

Department of Veterans Affairs

Camp Lejeune – Veteran (CL - V)

Requirements Specification Document



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1. Introduction

From the 1950s to the 1980s, people living or working at the US Marine Corps Base Camp Lejeune, North Carolina, were potentially exposed to drinking water contaminated with industrial solvents, benzene, and other chemicals. As a result, healthcare benefits will be provided for Veterans and their families that resided in Camp Lejeune between January 1, 1957 and December 31, 1987 that were physically affected by the water contamination. This will allow Veterans and their family members to receive Veterans Affairs (VA) healthcare and be enrolled in Priority Group 6 for Camp Lejeune related conditions.

The Camp Lejeune-Veteran (CL-V) project improves organizational efficiency in providing services to affected Veterans and their family members by ensuring that they are appropriately identified as Camp Lejeune eligible, assigning them to Priority Group 6, and waiving co-payments for their Camp Lejeune related conditions. This helps address mandate H.R. 1627 (now Public Law 112-154), which requires VA to provide hospital care and medical services to Veterans who served on active duty at Camp Lejeune and to eligible family members for one or more of 15 specified illnesses or conditions.

1.1. Purpose

The purpose of this Requirements Specification Document (RSD) is to formally define and document the business and user functional requirements that the CL-V project will provide. CL-V will focus on the implementation of CL-V system changes through front end applications (Registration, Enrollment, and Eligibility), point of care (Computerized Patient Record System, Scheduling, Pharmacy, etc.), and back office (Integrated Billing, Office of Policy and Planning reporting, etc.)¹

1.2. Scope

This document specifies business and functional requirements needed to successfully complete the CL-V project. Specifically, this RSD will provide required enhancement activities to include software development, system testing, integration testing, hardware configuration, software configuration, system administration, defect repair, and system deployment on a continuous basis in support of the CL-V project.

1.3. References

- Camp Lejeune PL 112-154 Veterans Systems Changes BRD v10

- Department of Veterans Affairs Handbook 6102
- Department of Veterans Affairs Handbook 6500
- Department of Veterans Affairs Handbook 6513
- Federal Information Processing Standards Publication (FIPS PUB) 140-2, Security Requirements for Cryptographic Modules (May 21, 2001)
- Federal Information Processing Standards Publication (FIPS PUB) 199, Standards for Security Categorization of Federal Information and information Systems (March 2004)
- Federal Information Processing Standards Publication (FIPS PUB) 200, Minimum Security Requirements for Federal Information and Information Systems (March 2006)
- National Institute of Standards and Technology (NIST) Special Publication(SP) 800-30, 800-37, 800-53, 800-60 rev 1, 800-53 rev 3, 800-111
- Section 508 Compliance.

2. Overall Description

President Barack H. Obama signed into law, the Honoring America's Veterans and Caring for Camp Lejeune Families Act of 2012, on August 6, 2012. This law (H.R. 1627, now Public Law 112-154), requires VA to provide hospital care and medical services to Veterans who served on active duty at Camp Lejeune (North Carolina) and to eligible Family Members for one or more of 15 specified illnesses or conditions (Esophageal cancer; Lung cancer; Breast cancer; Bladder cancer; Kidney cancer; Leukemia; Multiple myeloma; Myelodysplastic syndromes; Renal toxicity; Hepatic steatosis; Female infertility; Miscarriage; Scleroderma; Neurobehavioral effects; and Non-Hodgkin's lymphoma).

To be eligible for care under the provisions of this bill, the Veteran and/or family member must have resided or served on active duty at Camp Lejeune for not fewer than 30 days between January 1, 1957 and December 31, 1987.

2.1. Accessibility Specifications

All Section 508 requirements will be adhered to. Compliance with Section 508 will be determined by fully meeting the applicable requirements as set forth in the Veterans Health Architecture (VHA) Section 508 checklists (1194.21, 1194.22, 1194.24, 1194.31, and 1194.41) located at: <http://www.va.gov/vha/508/> or as otherwise specified.

Checkpoints will be established to ensure that accessibility is incorporated from the earliest possible design or acquisition phase and successfully implemented throughout the project.

