease of Implementation	
Strengths	• As with baseline, there is a balance of community support and resistance which is preferred to the additional resistance indicated for option 4. • Greater likelihood of community support for re-use option due to continued VA presence.
Weaknesses	• Option 8 has an elevated level of complexity for the renovations of this option. • Causes a high level of patient disruption especially for NHCU patients while renovations are being conducted in Building 90.
Stakeholder & LAP Input	
Strengths	• There are no strengths in option 8 relative to the other options.
Weaknesses	• Similar to the baseline option, a majority of stakeholders and the LAP did not ultimately support option 8 because it does not provide efficient, state-of-the-art NHCU facilities and because of concerns about continuity of care during renovations.

Summary

Each of these options has relative merits and varying levels of stakeholder support. The baseline option (BPO 1) renovates existing buildings to provide a modern, safe, and secure environment to best accommodate the planned workload. The stakeholders did not ultimately support this option because it fails to provide new state-of-the-art NHCU facilities and it carries with it the disadvantages of higher risk of patient disruption and lower operating efficiencies. The renovations in the baseline create a modern, safe, and secure healthcare delivery environment. However, the result is an increase in underutilized space and vacant space. These renovations also result in the highest operating and net present cost of all of the options for Livermore. Although some land would potentially be available for re-use in the alternate baseline, this would result in the lowest re-use proceeds of all of the options.

Options 2 and 4 that construct new NHCUs provide several comparative advantages to the other options. These options have shorter construction schedules (almost three years shorter than options 1 and 8), result in lower underutilized and vacant space, lower operating costs, and are characterized by relatively less complex capital projects and patient moves. However, option 2 does require a higher level of capital investment than renovation option BPO 8 and does not co-locate the facility with ambulatory services in a CBOC. Most stakeholders agreed that option 2 was the best of the options which would keep the NHCU at Livermore. However, the LAP raised concerns about the implementation of a stand alone nursing home. Option 4 co-locates the nursing home with a CBOC in the central valley. It likely improves access to primary care services and makes the entire site available for re-use, thereby resulting in the greatest re-use proceeds and lowest net present cost. This option received the most support from stakeholders and the LAP at the fourth LAP meeting. Additionally, there was a strong letter writing campaign from veterans and the community supporting option 4.

Option 8 renovates and expands the NHCU on the Livermore campus. This option is similar to baseline, yet lowers underutilized and vacant space. The construction schedule for these renovations is similar to the baseline at approximately 108 months. BPO 8 has the advantage of having the lowest capital investment costs (net of re-use). Although the operating and net present costs for option 8 are lower than the baseline, they are still higher than options 2 and 4. Similar to baseline, the renovations in BPO 8 involve more complex capital plans and a comparatively greater likelihood of disruption to patients during implementation. This option, like the baseline, was ultimately not supported by stakeholders and the LAP.

Appendices

Appendix A - Other Relevant Documents

Other relevant documents include the following:

- The report entitled, *Phase 3 Report: General Re-use/Redevelopment Options Livermore Division, VA Palo Alto Medical System* developed by OGC S&S/ACG Joint Venture. This report is available on the VA's Office of Asset Enterprise Management website.
- The document entitled, *Stage II Assumption, Inputs and Outputs* written by Team PwC
- BPO Implementation Plan and Risk Mitigation Strategies

Appendix B - Detailed Stage II Methodology

Overview

This section provides an overview of the methodology employed in Stage II of the CARES study. In Stage I, Team PwC in collaboration with Other Government Contractors (OGCs) for Re-use studies[6], developed and assessed a broad range of potentially viable business plan options (BPOs) that met the forecast healthcare needs for the study sites. Based upon an initial assessment of these BPOs, Team PwC recommended up to six BPOs to be taken forward for further development and assessment in Stage II, and VA selected the specific BPOs to be studied further. In Stage II, Team PwC and OGCs will conduct a more detailed assessment of the short-listed BPOs in order to provide VA decision makers with an evaluation of each BPO and its relative merits.

In Stage II, Team PwC and OGCs will collect additional data on a set of evaluation criteria and conduct additional capital planning, re-use, and financial analysis for each BPO. The results will be used to compare BPOs and to evaluate the relative strengths and weaknesses of each BPO. Finally, an implementation plan featuring risk mitigation strategies will be developed for each BPO.

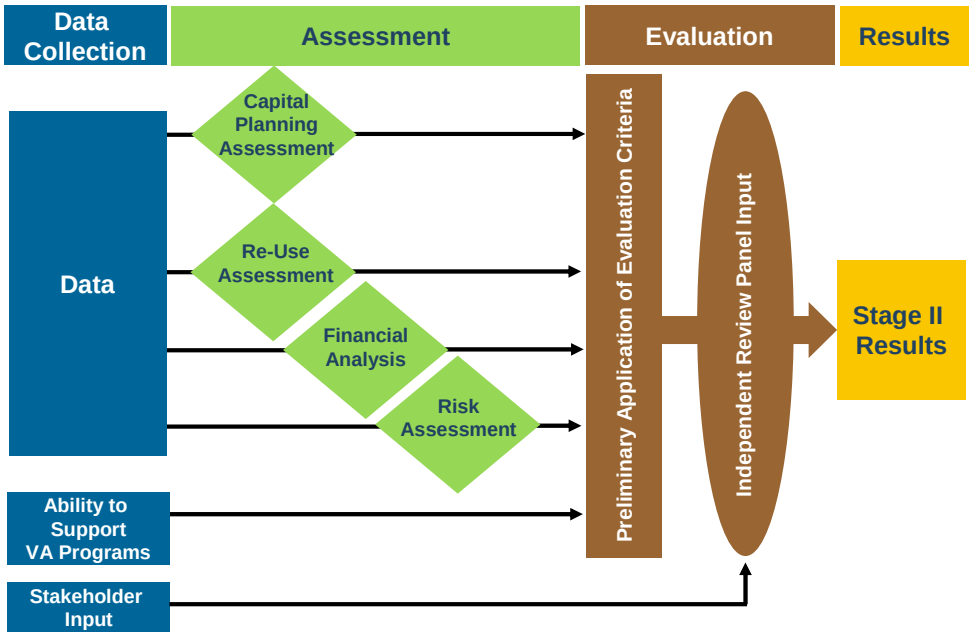
The Stage II study will be organized around the following evaluation categories:

- Capital Planning
- Use of VA Resources
- Ability to Support Other VA Programs
- Re-Use
- Ease of Implementation
- Stakeholder Input

The Stage II study process will consist of four primary steps, Data Collection, Assessment, Evaluation, and Stage II Results, as depicted in Figure 1.

[6] In both Stage I and II, OGCs complete the Re-use studies for comprehensive capital planning sites. Team PwC completes the Re-use studies for healthcare planning sites.

Figure 1: A Diagram of the Overview of Stage II Methodology



The Data Collection process will be used to augment study data gathered in Stage I. This data will provide the inputs to the BPO assessment. During the data collection step, Team PwC will confirm existing Stage I data and collect new data in order to refine the BPOs and complete the assessments for each evaluation category. The Capital Planning team will obtain such information as updated building scores, healthcare utilization, and space projection factors, while the Re-use team will obtain additional information regarding the real estate market, such as rents and sales prices. The Use of VA Resources team will validate and update VA costs of care and collaborate with the Capital Planning and Re-use team to understand the capital investment needs and potential re-use revenues associated with each BPO. The Ease of Implementation team will obtain data and information to validate the impacts on academic affiliations and education programs, in addition to potential staffing complements under each BPO. The Ease of Implementation team will work with the Capital Planning and Re-use teams to understand the implementation considerations for each BPO and develop strategies to mitigate implementation risks. Site teams will review information about Ability to Support VA Programs and potential services in kind to determine how they might be impacted by the implementation of the BPOs.

Parallel to the data gathering activities, Team PwC will solicit input from stakeholders on their comments and concerns for each BPO. Stakeholder input will include written correspondence received through a central mail stop, oral testimony received through Local Advisory Panel (LAP) public meetings, results of LAP deliberations, and electronic feedback received through the study website.

The Assessment step will involve conducting more detailed analyses of the short-listed BPOs across each evaluation category. The data collected in this initial step will drive the completion of the assessments. The Capital Planning team will use projected utilization and facility

information to calculate and allocate space needs for a conceptual site plan, determine the capital investment required, and schedule construction projects. The Re-use team will refine the market assessment as well as the environmental and regulatory assessments for the property. The Use of VA Resources team will complete a financial analysis to determine the costs, revenues, and savings associated with each BPO, while the Ease of Implementation team will determine risk ratings for each option. The outputs of the Assessment step will be a set of data and findings for each BPO.