2.2. Business Rules Specification²

² Camp Lejeune PL 112-154 Veterans Systems Changes BRD v10 p.4

Business Need (BN)	OWNER Number	Owner Requirement (OWNR)	Priority*
BN 1: Adhere to the Enterprise Level requirements within the Enterprise Requirements Repository (ERR).			
BN 2: Provide the capability for VA staff (Enrollment System (ES) User and VistA User) to manage the identification of Veterans eligible for care based on the Camp Lejeune legislation. Ability to capture Camp Lejeune (CL) information at registration event or perform updates to initial registration information.			
	2.1	VA Staff (ES User and VistA User) should have the capability to add, view, and update CL information for Veterans.	
	2.1.1	<p>Provide the capability to determine whether a Veteran is CL eligible or not.</p> <p>CL eligibility may be set by an ES or VistA user if <u>all</u> of the following conditions are met:</p> <ul style="list-style-type: none"> • Person is a Veteran* AND • Has at least one Military service episode between, and inclusive of, January 1, 1957 and December 31, 1987 with an other than dishonorable character of discharge, AND <ul style="list-style-type: none"> ○ Either: <ul style="list-style-type: none"> ○ A) The identified Military Service episode is at least 30 days in duration; OR ○ B) One or more military service episodes within the dates add up to 30 or more days in duration (meaning that it does not have to be consecutive days) <p><i>*Note: The clerks are responsible for determining if a person is a Veteran. Veteran definition for VA Health Care purposes must meet all of the following criteria:</i></p> <ul style="list-style-type: none"> • A Veteran is a person who served in the active military, naval, or air service, and who was discharged or released under conditions other than dishonorable. • Former Reservists may be eligible for VA health care benefits if they served full-time and for operational or support (excludes training purposes). • Former National Guard members may be eligible for care or enrollment if mobilized by a Federal order. • To be eligible for care, most Veterans who enlisted in the Armed Forces after 9/7/80, must have completed: <ul style="list-style-type: none"> ○ 24 months continuous active service, or ○ the full period for which they were called or ordered to active duty. <p><i>There are 3 exceptions to the 24 month rule:</i></p> <ul style="list-style-type: none"> • Discharged due to a disability incurred or aggravated during active duty • Discharged due to a Hardship • Discharged in accordance with Title 38, 1171. 	
	2.1.2	If the Veteran is CL Eligible based on the rules above, the User (ES or VistA) will have the ability to set a Camp Lejeune Service	

Business Need (BN)	OWNER Number	Owner Requirement (OWNER)	Priority*
		<p>Indicator.</p> <ul style="list-style-type: none"> Indicator shall be known as the Camp Lejeune Service Indicator (CL) Allowable entry values are "Y" for Yes, "N" for No, or blank <p>Hence, if the above rules to determine CL Eligibility are not met, the User (ES or VistA) will NOT have the ability to set a Camp Lejeune Service Indicator.</p>	
	2.2	Only an ES User, with the capability to modify enrollment decisions, should have the capability to remove or modify CL information for Veterans once enrollment status has been set by ES.	
	2.2.1	Once eligibility status has been verified and enrollment status set by the ES, only an authorized ES User shall have the capability to remove (or update/correct) the CL information.	
	2.2.2	Once ES has processed CL information to determine the authoritative eligibility and enrollment decision, and has sent this information to all sites of record, the CL VistA fields shall be locked from editing.	
BN 3: Ability to process Camp Lejeune eligibility, to determine enrollment decisions, and to capture enrollment history.			
	3.1	Provide the capability for VistA and ES to calculate health benefit eligibility based on CL information and allow the determination of enrollment category, status, and priority group.	
	3.1.1	<p>Once CL eligibility has been set, the record will be evaluated to determine if a Veteran can receive health benefits due to CL legislation, and the system shall calculate the enrollment category, status, and priority group.</p> <ul style="list-style-type: none"> If the CL Service Indicator is "Yes" (CL = Y) then the Veteran will have a Verified eligibility status and be assigned to Priority Group 6 (or higher based on other eligibility factors). 	
	3.1.3	For Veteran records that have changed, the CL Service Indicator (from Yes to No/Blank, or No/Blank to Yes), the system shall recalculate their eligibility to receive health benefits and, if appropriate, determine continuation of enrollment.	
	3.2	<p>Provide VA Staff (ES and VistA) the capability to view the history of changes to the Camp Lejeune records, including:</p> <ul style="list-style-type: none"> Site Number and Date/Time of change Camp Lejeune Indicator Enrollment history. 	
BN 4: Communication, sharing, and processing of Camp Lejeune information, eligibility and enrollment decisions with other VHA processes.			
	4.1	Eligibility and Enrollment: Ensure CL Eligibility and Enrollment benefits are communicated via Veterans Health Benefits Handbook, or Inserts for Handbook, to Veterans with CL Eligibility and a verified enrollment status and priority group assigned.	
	4.2	Finance: Provide the capability to share CL Eligibility and Enrollment benefits information with Finance (e.g., Accounts Receivable).	

Business Need (BN)	OWNER Number	Owner Requirement (OWNR)	Priority*
	4.3	Billing Package: Provide the capability to share CL Eligibility and Enrollment benefits information with Billing, IV, Facility Revenue, and Revenue Utilization Review staff (e.g., Claims Tracking, Insurance Buffer, 1 st Party).	
	4.4	Medical Services: Provide the capability to share CL Eligibility and Enrollment benefits information with Medical Services (e.g., CPRS, PCE, Event Capture)	
	4.5	Ancillary Services: Provide the capability to share CL Eligibility and Enrollment benefits information with Ancillary Services (e.g., Surgery, Pharmacy, Lab, Prosthetics, Fee)	
	4.6	Other Applications: Provide the capability to share and process CL Eligibility in downstream applications (high-level).	
	4.6.1	<p>Upon determination of CL Eligibility, the following processes shall be supported (multiple systems):</p> <ul style="list-style-type: none"> a. Ability for Scheduling and PCE to process CL eligibility, modify classification questions, and update Checkout prompts. b. Ability for clinician (e.g., CPRS) to view CL eligibility during patient encounter, for selection of the treatment factor to indicate a Veteran's episode of care or medication(s) is related to CL [similar to Agent Orange (AO), Ionizing Radiation (IR), South West Asia Conditions (SWAC), and Combat Veterans (CV)]. c. Ability to capture CL conditions in the Patient Treatment File (PTF) for each movement, for patients whose CL status is active. d. Ability to process CL information during the medication order entry process for those Veterans eligible for this benefit. When a renewed prescription order is placed, the software shall be modified to perform checks for CL status. All prescription renewal processes (regular, speed, and barcode) shall be modified to incorporate the CL status, as necessary. e. Ability to exempt Veteran from medical care co-payments, medication co-payments, and insurance billing for care related to CL. f. Waive co-payments for CL related treatment and medication. Waive 1st and 3rd party billing. g. Identification of CL related information during Encounter Checkout process through Patient Care Encounter (PCE). CL related encounter information shall be passed along to the billing package. h. Ability to transmit CL information, workload, events, and episodes of care to other applications including Corporate Data Warehouse (CDW), Fee, Pharmacy, etc., just as AO, IR, SWAC, and CV are handled. i. Printing modifications (e.g., when evaluating the co-pay status of a prescription, either to print the text "COPAY", or 	

Business Need (BN)	OWNER Number	Owner Requirement (OWNR)	Priority*
		<p>"NO COPAY").</p> <ul style="list-style-type: none"> j. IB/Claims Tracking needs the ability to identify and flag non-billable outpatient encounters and prescriptions related to CL. Claims Tracking display and reports need to be modified to include the CL classification. k. AmbCare shall be modified to send the CL Indicator status to Austin CDW daily. l. Patient Treatment File (PTF) needs the ability to capture the CL data as it relates to tracking of a patient's inpatient movement. m. Add processing of the CL Environmental Indicator (CL) to the medication order entry. n. Pharmacy needs the ability to provide a prompt to CPRS for the Ordering Provider to answer when the treatment is related to a CL condition. o. Ability for Surgery to capture CL data. Modify Surgery reports and screens to include the CL classification questions. p. Ability for Radiology to capture if a procedure being ordered is related to CL via CPRS. q. The following applications need the ability to share CL data, as well as modify screens to display the CL Indicator and classification questions, as well as modify reports: <ul style="list-style-type: none"> • Inpatient/Outpatient Pharmacy • Lab • CPRS • Surgery • Radiology • Patient Treatment File (PTF) • Fee packages (FB) • Prosthetic (RMPR~) • DSS (ECX) • EVENT CAPTURE (ECS) 	
BN 5: Modifications to HELP text, prompts, and instructions			
	5.1	Ensure all new CL fields added to ES have a HELP Text capability and easy to understand instructions.	
	5.2	Ensure all new CL fields added to VistA have a HELP Text capability (or User help resource) and easy to understand instructions (e.g., Registration Enrollment and Eligibility (REE), CPRS, PCE, Billing).	
	5.3	Provide the ES and VistA Users with data entry validation and consistency check messages to ensure business rules are met (see detailed requirements).	
BN 6: Technological/system enhancements to business applications in support of Camp Lejeune processing.			
	6.1	Administrative Data Repository (ADR), Standard Data Services (SDS), and VistA Registration Enrollment and Eligibility (REE)	