The Evaluation step will compare the BPOs against the Baseline option using a set of agreed-upon evaluation criteria, which are described in the following section. The Team PwC and OGC site teams will conduct a preliminary evaluation of each BPO. The independent review panel will provide a sounding board for the preliminary assessment findings and evaluation of each BPO, together with stakeholder input. The BPOs will be evaluated against the evaluation criteria using a quantitative scale in order to discriminate between the BPOs. The evaluation results will be used by site teams and the expert panel to discuss the relative strengths and weaknesses of each BPO and to develop implementation plans. The outputs of the Evaluation step will be the evaluation results for each BPO, a discussion of the merits of each BPO, and an implementation plan and risk mitigation strategies for each BPO. The Stage II Results will be used by VA in its decision making.

Evaluation Criteria

In Stage I, a broad range of BPOs were screened and evaluated according to a set of primary and discriminating criteria. Primary criteria consisted of access, quality of care, and cost effectiveness. Discriminating criteria consisted of healthcare quality, healthcare access, impact on VA and local community, use of VA resources, ease of implementation, and ability to support VA programs.

The Stage I evaluation process resulted in BPOs recommended for further study in Stage II. Each of the BPOs recommended for further study in Stage II met the three primary criteria of access, quality of care, and cost effectiveness. In terms of access and quality of care, each of the BPOs was assessed to meet minimum standards and thresholds. These criteria will not be further studied in Stage II.

The discriminating criteria used in Stage I provided a level of analysis which was sufficient to arrive at recommended BPOs. The purpose of the Stage II evaluation process is to further compare and contrast the BPOs based upon more detailed analysis of several evaluation criteria.

Working collaboratively with VA management, Team PwC developed five categories of evaluation criteria that were deemed appropriate for Stage II evaluation. These five categories of evaluation criteria are: Capital Planning, Re-use, Use of VA Resources, Ease of Implementation, and Ability to Support Other VA Programs. In arriving at these criteria, consideration was given to Stage I criteria and results, discriminating factors of BPOs moving forward for study in Stage II, and the relevance of criteria across sites. Table 1 lists the indicators used to measure each of the evaluation criteria, together with the definition. It should be noted that some criteria,

specifically academic affiliations / education and HR / staffing, used to evaluate the impact on local community in Stage I, will be used more appropriately in Stage II to evaluate the ease of implementation.

Table 1: Stage II Evaluation Criteria and Indicators

Evaluation Criteria	Indicator	Definition
Capital Planning		
Timeliness of completion	Total duration (Years to complete)	The amount of time to complete construction of new or renovated facilities.
Timeliness of urgent corrections	Duration (Years to correct code deficiencies, focusing on seismic deficiencies as identified in the CAI)	The amount of time to complete safety improvements and render facilities compliant with modern seismic standards. Implements seismic corrections for buildings designated by VA as seismic non-exempt. Where seismic non-exempt buildings are not identified for occupancy in the BPO, these corrections will not be implemented.
Consolidation of underutilized space	% Underutilized space	The extent to which campus space is used for healthcare delivery. Assesses the percentage variance between the projected ideal total campus BGSF and the projected BPO projected area. The projected BPO BSGF is a function of the facility condition assessment scores and quantity of the existing buildings altered in the BPO.
Consolidation of vacant space	% Vacant space	The extent of vacant space remaining on campus at completion of the proposed construction.
Re-Use		
Market potential for re-use	Market potential for re-use	Reflects the strength of the local real estate market. Gauges the market appeal of each BPO as well as the overall market appetite for similar projects.
Financial feasibility	Financial feasibility	The total cash flows each BPO will yield to VA. The financial feasibility utilizes market data to determine a value for each BPO and to generate projected net re-use cash flows for each BPO. A range of financial factors will be considered including demolition costs, capital market conditions, required VA investments, etc.
VA mission enhancement	VA mission enhancement	A qualitative assessment of how the overall re-use solution may support VA mission. This can include the degree of compatibility that the re-use option has with the existing Medical Center activities, the existence of synergies that benefit both parties, and other potential complimentary elements of the BPO.
Execution risk	Execution risk	The level of complexity and risk required from a real estate perspective to accomplish the deal and deliver the cash flows presented in the highest and best use and financial feasibility option analysis. It encompasses risk factors associated with both market and financial issues, taking into account the local context.
Use of VA Resources		
Total operating costs	Total operating costs ($)	Total operating costs in $ including direct variable, fixed direct, and fixed indirect costs associated with a BPO. Operating costs are aggregated for the 30-year study period.
Total capital investment costs	Total capital investment costs ($)	Total capital investment costs in $ for each BPO over the 30-year study period.
Net present cost	Net present cost ($)	Annual cash outflow discounted using the overall discount rate so that a particular BPO's cash outflows can be valued on a relative basis as compared to other BPOs.

Evaluation Criteria	Indicator	Definition
Total considerations	Total considerations (re-use revenues, in-kind, etc.) ($)	Total considerations (re-use proceeds/costs, in-kind considerations, etc.) in $ for each BPO aggregated for the 30-year study period.
Total annual savings	Total annual savings ($)	Annual savings in $ for each BPO over the 30-year study period.
Ease of Implementation		
Academic affiliations / education*	Number of research programs impacted	The number of research programs (as defined either by disease focus or patient population, as data allows) expected to be negatively impacted due to the change in services provided, facilities, or location.
	% annual research budget impacted	The % of total research budget (as defined by research expenditures for a given fiscal year) expected to be negatively impacted due to the change in services provided, facilities, or location.
	Number of residency programs and residents impacted	The number of residency programs (as defined by medical specialty) and total number of resident positions expected to be negatively impacted due to the change in services provided, facilities, or location.
	Number of faculty with dual appointments impacted	The number of faculty with appointments at both the VAMC and affiliate organizations that would be negatively impacted due to the change in services provided, facilities, or location.
HR / Staffing*	Change in staff (FTEEs)	The net change in the number of staff expected for the BPO.
	Number of staff required to change job site (FTEEs)	The total number of staff that will be required to change working locations and thus commutes.
Re-use considerations	Community support	A qualitative assessment reflecting the degree of community support for the option. This includes the potential use of the option and how that fits with what the community perceives as its needs. Community support also reflects political support or opposition to each option.
	Legal / regulatory	This captures all legal and regulatory issues faced by each option, including zoning, environmental, historic considerations, title encumbrances and any other site restrictions that may impact the option.
Capital planning considerations	Size and complexity of capital plan	This captures four indicators of the extent to which campus facilities will be impacted by the capital plans for a given BPO: The number of capital projects associated with the BPO; the percentage campus area change as projected by the BPO; the total duration of the capital projects; and the overall capital investment cost for the BPO.
	Number and frequency of patient moves (quantity of clinical buildings altered)	The extent to which clinical buildings will be impacted by the capital plans for a given BPO. Provides an assessment of the total quantity of buildings altered in the BPO where patients (clinical space) are impacted. It is assumes that any construction activities in existing buildings will disrupt typical patient care activities and these activities will require relocation to maintain acceptable levels of patient satisfaction.
	Number of historic buildings altered (total historic buildings altered)	The extent to which there are historical considerations in implementing the capital plans for a given BPO. Assesses the total quantity of historic buildings altered in the BPO.

Evaluation Criteria	Indicator	Definition
Ability to Support Other VA Programs		
DoD sharing	MOUs impacted by BPO	The extent to which Memoranda of Understanding with DoD partners (for sharing agreements) are enhanced by the BPO.
One VA integration	VBA and NCA impacted by BPO	The extent to which each BPO will enhance existing One-VA co-locations or facilitate the establishment of new co-locations.
Specialized VA programs	Specialized Care/COE impacted by BPO	The extent to which the BPOs enhance specialized care (e.g., chronic spinal cord injury treatment, Alzheimer's treatment, etc.) or Centers of Excellence (e.g., GRECC, GEM, etc.) as defined by VA.
Enhancement of services to veterans	Services in kind	Extent to which each BPO directly and indirectly provides enhancement to VA services. This may often be achieved through providing in-kind services. In addition, this may be achieved through upgrading of general services on campus It may also involve uses that by proximity enhance the overall ability of the Center to offer its veterans convenient complementary services.