Business Need (BN)	OWNER Number	Owner Requirement (OWNR)	Priority*
		Capability for ES and VistA to have new data elements for the update, edit, or deletion of CL eligibility information that allows for processing and determination of VA health care benefits.	
	6.1.1	Provide the capability for ES and VistA data fields to capture CL information: <ul style="list-style-type: none"> Indicator shall be known as the CL Service Indicator and allowable entry values are "Y" for Yes, "N" for No, or blank.; and Indicator shall be known as the CL Service Component Indicator and allowable entry values are "Y" for Yes, "N" for No, or blank. 	
	6.1.2	Capability to store and retrieve enrollment history records created based on changes to CL information.	
	6.2	Enrollment System (ES) and VistA Registration Enrollment and Eligibility (REE) Provide the capability for ES and VistA to manage CL information, determine VA health care benefits eligibility, and share, as appropriate.	
	6.2.1	Storing, viewing, and flow	
	6.2.1.1	Provide ES and VistA REE with the capability to collect, retrieve, store, save, and display the CL information.	
	6.2.1.2	Provide capability for ES and VistA REE to Date Stamp, capture site entering data in CL eligibility fields, store, and display changes to the CL information.	
	6.2.1.3	Provide capability for ES to capture enrollment history on changes to health eligibility based on CL information updates.	
	6.2.1.4	Incorporate the CL eligibility information to ES and VistA REE views containing Veteran's enrollment category, status, priority group, history, and messaging/transactions (e.g., Identify and Merge Duplicate Person Records (ES); Load Registry Files (ES); Patient Enrollment (VistA REE)).	
	6.2.1.5	Within the ES and VistA, ensure the data created by users selecting CL fields is captured, date stamped, displayed in history, and accessible for reports.	
	6.2.2	Receive, uploading, and processing	
	6.2.2.1	Provide the capability for ES to receive, upload, and process CL information from VistA and/or Self-Service applications (e.g., 1010EZ/R and Veterans Online Application). Consistency Checks and Application Error descriptions will be provided in the use cases.	
	6.2.2.2	Provide the capability for ES to send CL authoritative decisions and supporting information to VistA and ES services subscribers. Supporting information does not include imaged documentation.	
	6.2.2.3	Provide the capability for VistA to receive and upload CL information from ES. Consistency Checks and Application Error descriptions will be provided in the use cases.	
	6.2.2.4	Provide the capability for VistA to send CL information to ES. Consistency Checks and Application Error descriptions will be provided in the use cases.	
	6.2.3	Locking	