***** Academic affiliations/education and HR/staffing criteria not assessed at comprehensive capital planning sites, where no healthcare decision is required.

Stage II BPO Assessment and Evaluation Process

In Stage II, Team PwC and OGCs will further study and assess the BPOs using the following evaluation criteria: capital planning, re-use, use of VA resources, ease of implementation, and ability to support VA programs. The following sections describe the inputs and assumptions that will be used to conduct the refined studies as well as the resulting outputs. Finally, the process for evaluating the outputs per the evaluation criteria is provided to illustrate how BPOs will be evaluated relative to each other.

Capital Planning

The Capital Planning study determines projected future site and facility development for the optimum physical configuration for delivery of healthcare services to veterans. In Stage I, the Capital Planning studies determined the placement of facilities within a campus to meet the capital needs for a given BPO. In Stage II, the study will be refined to consider the extent of renovations and new construction needed to optimize proposed locations on the campus.

In order to conduct the analysis, Team PwC will utilize a database to project space needs and allocate square footage according to departmental groups[7] in order to develop a conceptual plan for the campus and determine investment costs. The capital investment requirements will be calculated for the capital plan and appropriate timing and sequencing of construction determined to assist with implementation. The inputs and assumptions to be used in conducting the Capital Planning study, as well as the outputs from the study, are further described below.

[7] Departmental groups identify one or more distinct buildings of similar construction type and functional activities.

Inputs and Assumptions

The basic capital planning inputs for determining physical space need on the campus are identified below:

- **BPOs selected for further study**: The Secretary's Decision dictated the BPOs to be studied further in Stage II. The BPOs include those recommended by Team PwC at the conclusion of Stage I or BPOs introduced by the Secretary to be studied in Stage II. This input will be imperative for all assessments.

- **Departmental utilization data**: Departmental utilization data is based upon projected CARES Implementation Categories (CIC) utilization data approved by VA using FY03 as the Baseline year.

- **Campus site and building plans**: GFI drawings of current site and buildings were provided by VA.

- **Detailed building data**: Building data such as building condition scores, square footages, etc. were provided via the capital asset inventory (CAI) database administered by VA.

A detailed set of assumptions were established in order to conduct the Stage II Capital Planning assessments. These assumptions pertain to such factors as space projection, building scores, historical designation, departmental groupings, etc. Key assumptions are provided below; however, a more detailed listing of assumptions are compiled in the appended assumptions document:

- Minimum space requirements are developed per *AIA Guidelines for Hospitals and Healthcare Facilities 2001 edition*, VA standards, and Team PwC experience.
- Area calculations, condition assessment ratings, major building systems life cycle costing projections, and functional use descriptions associated with existing buildings are based on the VA provided CAI database.
- Where the existing quality of care environment does not address current fire and life safety codes or VA standards of care (such as in the case of multi-bed patient wards), renovation and or new construction is required to provide a modern, safe, and secure environment.
- A period of ten years is required to demolish historical buildings. Submission of all buildings designated as historic will occur for all project sites in 2007. Therefore, the earliest date for demolition of historic buildings will be 2017. The earliest date for renovations to historic buildings will be 2009.
- Buildings with an average facility assessment score from the CAI less than 4.0 are not suitable for clinical occupancy. Buildings with an average score of 3.0 are not suitable for occupancy, and buildings with an average score of 3.0 or less will be vacated or demolished, unless deemed suitable by the consultant.

- The first funding cycle for any new project would occur in the first quarter of 2009.
- Buildings (existing or proposed) that have been identified as being vacated and mothballed will become inoperative.
- Easements for utilities must be maintained for all re-use development activities in options where VA facilities remain and require access to these utilities.
- The maximum number of floors possible for new Nursing Home facilities will be two.

Outputs

The Capital Planning study will yield the following outputs:

- **Existing current state site plan**: A site plan of the current physical configuration and building distribution of the campus, with narrative description and table of buildings, will be included as a reference for comparing facility changes defined by each of the BPOs.

- **Proposed site plan**: A site plan of the campus, with narrative description, will be generated for each BPO, illustrating the physical configuration and building distribution of the campus in the projection year 2023.

- **Concept plan**: Concept plan of typical floor or stack diagram will only be provided for complex/multi-function buildings with narrative description.

- **Supporting Narrative**: A narrative explaining significant projected area DGSF implications on site, key proposed activities (i.e., parking, site work, historic buildings, phasing issues, rationale for renovations and/or new construction, and re-use parcel distribution), and key implementation milestones.

- **Construction Schedule**: Schedules for construction activities are intended to identify the relative duration of renovation and construction in order to calculate the occupancy date for utilization of space and escalation costs. These schedules provide a base on which the implementation plans will be incorporated. A narrative includes a brief description of the individual building construction projects and indicates the construction sequence and duration for each BPO.

- **Projected BPO cost estimate**: The capital investment required (including both investment expense and periodic maintenance costs) to implement the capital plan will be generated based upon the unit price per square foot. These costs serve as inputs to the financial analysis discussed later in the report.

Evaluation Scale

The evaluation scales for the Capital Planning criteria are described in Table 2. Criteria will be assessed on a 5-point scale using the outputs of the Capital Planning analysis.

Table 2: Evaluation Scale for Capital Planning Evaluation Criteria

Evaluation Criteria/ Indicators	Evaluation Scale	Explanation of Scale
Timeliness of completion: Total Duration (Years to complete)	1 = Significantly longer duration than the Baseline BPO (>24 months longer) 2 = Longer duration than the Baseline BPO (>6 and ≤ 24 months longer) 3 = Similar duration as the Baseline BPO (+/- 6 months) 4 = Shorter duration than the Baseline BPO (>6 and ≤ 24 months shorter) 5 = Significantly shorter duration than the Baseline BPO (>24 months shorter)	An assessment of "1" represents the longest duration to implement the plan, which is least preferred since improvements to healthcare delivery may take a significant amount of time to realize. An assessment of "5" represents the shortest duration to implement the plan, which is most preferred since improvements to healthcare delivery may be realized sooner.
Timeliness of urgent corrections: Duration (Years to correct code deficiencies, focusing on seismic deficiencies as identified in the CAI)	1 = Significantly longer duration than the Baseline BPO (>24 months longer) 2 = Longer duration than the Baseline BPO (>6 and ≤ 24 months longer) 3 = Similar duration as the Baseline BPO (+/- 6 months) 4 = Shorter duration than the Baseline BPO (>6 and ≤ 24 months shorter) 5 = Significantly shorter duration than the Baseline BPO (>24 months shorter)	An assessment of "1" represents the longest duration to make seismic corrections, which is least preferred since safety improvements may take a significant amount of time to realize. An assessment of "5" represents the shortest duration to make seismic corrections, which is most preferred since safety improvements may be realized sooner.
Consolidation of underutilized space: % Underutilized Space	1 = Significantly less reduction in underutilized space than the Baseline BPO (>20% higher) 2 = Less reduction in underutilized space than the Baseline BPO (>5 and ≤ 20% higher) 3 = Similar reduction in underutilized space as the Baseline BPO (+/- 5%) 4 = Greater reduction in underutilized space than the Baseline BPO (>5 and ≤ 20% lower) 5 = Significantly greater reduction in underutilized space than the Baseline BPO (>20% lower)	An assessment of "1" represents the least amount of reduction in underutilized space, which is least preferred since less reduction of underutilized space indicates a less optimal use of space for providing healthcare and administrative functions throughout the campus. An assessment of "5" represents the greatest amount of reduction in underutilized space, which is most preferred since greater reduction of underutilized space indicates a more optimal use of space for providing healthcare and administrative functions throughout the campus.
Consolidation of vacant space: % Vacant Space	1 = Significantly less reduction in vacant space than the Baseline BPO (>20% higher) 2 = Less reduction in vacant space than the Baseline BPO (>5 and ≤ 20% higher) 3 = Similar reduction in vacant space as the Baseline BPO (+/- 5%) 4 = Greater reduction in vacant space than the Baseline BPO (>5 and ≤ 20% lower) 5 = Significantly greater reduction in vacant space than the Baseline BPO (>20% lower)	An assessment of "1" represents the least amount of reduction in vacant space, which is least preferred since less reduction of vacant space indicates a less optimal use of space for providing healthcare and administrative functions throughout the campus. An assessment of "5" represents the greatest amount of reduction in vacant space, which is most preferred since greater reduction of vacant space indicates a more optimal use of space for providing healthcare and administrative functions throughout the campus.