Business Need (BN)	OWNER Number	Owner Requirement (OWNR)	Priority*
	6.2.3.1	Modify VistA REE to ensure CL fields are NOT allowed to be modified (updated/changed), once the eligibility status is set to Verified, transmitted to ES, and ES sends a verified enrollment status to all sites of record. The ES CL fields will not be subject to "locking". CL fields can be set, edited, and deleted within the ES. All changes to the CL fields will be audited.	
	6.2.3.2	Ensure ES and VistA will handle CL eligibility in the same manner as "Agent Orange" eligibility (e.g., once eligibility status is verified in VistA, record has transmitted to ES, and enrollment status is verified, all subsequent changes to eligibility MUST occur within ES).	
	6.2.4	Eligibility and Enrollment Processing - Ensure ES and VistA REE algorithms used to process eligibility decisions and enrollment determinations are updated to use CL information.	
	6.2.4.1	Update Determine Eligibility algorithm to include CL Eligibility information.	
	6.2.4.2	Update Determine Enrollment algorithm to include CL Eligibility information.	
	6.2.4.3	Update Continuous Enrollment Processing algorithm to include CL Eligibility information.	
	6.2.5	Work Lists and Logs	
	6.2.5.1	Modify the ES communications log of all external transmissions regarding VA health benefits enrollment status to accommodate CL data.	
	6.2.5.2	Modify ES to add to the consistency check events, a type and description specifically for CL eligibility issues and ensure when these events occur, they trigger the creation of a "worklist" item for manual review and resolution.	
	6.2.5.3	Provide capability within the ES to assign and unassign CL related items.	
	6.2.5.4	Provide capability to access and close "worklist" items with CL attributes.	
	6.2.5.6	Provide capability to search for CL related "worklist" items.	
	6.3	Interfaces, Application Program Interfaces and Web-services: Provide the capability for multiple lines of business to view, receive, and retrieve information regarding CL records	
	6.3.1	Modify existing VistA Application Program Interfaces (API) or others (RPCs, etc.) to include the CL Information. Authorize subscribers as/if needed.	
	6.3.2	Modify existing ES services (Web service or others) to include the CL Information. Authorize subscribers as/if needed.	
	6.3.3	Modify the messaging (HL7) to accommodate and process the new CL Information.	
	6.4	Enrollment System (ES) Reporting Requirements	
	6.4.1	Incorporate CL information to existing ES reports that include special eligibility factors (e.g., A/O, SHAD, IR, etc.).	
	6.4.2	Provide the capability to generate ad hoc reports within ES to determine information about services rendered under CL benefit.	

Business Need (BN)	OWNER Number	Owner Requirement (OWNR)	Priority*
	6.4.3	Provide new reports within ES to allow for analysis services rendered to Veterans with of CL eligibility ONLY.	
	6.4.5	Provide the capability to print ES generated reports regarding Veterans with CL Eligibility.	
	6.4.6	Modify ES system to send OPP the information on Veterans that have CL indicator equal to "Yes". Note: Handle in the same manner as the other Environmental contaminants that are reported to OPP.	
	6.5	VistA Reporting Requirements	
	6.5.1	Incorporate CL information to existing VistA/FileMan reports that include special eligibility factors (e.g., A/O, SHAD, IR, etc.).	
	6.5.2	Provide ad hoc reporting capability for reports generated within VistA and/or FileMan to determine information about services rendered under CL benefit.	
	6.5.3	Provide capability to generate within VistA and/or FileMan new reports to allow for analysis services rendered to Veterans with of CL eligibility ONLY.	
	6.5.4	Provide the capability to print reports generated within VistA regarding CL Veterans.	
BN 7: Batch job to load from an external source (e.g., file) a list of Veterans identified as potentially/currently eligible to receive health benefits due to Camp Lejeune Legislation.			
	7.1	<p>The "short term initial implementation" deployed the Camp Lejeune Environmental Action Report (CLEAR) application. This allows the HEC to collect documentation (proof of CL eligibility) serving as proof of CL eligibility.</p> <p>The HEC uses this information to ensure the Veteran's enrollment status is in line with eligibility determination. The HEC has the capability to override rejection decisions if needed.</p> <p>Post deployment of updates to ES and VistA systems that can handle CL eligibility, there is a need for a batch job to update the Enrollment System with Veteran records that were identified as having met the CL eligibility from an external source of information (e.g., CLEAR or Department of Defense file). The batch job will populate the CL Service Indicator, update Veterans' eligibility and enrollment; share the updated eligibility and enrollment with sites of record, and trigger enrollment correspondence as appropriate (e.g., Handbook insert).</p>	
	7.1.1	<p>Read in a file (e.g., from CLEAR) from a predefined location (e.g., Secure network drive/server) of the Veterans identified as CL and the supporting information (as required by ES/VistA). Minimum information required:</p> <ul style="list-style-type: none"> • Veteran identifiers • Source and Date/Time of change • CL Service Indicator. <p>Note: the file format shall be defined with IT's support.</p>	
	7.1.2	Re-calculate eligibility and enrollment status and assignment to the highest priority group based on individual Veteran eligibility factors	

Business Need (BN)	OWNER Number	Owner Requirement (OWNR)	Priority*
		that may include CL eligibility. Execute appropriate triggers and communications.	
	7.1.3	Provide three reports on the activity: a) Summary of records processed – number of records successfully processed, number of records that had an issue processing, time it took to run the process, and b) Detail information on activity – should list Veteran identifiers, counts, “old” priority group and “new” priority group. c) Detail information on unsuccessful activity – should list Veteran identifiers and reason why the upload failed.	
	7.1.4	The process should have the capability of being throttled, paused/restarted, and terminated.	
	7.1.5	An authorized ES user shall have the ability to identify the location where the file to be uploaded resides.	
	7.1.6	An authorized ES user shall have the ability to execute the batch job at any time.	