Re-Use

The purpose of the Re-use studies in Stage II is to determine the highest and best use of property for each of the BPOs. The Re-use team (Team PwC or OGC) will conduct refined market assessments and regulatory assessments in Stage II that build upon the previous market analysis completed for Stage I, with supplemental information from the local marketplace. The assessment will include such elements as rents, sales prices, absorption, changes to supply, and forecasted changes in demand drivers, such as projected employment growth and increase in households. Using the revised information from the market assessment, the Re-use team will engage in a collaborative process with the Capital Planning team to identify the optimal site configuration for each BPO that balances the desirability for re-use with the goals of the Capital Planning team. They will also provide information to the financial analysis team regarding projected re-use proceeds resulting from the BPO.

Inputs and Assumptions

The following will be the key inputs to the Re-use study for Stage II:

- **Market interviews**: Conversations will be conducted with local real estate brokers, developers, homebuilders, other real estate professionals, as well as local planning and economic development officials as appropriate.

- **Non-market users**: Non-market users will be identified through the LAP and stakeholder input. Telephone conversations will also be conducted with major veterans organizations to identify potential "in-kind" services as appropriate.

Key assumptions driving the Re-use study will include the following:

- Industry standards are to be utilized for estimating demolition or clean-up requirements as applicable.
- "Non-significant" historic buildings will be assumed eligible for demolition as opposed to re-use.
- Engagement in an Enhanced Use Lease will be assumed unless disposition would result in significantly higher net proceeds.

Several assumptions will also serve as the foundation for projecting revenues associated with Re-use plans:

- Revenue assumptions will be based on current market sale and lease rates as identified through a refined market assessment.
- All financing assumptions, including interest rates, capitalization rates, and discount rates, among others, are to be based on current market conditions.
- Non-market users will be considered to be revenue-neutral.
- Land acquisition costs are to be based on average current market rates for commercial and institutional property.

- A private developer or end-user will pay for demolition costs as necessary.

Outputs

The Re-use team will engage in a collaborative process with the Capital Planning team to identify the optimal site configuration for each BPO that balances the desirability for re-use with the goals of the Capital Planning functional area resulting in a refined BPO. Additional key outputs from the Re-use study will be the following:

- **Refined Market Assessment:** A market assessment write-up will be developed containing the following elements: market assessment of area, real estate market trends, range of market values and returns, and development risks given market trends.

- **Re-use Revenues:** The profiles of revenues generated from real property will be incorporated into the financial analysis to offset investment costs and yield an overall net present cost.

- **Political and Regulatory Assessment:** An assessment of the political, regulatory, and environmental conditions will be developed that assesses the political climate as well as existing and proposed zoning and other development regulations that could impact the re-use opportunities on the site.

- **Non-market users:** Non-market users identified through stakeholder and LAP meetings will be noted and addressed in narrative form.

- **Public and Private Funding Sources:** A discussion of sources of funding as identified through the LAP and discussions with local economic development officials.

Evaluation Scale

The evaluation scales for the Re-use criteria are described in Table 3. Criteria will be assessed on a 5-point scale using the outputs of the Re-use analysis.

Table 3: Evaluation Scale for Re-Use Evaluation Criteria

Evaluation Criteria / Indicators	Evaluation Scale	Explanation of Scale
Market potential for re-use	1 = Re-use would not be well received by the market 2 = Market is weak for re-use 3 = Market is adequate for re-use 4 = Market exhibits strength 5 = Market is very strong for re-use	An assessment of "1" represents the least market support for the re-use plan, which is least preferred since this would indicate a plan that is not the highest and best use of land. An assessment of "5" represents strong market support of the re-use plan, which is most preferred since this suggests the highest and best use of the land.
Financial feasibility	1 = Transaction expected to result in negative cash flow 2 = Transaction will generate less than satisfactory cash flows 3 = Transaction will generate marginal cash flows 4 = Transaction will generate material cash flows 5 = Transaction will generate significant cash flows	An assessment of "1" represents a re-use expense to VA which is least preferred since this would not result in proceeds for offsetting capital investment. An assessment of "5" represents significant positive cash flows, which is most preferred since they would allow VA to realize re-use proceeds to offset the capital investment required.
VA mission enhancement	1 = Least compatible with / provides least enhancement of VA mission 2 = Less compatible with / provides less enhancement of VA mission 3 = Similar compatibility / enhancement of VA mission as other BPOs 4 = More compatible with / provides more enhancement of VA mission 5 = Most compatible with / provides best enhancement of VA mission	An assessment of "1" represents a re-use plan that is not compatible with VA's mission, which is least preferred since this would not enhance and could possibly hinder the goals of VA. An assessment of "5" represents a re-use plan that is most compatible with VA's mission, which is most preferred since this would enhance the ability of VA to meet its goals.
Execution risk	1 = Option presents barriers that cannot be resolved 2 = Option presents significant obstacles that may not be resolvable 3 = Option may present obstacles that are resolvable with some difficulty 4 = Option may have some obstacles, but they should be reasonably resolvable 5 = Option presents no significant obstacles or barriers to execution	An assessment of "1" represents significant obstacles to the successful implementation of the re-use plan, which is least preferred since this could indicate inability to realize re-use proceeds in a timely manner. An assessment of "5" represents no obstacles to a successful implementation plan, which is most preferred since this would indicate that VA would realize expected re-use proceeds in a timely manner.

Use of VA Resources

The purpose of the financial analysis is to develop a detailed Cost Effectiveness Analysis for each BPO studied in Stage II. The analysis will utilize a financial model that considers the VAMC operating costs for providing care and capital investments, as well as proceeds from re-

use plans in order to determine overall cost effectiveness. Additionally, sensitivity analyses will be conducted to test the importance of the key assumptions. Additional iterations of the financial analysis will be run for each BPO to determine the impact different assumptions may have on the results.

Special attention will be given to providing more specific department/service level cost analysis that builds upon earlier CARES analysis and provides clearly described cost and business decision options as part of the Stage II results. The major differences between Stage I and Stage II financial analyses will be the level of detail and refinement that is included in the inputs to the financial analysis as well as improvement in the completeness of the analysis.

Inputs and Assumptions

These key inputs will include the following:

- **Current and forecasted services:** These are defined by the healthcare component of each BPO.

- **Current and forecasted utilization:** Departmental utilization data is based upon projected CIC utilization data approved by VA.

- **VA current and future unit cost of care**: Current costs are provided per CIC by VACO from the DSS system which serves as its cost accounting system. Team PwC calculates the future cost of care using an inflation factor.

- **Capital investment requirements and timing**: This will be provided by the Capital Planning team based upon square footage projections.

- **Re-use revenues**: These are revenues generated from real property and sharing agreements, and will be provided by the Re-use team.

The financial analysis to be conducted in Stage II will be based on several assumptions. A more detailed set of assumptions are included in the appendix; however, key assumptions are highlighted below:

- The financial analysis has a 30-year planning horizon from 2003 to 2033.
- Escalation rates are constant for each year for each individual site.
- The net present cost of each BPO is calculated using a Treasury nominal discount rate (5.2%).
- Medicare payment rates will use average rates per county. Adjustments for graduate medical education, average wage rates, disproportionate share, or capital requirements will be assumed to have been averaged across all providers.

Outputs

The outputs from the financial analysis are as follows:

- **Total operating costs**: This is the comparison of the total operating costs among the BPOs. Total operating costs include direct variable, fixed direct, and fixed indirect costs associated with a BPO. Operating costs are aggregated for the 30-year study period. This output is useful for evaluating the operating cost effectiveness of a BPO.

- **Total capital investment costs**: This is the comparison of the total capital investment costs among the BPOs over the 30-year study period net of reuse.

- **Net present cost**: This is the comparison of the 30-year NPC among the BPOs. NPC is the annual outflow discounted using the overall discount rate so that a particular BPO's cash outflows can be valued on a relative basis as compared to other BPOs.

- **Total considerations (re-use revenues, in-kind, etc.)**: This is the comparison of the total considerations (re-use proceeds/costs, in-kind considerations, etc) aggregated for the 30-year study period.

- **Total annual savings**: This is the comparison of the annual savings among the BPOs over the 30-year study period.