Additionally, the CL-V solution should provide the ability for the user to generate reports in Excel format.

2.3. Design Constraints Specification

Successful implementation of this project requires adequate training and education for end users and support staff.

The CL-V project will adhere to all technical standards published in VA Handbook 6102, as well as all security standards described under section 2.13 of this document.

- For Development, the Standards and Conventions document is followed for coding standards.

2.4. Disaster Recovery Specification

A contingency plan will be developed to address CL-V disaster recovery needs. The contingency plan will be coordinated with the emergency management staff of system sites and approved by the facility director or program manager. The contingency plan will define the overall objectives and establish the framework, roles, and responsibilities of the plan. The plan will address the scope, resource requirements, processing priorities, training, testing, plan maintenance, and backup requirements of the contingency recovery plan. The contingency plan will include remote sites. Activities involved in creating this plan include conducting an impact analysis, identifying preventive measures, developing a recovery strategy, documenting the disaster plan, distributing the plan to appropriate individuals, training the staff, and testing the plan.

The contingency plan will identify the activities that are necessary to execute temporary information system processing capabilities, repair damage to the original system, and restore

operational capabilities at the original or new facility. The information system contingency recovery plan will also document the following resources required for supporting critical functions.

Recovery strategies will include the sequence of activities as well as detailed procedures for the technical recovery of operations until the system can be reconstituted.

2.5. Documentation Specifications

The CL-V project will conform to the documentation specifications as mandated by Program Management Accountability System (PMAS), ProPath, and the Integrated Project Team (IPT).

User and system documentation for the CL-V project shall be provided by the contractor responsible for software enhancements and sustainment; required documentation may include:

- a. User manuals for software
- b. In-house application documentation (application requirements/program documentation, specifications/change control recommendations)
- c. Any vendor-supplied documentation
- d. Standard operating procedures
- e. Network diagrams and documentation on setups of routers and switches
- f. Software and hardware testing procedures and results
- g. System interconnection agreements
- h. Hardware replacement agreements
- i. Vendor maintenance agreements and maintenance records.

2.6. Functional Specifications

Functional Specifications are available within section 2.2 of this document. Additional requirements are found within the CL-V Software Requirements Specifications (SRS) document found at the following link:

[http://\[REDACTED\]](http://[REDACTED])

2.7. Graphical User Interface (GUI) Specifications

General GUI Compliance:

A well-defined on-screen indication of the current focus will be provided. The on-screen indication moves among interactive interface elements as the input focus changes. The focus will be programmatically exposed so that assistive technology can track focus and focus changes. The identity, operation, and state of the user interface element will be available to support assistive

technology. When an image represents a program element, the information conveyed by the image must also be available in text. Textual information will be provided through operating system functions for displaying text. The minimum information that will be made available is text content, text input caret location, and text attributes. Applications will not override user selected contrast and color selections and other individual display attributes. When electronic forms are used, the form will allow people using assistive technology to access the information, field elements, and functionality required for completion and submission of the form, including all directions and cues³.

CLUser Interface Specifications are available within the CL-V SRS document found within section 2.6 of this document.

2.8. Multi-divisional Specifications

Multi-divisional Specifications will be added when applicable.

2.9. Performance Specifications

Operational environment requirements are as follows:⁴

ReqPro Tag	Operational Environment Requirements
NONF1608	Information about response time degradation resulting from unscheduled system outages and other events that degrade system functionality and/or performance shall be disseminated to the user community within 30 minutes of the occurrence. The notification shall include the information described in the current Automated Notification Reporting (ANR) template maintained by the VA Service Desk. The business impact must be noted.
NONF1609	Provide a real-time monitoring solution during the maintenance windows or when technical issues/problems occur which may require a preventative back-up.
NONF1610	Notification of scheduled maintenance periods that require the service to be offline or that may degrade system performance shall be disseminated to the user community a minimum of 48 hours prior to the scheduled event.