- **Cost Effectiveness Analysis:** The outputs from the Cost Effectiveness Analysis will also be provided which include such metrics as Return on Investment, Internal Rate of Return, Payback in terms of years, and Average Annual VA Investment.

Finally, sensitivity analyses will also be performed for each BPO to understand the effects of key data elements (e.g., contract prices, utilization volumes, etc.) on the outcomes.

Evaluation Scale

The evaluation scales for the Use of VA Resources criteria are described in Table 4. Criteria will be assessed on a 5-point scale using the outputs of the Use of VA Resources analysis.

Table 4: Evaluation Scale for Use of VA Resources Evaluation Criteria

Evaluation Criteria/ Indicators	Evaluation Scale	Explanation of Scale
Total operating costs	1 = Financial analysis metric for the BPO is greater than 114% of the Baseline BPO 2 = Financial analysis metric for the BPO is 105 - 114% of the Baseline BPO 3 = Financial analysis metric for the BPO is 95 - 104% of the Baseline BPO 4 = Financial analysis metric for the BPO is 85 - 94% of the Baseline BPO 5 = Financial analysis metric for the BPO is less than 85% of the Baseline BPO	An assessment of "1" represents a financial metric that is greater than the Baseline BPO, which is least preferred since this indicates higher costs to VA. An assessment of "5" represents a financial metric that is less than the Baseline BPO, which is preferred since this indicates lower costs to VA.
Total capital investment costs		
Net present cost		

Both the indicators of Total Considerations and Total Annual Savings will be presented and considered in the recommendation of a final BPO; however, they will not be evaluated using the scale as applied to the other outputs of the financial analysis.

Ease of Implementation

The purpose of the Ease of Implementation assessment is to determine the likelihood and potential severity of various risks that could impede the successful and timely implementation of the BPO. This also allows for the development of mitigation strategies that can be considered during implementation planning. Data for the indicators of the evaluation criteria (i.e., capital considerations, re-use considerations, academic affiliation / education, and HR / staffing) will be compiled. The risk factors will be assessed according to impact and likelihood of occurrence. The impact of a risk factor refers to the degree to which the factor will disrupt successful implementation of the BPO. The likelihood of occurrence refers to the probability that the risk factor will arise. An online risk assessment tool will be used to calculate the risk metric based on these parameters as well as capture corroborative data, justification for the risk metric, and mitigation factors. Mitigation strategies will be developed for major risks identified through this assessment and included in the implementation plan for each BPO.

Inputs and Assumptions

The key inputs for the Ease of Implementation study will mirror the evaluation criteria as discussed earlier for this function. The risks assessments will be conducted using the indicator data gathered for the evaluation criteria of academic affiliations / education, HR / staffing, re-use considerations, and capital considerations.

Key assumptions for conducting the Ease of Implementation study will include the following:

- Academic affiliations/education and HR/staffing criteria are not assessed at comprehensive capital planning sites, where no healthcare decision is required.
- There will be no overall risk score for a given BPO (i.e., risk criteria will be assessed independently and will not be summed or weighted).
- Each risk criterion will be rated across two factors – impact and likelihood of occurrence.
- The expert panel will review and validate the risk assessment proposed by the site study team.

Outputs

The following will be the key outputs from the risk assessment:

- **Risk metric and narrative**: Quantitative risk assessment of each criterion with supporting narrative. The risk metric and assessment information will assist in the development of risk mitigation factors to be developed in the final business plan.

- **Risk mitigation plans**: Plans for mitigating the identified risks will be developed and incorporated into the implementation plan for the BPO.

Evaluation Scale

The evaluation scales for the Ease of Implementation criteria are described in Table 5. Criteria will be assessed on a 5-point scale using the outputs of the Ease of Implementation analysis.

Table 5: Evaluation Scale for Ease of Implementation Evaluation Criteria

Evaluation Criteria/ Indicators	Evaluation Scale	Explanation of Scale
Academic affiliations/education* (All indicators) **HR/staffing*** (All indicators) **Re-use considerations** (All indicators) **Capital planning considerations** (All indicators)	The ease of implementation criteria will be assessed as the average of two dimensions: 1) negative impact of identified risk and 2) likelihood of negative impact of identified risk. <u>Negative Impact of Identified Risk</u> For Academic affiliations/education, HR/staffing, and all Capital planning considerations for implementation, **impact** will be measured as follows: 1-5 scale for negative impact of identified risk 1 = High potential negative impact 3 = Medium potential negative impact 5 = Low potential negative impact For Community Support (a Re-use consideration), impact will be measured as follows: 1 = Option has strong community resistance with at most limited support 2 = Option has greater community resistance than support 3 = Option has a balance of community support and resistance 4 = Option has greater community support than resistance 5 = Option has strong community support with at most limited resistance For Legal and Regulatory (a Re-use consideration), impact will be measured as follows: 1 = Option has obstacles that cannot be resolved 2 = Option has significant obstacles that may not be resolvable 3 = Option may have obstacles that are resolvable with some difficulty 4 = Option may have some obstacles, but they should be reasonably resolvable 5 = Option has no significant legal/regulatory obstacles <u>Likelihood of Negative Impact</u>	The overall assessments represent the ease of implementation according to the two noted dimensions. Thus, assessments with lower scores will be more difficult to implement and will require more mitigation planning, while assessments with higher scores will be easier to implement and require less mitigation planning. An assessment of "1" represents a risk area that is likely to occur and would have a high negative impact. This assessment is least preferred since this indicates a BPO that is not easily implemented and requires development of substantial mitigation strategies for identified risks. An assessment of "3" represents a risk area with one of the following scenarios: • The risk is likely to occur, but will have low negative impact • The is not likely to occur, but would have high negative impact • The risk has medium likelihood of occurring and would have medium negative impact if occurred The BPO with an assessment of "3" would require a moderate amount of mitigation planning for the identified risks for successful implementation. An assessment of "5" represents a risk area that is not likely to occur and would have a low negative impact, which is preferred since this indicates a BPO that is easily implemented and does not require substantial mitigation planning.

Evaluation Criteria/ Indicators	Evaluation Scale	Explanation of Scale
	For Academic affiliations/education, HR/staffing, and all Capital planning considerations for implementation, **likelihood** will be measured as follows: 1-5 scale for likelihood of negative impact for identified risk 1 = High likelihood of occurrence of negative impact 3 = Medium likelihood of occurrence of negative impact 5 = Low likelihood of occurrence of negative impact For Community Support, likelihood will be measured as follows: 1 = Option has high likelihood of community resistance 3 = Option has moderate likelihood of community resistance 5 = Option has low likelihood of community resistance For Legal and Regulatory, likelihood will be measured as follows: 1 = Option has high likelihood of encountering legal or regulatory obstacles 3 = Option has moderate likelihood of encountering legal or regulatory obstacles 5 = Option has a low likelihood of encountering legal or regulatory obstacles The ease of implementation metric will be calculated using the following: Ease of Implementation = (Impact + Likelihood) / 2. An ease of implementation score will then be calculated for each criterion using the following scale: 1 = The BPO has significantly greater implementation challenges than the Baseline BPO (≥ 2 points higher than the Baseline BPO) 2 = The BPO has greater implementation challenges than the Baseline BPO (≥ 1 points higher and <2 points higher than the Baseline BPO) 3 = The BPO has similar ease of implementation to the Baseline BPO (<1 point difference with the Baseline BPO) 4 = The BPO has greater ease of implementation than the Baseline BPO (≥ 1 points lower and <2 points lower than the Baseline BPO) 5 = The BPO has significantly greater ease of implementation than the Baseline BPO (≥ 2 points lower than the Baseline BPO)	

* Academic affiliations/education and HR/staffing criteria not assessed at comprehensive capital planning sites, where no healthcare decision is required.

Ability to Support Other VA Programs

The purpose of this study is to determine how BPOs may support or jeopardize specific programs that have been identified as primary initiatives. These initiatives include enhanced DoD sharing, One-VA integration, promotion of specialized programs, and enhancement of services to veterans. This assessment will leverage information from Stage I to determine how the refined BPOs in Stage II would positively or negatively impact these VA objectives. Site teams will consider these impacts in evaluating the BPOs against the Baseline option.

Inputs and Assumptions

The primary inputs for this study will be the information gathered in Stage I regarding the following:

- **DoD sharing arrangements**: These include arrangements made between VA and DoD institutions to share facilities or services in order to provide care to veterans.
- **Specialized VA programs**: Specialized VA programs are defined as spinal cord injury, blind rehabilitation, seriously mentally ill, polytrauma, and Centers of Excellence.
- **Proposed enhancement of services**: Service enhancements or ancillary support services that would improve quality, cost effectiveness and continuity of care.
- **Integration with VBA and NCA facilities**: Co-location of VBA or NCA facilities with VA facilities to allow for easier access to VA services on the campus.

Outputs

A discussion will be provided of how each BPO impacts the VA programs, specifically, DoD sharing, One-VA integration, specialized VA programs, and enhancement of services to veterans. The resulting impacts will be quantitatively evaluated similar to other assessment areas.

Evaluation Scale

The evaluation scales for the Ability to Support Other VA Programs criteria are described in Table 6. Criteria will be assessed on a 5-point scale using the outputs of the Ability to Support VA Programs analysis.

Table 6: Evaluation Scale for Ability to Support Other VA Programs Evaluation Criteria

Evaluation Criteria/ Indicators	Evaluation Scale	Explanation of Scale
DoD sharing (Memoranda Of Understandings impacted by BPO)	1 = The BPO has the potential to provide the least enhancement relative to the Baseline BPO for the specific criterion 2 = The BPO has the potential to provide less enhancement relative to the Baseline BPO for the specific criterion 3 = The BPO has the potential to provide enhancement equivalent to the Baseline BPO for the specific criterion 4 = The BPO has the potential to provide more enhancement relative to the Baseline BPO for the specific criterion 5 = The BPO has the potential to provide the most enhancement relative to the Baseline BPO for the specific criterion	An assessment of "1" represents the least potential for the BPO to enhance one of the special VA programs, which is least preferred since this does not assist VA in meeting programmatic objectives. An assessment of "5" represents the most potential for the BPO to enhance one of the select VA programs, which is preferred since this assists VA in meeting programmatic objectives.
One VA integration (VBA and NCA impacted by BPO)		
Specialized VA programs (Specialized Care/COE impacted by BPO)		
Enhancement of services to veterans (Services in kind)		

Stakeholder Input

The purpose of the Stakeholder Input element in Stage II is to encourage a meaningful dialogue with veterans, veterans advocacy groups, staff, elected officials, and other interested parties, about the options being considered for a given study site. The Stakeholder Input element seeks to provide stakeholders with a series of convenient communication channels to express their interests, concerns, and priorities for the study. Through the CARES project website (www.va.gov\cares), Team PwC will also provide stakeholders with information about the study background and objectives, the options being considered, and the findings and recommendations for each study site.

Feedback from stakeholders will be considered by Team PwC in developing implementation plans and risk mitigation strategies for each BPO. This feedback will also be used by VA decision makers in weighing the advantages and disadvantages of each BPO and their associated implementation plans.

Inputs and Assumptions

Similar to the manner in which stakeholder inputs were gathered during Stage I, the inputs will include the following:

- Testimony and presentations made at public meetings, including public comments and questions
- A questionnaire soliciting stakeholder opinions which will be available for completion by persons who access the website
- A paper version of the questionnaire which will be available during public meetings
- A mail stop where the public can mail written comments and information about a particular study site

In addition, presentations and approved reports, along with meeting information and any other announcements concerning the study, will be promptly posted on the CARES Project website, the address of which will be prominently publicized.

In Stage II, stakeholders will be asked to comment on the BPOs selected for further study. However, stakeholders will not be limited as to the type of input which they can provide, and some stakeholders may choose to provide very personal information about the care they or a relative received, or about the anticipated need to provide future veterans with healthcare.

Key assumptions include:

- Stakeholder input will be limited to the study period
- Stakeholders will have 14 calendar days following the LAP meeting to submit additional written feedback via the website or mail stop
- Although the volume of stakeholder input recfeived will not necessarily represent all stakeholder viewpoints, and may not be statistically significant, the feedback will still provide a useful indication of the likely interests, concerns, and priorities of stakeholders that must be considered if a BPO is to be implemented successfully
- Despite the absence of an assigned weight or evaluation scale to stakeholder input, Team PwC's site teams, the expert panel, and VA decision makers will nevertheless have access to the types of concerns expressed by stakeholders, including insights that may not be available through more objective data-gathering methods

For healthcare study sites, the questionnaire will specifically solicit views from stakeholders in the following five categories:

Table 7:Healthcare Study Sites - Categories of Concern

Category of Concern	Definition
Access	Concerns about the travel time to the healthcare facility if this option is selected.
Healthcare Services & Providers	Concerns about a possible change in what services are available or who provides them.
Adequate Facilities	Concerns about whether the option would provide a modern facility capable of meeting healthcare demands in the future.
Use of Facilities	Concerns about whether this option makes good use of existing land and buildings.
Research & Education	Concerns about changes to research or education programs at the facility.

For capital planning study sites, the questionnaire will specifically solicit views from stakeholders in the following five categories:

Table 8: Capital Study Sites - Categories of Concern

Category of Concern	Definition
Adequate Facilities	Concerns about whether this option would provide a modern facility capable of meeting healthcare demands in the future.
Timeliness	Concerns about the length of time to finish construction called for by this option.
Availability of Care	Concerns that construction will disrupt the healthcare currently provided
Use of Facility	Concerns about whether this option makes good use of existing land and facilities.
Campus Environment	Concerns that this option will disrupt the historic quality or the natural setting of the current campus.

Outputs

Three types of stakeholder input (electronic comment forms, written comment forms and correspondence, and testimony) will be analyzed, categorized and summarized to provide information on:

- The number and percentage of stakeholders expressing a particular concern for a given BPO
- General themes expressed in oral testimony at the public LAP meetings and written input submitted at the LAP meetings, to the mail stop, or via the website
- When appropriate, selected comments which amplify or clarify stakeholder interests and concerns
- Implications of stakeholder feedback for successful implementation of the BPO

The tabulation and summary description of stakeholder input will be provided to Team PwC site teams and the expert panel for consideration in their discussion of the relative merits of each of the short-listed BPOs. The trade-off discussion will consider the five evaluation categories and stakeholder input. The evaluation findings of Team PwC will address the likelihood of stakeholder support for a given BPO, together with stakeholder interests, concerns and priorities to be addressed in implementation of the BPO.

Presentation of Results

The purpose of the results step is to provide VA decision makers with a balanced discussion of the trade-offs to be considered in making a final decision. The Stage II results will consist of a discussion of the relative merits of each BPO, comparing and contrasting the strengths and weaknesses of each BPO, and a plan to implement each BPO.

Independent Review Panel

To obtain greater input into the development of the final business plan reports, PricewaterhouseCoopers will convene an independent review panel (IRP) to provide an in-

process review of the Stage II analysis, including a balanced review of the tradeoffs that were considered in developing the evaluation of each business plan option. This panel will:

- Provide input from multiple perspectives, to include academia and private sector management and clinical viewpoints.
- Discuss analysis and evaluations.
- Discuss the reasoning behind the evaluations, including the trade-offs between criteria.
- Discuss the relative merits of each option without providing definitive recommendations.
- Capture feedback for incorporation into the final site report.

The composition of the IRP will include VA representatives from Office of Strategic Initiatives (OSI) and Office of Asset Enterprise Management (OAEM), and Team PwC representatives (Partner facilitators, physicians with expertise on clinical quality, expert capital planners, real estate market experts or advisors, and site leaders). The IRP members will also include independent experts from academia and healthcare management.

Panel Results

Stage II will employ the IRP at the conclusion of the analysis phase and prior to the development of final business plan reports.

The purpose of the results step of the process is to provide an in-process review of the Stage II analysis, including a balanced review of the tradeoffs that were considered in developing the Stage II Report. The panel process will provide the basis for discussion on the analysis of each BPO's relative merits, comparing and contrasting the strengths and weaknesses of each BPO, and a plan to implement each BPO.

Purpose

CARES Business Plan Study IRP
• Review Stage II site reports which will include analysis from capital, financial, re-use, and stakeholder management teams. • Identify areas where the discussion of analysis results could be enhanced to allow a better understanding of the evaluation of each Business Plan Option. • Review and synthesize the ongoing work of the PricewaterhouseCoopers (PwC) site team and the OAEM IDIQ contractors to determine if presentations clearly articulate tradeoff decisions and that those decisions represent best practices across the study areas (healthcare, capital and re-use). • Guidance received by the Panel should be considered and potentially incorporated in revisions of the CARES Business Plan Study Stage II final report.

Operating Principles

The IRP will be guided by the following principles:

- All meetings of the Panel were held at PricewaterhouseCoopers offices at McLean, attendance will be limited to panel members and PwC Project Management, OAEM, and study site staff except where alternate arrangements were made in advance.
- The Panel will be chaired by a PwC partner. The chairs will provide oversight to the preparation of all panel documents, including meeting agendas and meeting minutes.
- Panel members represented their expertise area and not their respective organizations or corporations.
- The panel members provided comments and recommendations verbally during the meeting.
- There was no attempt to reach consensus or to develop group recommendations within the committee. They did not make decisions or develop group positions.
- It was the responsibility of Team PwC in concert with the IDIQ to revise the Stage II final report as appropriate.
- No new data collection or analysis was conducted as a result of the recommendations of the committee members, unless directed by the VA contract officer.
- Detailed minutes of each committee meeting were documented.
- Panel documents were not made available to entities outside the offices of the Assistant Deputy Under Secretary for Health and Office of Asset Enterprise Management.
- Composition of the panel was subject to change, as needed, for the different sites identified in the CARES study.

Panel Process Outputs

The IRP members were provided with preparation material which will include an initial high level presentation of the VA CARES study, methodology, assumptions, site overview, and key site issues. During the panel meeting, the site study team will provide an overview presentation of site description, options, particular issues, option evaluation, supporting rationale, and conclusions.

The IRP discussed the conclusions of the study team and provide commentary on the analysis results and evaluation of each option. The IRP also weighed the breadth and depth of stakeholder concern about various alternatives and ensure that the evaluation of each option takes into account any information that was not captured in any of the other objective measures in forming the Panel's judgment.

The IRP provided feedback at the sessions that was used, as appropriate, by Team PwC and the IDIQ in finalizing the Stage II business plan report.

Implementation Plans

Following the IRP's discussion of preliminary results, implementation plans will be developed for all Stage II BPOs. The purpose of each plan will be to provide a roadmap for the local site teams for implementing the BPO, noting critical transition and implementation activities. The plan with highlight key milestones associated with implementation functions such as budgeting and funding, procurement, contracting for care, construction, human resource transition, as well as building activation and occupancy. The plan will help to appropriately sequence the implementation activities accounting for dependencies among the various functions.

An implementation schedule will be created using Microsoft Office's project management program (MS Project) in six-month intervals listing the critical implementation tasks. The plans will be based upon the capital planning construction schedules with overlays of additional functions. A supporting narrative will also be developed to more fully explain the implementation roadmap, explaining key milestones and dependencies, as well as risk mitigation strategies for all risks identified in the ease of implementation analysis. Ultimately the implementation plan will be used to guide the execution of the BPO, but may also provide VA additional insight to the risks and complexity of the BPO, as the results of the various BPOs studied in Stage II are considered.

Appendix C - Financial Definitions

- **Net Present Cost ("NPC")**: The sum of the annual cash-flows, discounted using the overall discount rate, so that a particular BPOs cash-flow can be valued on a relative basis to the other BPOs within a given study site. This is calculated as operating costs + capital costs (capital investments and periodic maintenance/replacement costs) + considerations.

- **Return on Investment ("ROI"):** The percentage return generated by each additional dollar invested. The ROI is always compared to BPO 1 and generally will be negative because the compared BPO has costs less than the BPO 1. The Financial Analysis for CARES Business Plan Studies uses the CEA, the term "benefits" means cost savings and cash-inflows estimated.

  - ROI calculation = [Positive savings minus (Option NPC minus BPO 1 NPC)]/(Option NPC minus BPO 1 NPC)

  - Positive savings: favorable difference in cost types (operational costs, capital investment costs, capital life cycle costs and re-use revenue), where Option X cost is less than BPO 1 cost. Negative savings, where Option X cost is greater than BPO 1 for any of the cost types, are not factored into the savings.

- **Internal Rate of Return ("IRR"):** A particular project's IRR is the discount rate that causes its future-value cashflows to result in a zero NPC.

- **Annual VA Investment Levels**: Annual investment levels required by the VA for a particular BPO are calculated by taking total capital investments divided by 30 years.

- **Return on Capital Investment**: Positive savings divided by Total Capital Cost (Capital Investments + Capital Periodic Maintenance/Replacement).

- **Total Operating Costs**: Annual operating cash-flows are discounted using the overall discount rate so that a particular BPOs operating cash-flow can be valued on a relative basis to the other BPOs operating cash-flow.

- **Total Capital Investment Costs**: Annual capital investment cash flows are discounted using the overall discount rate so that a particular BPOs capital investment cash-flow can be valued on a relative basis to the other BPOs.

- **Total Considerations**: Annual consideration cash flows are discounted using the overall discount rate so that a particular BPOs consideration cash-flow can be valued on a relative basis to the other BPOs.

- **Total Calculated Savings**: Favorable difference in cost types (operational costs, capital investment costs, capital periodic maintenance/replacement costs and re-use revenue) as

compared to other BPOs. Negative savings in cost types are not factored into the savings.

- **Direct Variable Costs**: The costs of direct patient care that vary directly and proportionately with fluctuations in workload. Examples include salaries of providers and the cost of medical supplies

- **Fixed Indirect Costs**: The costs not directly related to patient care, and therefore not specifically identified with an individual patient or group of patients. These costs are allocated to direct departments through the indirect cost allocation process. Examples include utilities, maintenance, and administration costs.

- **Fixed Direct Costs:** The costs of direct patient care that do not vary in direct proportion to the volume of patient activity. The word “fixed" does not mean that the costs do not fluctuate, but rather that they do not fluctuate in direct response to workload changes. Examples include depreciation of medical equipment and salaries of administrative positions in clinical areas.

Appendix D - Sensitivity Analysis

A sensitivity analysis, based on the outputs of the financial analysis, was performed for each of the Stage II BPOs for the Livermore study site. A sensitivity analysis is a procedure performed to determine the sensitivity of the outcomes of a BPO. For example, if a small change in a factor, such as escalation rates, results in relatively large changes in the outcomes, the outcomes are said to be sensitive to that factor. This section first describes key factors of the sensitivity analysis at Livermore, followed by a discussion of the detailed financial outputs associated with each factor.

Key Factors for Livermore

The following key factors were considered in the sensitivity analysis for each BPO at Livermore. These factors were selected based on the outputs from the financial analysis and the discussions conducted during the Independent Review Panel.

- Capital investment escalation rates – a change in capital investment escalation rates from 4% to 6.5% which was selected based on the last two years of construction cost history from RSMeans, a cost estimating organization
- Variable costs efficiencies related to recurring operating costs based on 2% for renovation and 4% for new construction
- Accelerating building construction timeframe – starting design in 2009 adding construction duration timeframe and 6 months for activation

Capital Investment Escalation Rates

Table 1 shows the sensitivity of the BPOs to the capital investment escalation rates used for each BPO. In this analysis the assumption for capital investment costs are increased to 6.5% per year instead of 4.0%. The reason for this sensitivity analysis is to identify the sensitivity the individual BPOs have to the escalation rate for construction. Recently, construction rates have increased at a higher rate than expected. Therefore, this sensitivity analysis provides insight into what happens to a BPO if this trend continues.

Table 1: Capital Investment Escalation Sensitivity

BPO Comparison 2003 Net Present Dollars ($000) Reflects 30 year period 2003-2033				
	BPO 1*	**BPO 2**	**BPO 4**	**BPO 8**
Total Net Present Cost	$ 717,470	$ 661,153	$ 657,225	$ 679,011
Total Net Present Cost Modified for Construction Escalation	$ 733,484	$ 673,500	$ 669,130	$ 692,840

Re-use is not included in Baseline

As shown, the NPC increases for all options. However, the new construction options, BPO 2 and BPO 4 remain the least expensive options. The renovation options, BPO 1 and BPO 8 remain the most expensive options.

Variable Cost Efficiencies

Variable costs account for the largest proportion (49-54%) of total operating costs at the Livermore site. These costs were only subject to changes arising from workload in the financial analysis. Generally, however, it is anticipated that efficiencies in these variable costs are gained during renovation and construction. These efficiencies relate to buildings and functions being in closer and better proximity to each other, facilities built to provide state of the art medical care, and other enhancements such as private inpatient rooms. The following shows the results of the sensitivity analysis where operating efficiencies of 2% and 4% are incorporated for new renovations and new construction, respectively.

Table 2: Variable Cost Efficiencies Sensitivity

BPO Comparison 2003 Net Present Dollars ($000) Reflects 30 year period 2003-2033				
	BPO 1*	**BPO 2**	**BPO 4**	**BPO 8**
Total Net Present Cost	$ 717,470	$ 661,153	$ 657,225	$ 679,011
Total Net Present Cost Modified for Operating Efficiencies	$ 715,015	$ 655,098	$ 651,171	$ 676,737

Re-use is not included in Baseline

As shown in Table 2, the savings that result from the operating efficiencies are about $2 million in NPC for renovations and $6 million in NPC for new construction. The savings for each BPO are limited to the timeframe after which activation of the facility has occurred through 2033. Although the impacts of these changes on the total operating cost and NPC of these options are fairly similar, they further support the lower cost new construction BPOs.

Accelerated Implementation Schedule

The implementation schedules for the four BPOs are reasonably long, a significant portion of which is caused by various anticipated regulatory constraints. This sensitivity analysis assessed the impact of removing these constraints on the timeframe for each BPO. Removing the constraints has the effect of reducing the impact of capital investment escalation rates and introducing some of the operating efficiencies earlier. Specifically, the impact of starting design and construction in 2009 was assessed to understand how the NPC of each BPO might change. Table 3 shows the results on the NPC for each of the BPOs.

Table 3: Accelerated Implementation Schedule Sensitivity

BPO Comparison 2003 Net Present Dollars ($000) Reflects 30 year period 2003-2033				
	BPO 1*	**BPO 2**	**BPO 4**	**BPO 8**
Total Net Present Cost	$ 717,470	$ 661,153	$ 657,225	$ 679,011
Total Net Present Cost Modified for Accelerated Implementation Schedule	$ 701,644	$ 642,010	$ 634,872	$ 646,453

Re-use is not included in Baseline

As shown, the changes result in decreases in the NPC of between $16 million and $33 million, with BPO 8 showing the greatest reduction ($33 million). However, there was no change in the overall rankings of the BPOs as they compare to each other.

Appendix E - Glossary

Acronyms

AFB	Air Force Base
AMB	Ambulatory
BPO	Business Plan Option
CAI	Capital Asset Inventory
CAP	College of American Pathologists
CARES	Capital Asset Realignment for Enhanced Services
CBOC	Community Based Outpatient Clinic
CIC	CARES Implementation Category
DoD	Department of Defense
FTEE	Full Time Employee Equivalent
GFI	Government Furnished Information
HEDIS	Health Plan Employer Data and Information Set
ICU	Intensive Care Unit
IP	Inpatient
JCAHO	Joint Commission on Accreditation of Healthcare Organizations
OP	Outpatient
MH	Mental Health
MOU	Memorandum of Understanding
N/A	Not Applicable
NFPA	National Fire Protection Association
PTSD	Post Traumatic Stress Disorder

SOW	Statement of Work
VA	Department of Veterans Affairs
VACO	VA Central Office
VAMC	Veterans Affairs Medical Center
VBA	Veterans Benefits Administration
VHA	Veterans Health Administration
VISN	Veterans Integrated Service Network

Definitions

Access	Access is the determination of the numbers of actual enrollees who are within defined travel time parameters for primary care, acute hospital care, and tertiary care after adjusting for differences in population and density and types of road.
Alternative Business Plan Options	Business Plan Options generated as alternatives to the Baseline Business Plan Option providing other ways VA could meet the requirements of veterans at the Study Site.
Ambulatory Services	Services to veterans in a clinic setting that may or not be on the same station as a hospital, for example, a Cardiology Clinic. The grouping as defined by VA also includes several diagnostic and treatment services, such as Radiology.
Baseline Business Plan Option	The Business Plan Option for VA which does not change any element of the way service is provided in the study area. "Baseline" describes the current state projected out to 2013 and 2023 without any changes to facilities or programs or locations and assumes no new capital expenditure (greater than $1 million). Baseline state accounts for projected utilization changes, and assumes same or better quality, and necessary maintenance for a safe, secure, and modern healthcare environment.

Business Plan Option (BPO)	The options developed and assessed by Team PwC as part of the Stage I and Stage II Option Development Process. A business plan option consists of a credible healthcare plan describing the types of services, and where and how they can be provided and a related capital plan, and an associated re-use plan.
Capital Asset Inventory (CAI)	The CAI includes the location and planning information on owned buildings and land, leases, and agreements, such as enhanced-use leases, enhanced sharing agreements, outleases, donations, permits, licenses, inter- and intra-agency agreements, and ESPC (energy saving performance contracts) in the VHA capital inventory.
CARES Implementation Category (CIC)	One of 25 categories under which workload is aggregated in VA demand models. *(See Workload)*
Clinic Stop	A visit to a clinic or service rendered to a patient.
Clinical Inventory	The listing of clinical services offered at a given station.
Code	Compliance with auditing/reviewing bodies such as JCAHO, NFPA Life Safety Code or CAP.
Community Based Outpatient Clinic (CBOC)	An outpatient facility typically housing clinic services and associated testing. A CBOC is VA operated, contracted, or leased and is geographically distinct or separate from the parent medical facility.
Cost Effectiveness	A program is cost-effective if, on the basis of life-cycle cost analysis of competing alternatives, it is determined to have the lowest costs expressed in present value terms for a given amount of benefits.
Domiciliary	A VA facility that provides care on an ambulatory self-care basis for veterans disabled by age or diseases who are not in need of acute hospitalization and who do not need the skilled nursing services provided in a Nursing Home.
Enhanced Use Lease	A lease of real property to non-government entities, under the control and/or jurisdiction of the Secretary of Veterans Affairs, in which monetary or "in-kind" consideration (i.e., the provision of goods, facilities, construction, or services of the benefit to the Department) is received. Unlike traditional federal leasing authorities in which generated proceeds must be deposited into a general treasury account, the enhanced-use leasing authority

	provides that all proceeds (less any costs than can be reimbursed) are returned to medical care appropriations.
Good Medical Continuity	A determination that veterans being cared for a given condition will have access to the appropriate array of primary, secondary, and tertiary care services required to treat that condition.
Initial Screening Criteria	A series of criteria used as the basis of the assessment of whether or not a particular Business Plan Option has the potential to meet or exceed the CARES objectives.
Inpatient Services	Services provided to veterans in the hospital or an inpatient unit, such as a Surgical Unit or Spinal Cord Injury Unit.
Market Area	Geographic areas or boundaries (by county or zip code) served by that Network's medical facilities. A Market Area is of a sufficient size and veteran population to benefit from coordinated planning and to support the full continuum of healthcare services. (*See Sector)*
Mental Health Indicators	See the end of this document.
Multispecialty Clinic	A VA medical facility providing a wide range of ambulatory services such as primary care, specialty care, and ancillary services usually located within a parent VA facility.
Nursing Home	The term "Nursing Home care" means the accommodation of convalescents or other persons who are not acutely ill and not in need of hospital care, but who require nursing care and related medical services, if such nursing care and medical services are prescribed by, or are performed under the general direction of, persons duly licensed to provide such care. Such term includes services furnished in skilled nursing care facilities, in intermediate care facilities, and in combined facilities. It does not include domiciliary care.
Primary Care	Healthcare provided by a medical professional with whom a patient has initial contact and by whom the patient may be referred to a specialist for further treatment. *(See Secondary Care and Tertiary Care)*
Re-use	An alternative use for underutilized or vacant facility space or VA owned land.

Risk	Any barrier to the success of a Business Planning Option's transition and implementation plan or uncertainty about the cost or impact of the plan.
Secondary care	Medical care provided by a specialist or facility upon referral by a primary care physician that requires more specialized knowledge, skill, or equipment than the primary care physician has. *(See Primary Care and Tertiary Care)*
Sector	Within each Market Area are a number of sectors. A sector is one or more contiguous counties. *(See Market Area)*
Stakeholder	A person or group who has a relationship with VA facility being examined or an interest in what VA decides about future activities at the facility.
Tertiary care	High specialized medical care usually over an extended period of time that involves advanced and complex procedures and treatments performed by medical specialists. *(See Primary Care and Secondary Care)*
Workload	The amount of CIC units by category determined for each market and facility by the Demand Forecast.