Performance specifications are as follows:⁵

If this is a system modification, how many users does the current system support?
The Enrollment system supports all 159 VA medical centers and 400 health Eligibility Center users. The system is in production and is available 24/7.
How many users will the new system (or system modification) support?

³ Standard GUI Compliance pp. 4-7

⁴ Camp Lejeune PL 112-154 Veterans Systems Changes BRD v10 p.10

⁵ Camp Lejeune PL 112-154 Veterans Systems Changes BRD v10 p.12

The system modification will support all users.
What is the predicted annual growth in the number of system users?
The enrollment system is expanding with iEHR and outside initiatives. The exchange of data from other health care providers and DoD will expand enrollment ability for automated updates and eligibility information. The system serves approximately 3,000 users on a daily basis.

2.10. Quality Attributes Specification

Specifications will be determined at a later stage of the project. Quality attribute specifications will enhance the supportability, maintainability, portability, testability and reusability of the CL-V project. This will include the applicable coding standards, naming conventions, class libraries, maintenance access, and maintenance utilities.

2.11. Reliability Specifications

System availability should be 24 hours per day, 365 days per year except during periods of scheduled maintenance.⁶

2.12. Scope Integration

The software enhancements will be implemented on many of the current VistA applications such as Enrollment/Registration (REEG), Patient Care Encounter (PCE), and Integrated Billing (IB).

Systems impacted include, but are not limited to: Computerized Patient Record System (CPRS), Integrated Billing (IB), Accounts Receivable, Patient Care Encounters (PCE), Patient Information Management System (PIMS), Scheduling, Corporate Data Warehouse (CDW), Ambulatory Care Billing, Patient Treatment File (PFT), Pharmacy Rx (inpatient/ outpatient/ new medication/ refills), Scheduling, Surgery, Radiology, Laboratory, Long Term Care (LTC), Standard Data Service (SDS), and Enrollment.

Additional required interfaces are stated within the business needs in section 2.2 of this document.

2.13. Security Specifications

The VA requires that application enhancements address standards, procedures, and technical aspects of the solution required achieving Certification and Accreditation of the system. These should address controls listed in the Federal Information Processing Standards Publication (FIPS PUB) 200 Minimum Security Requirements for Federal Information and Information Systems. Additional security specifications include:

⁶ Camp Lejeune PL 112-154 Veterans Systems Changes BRD v10 p.13

- Compliance with standards and regulatory requirements published in VA Handbook and Directive 6500: Veterans Affairs Directives > VA Handbook and Directive 6500
- Compliance with Federal Information Processing Standards Publication (FIPS PUB) 140-2, Security Requirements for Cryptographic Modules, and for all voice and data traffic encryption: Computer Security Division > Publications > Federal Information Processing Standards > FIPS PUB 140-2.

Additionally due to patient safety considerations, data protection measures such as backup intervals and/or redundancy shall be consistent with systems categorized as critical.⁷

2.14. System Features

Upon availability details for this section will be provided.

2.15. Usability Specifications

CL-V usability specifications are as follows⁸:

ReqPro Tag	Usability-User Interface Requirements
NONF1611	User acceptance training and testing tools shall include user prompts to guide the use of the application so that minimal technical support is needed by the user.
NONF1612	A technical training curriculum shall be developed and delivered to all levels of staff users.
NONF1613	The training curriculum shall state the expected task completion time for primary and secondary users.
ReqPro Tag	Usability/User Interface Requirements
	Left align content in table cells to facilitate quick visual scan.
	Left align text for column headers to facilitate visual scan and make columns and content appear more organized.
	Use mixed case instead of all caps whenever possible (e.g., dropdown list items, table data, table headers, hyperlinks, tab names). Limit the use of "all caps" throughout the application.
	Simplify button labels. Re-label buttons to reflect standard terminology that is common in web interfaces and other applications (e.g., "Cancel"). Emphasize the action being performed in the most succinct way possible. Minimize redundancy in text/terminology that is used to convey the same action.
	Left align page/section titles to anchor titles in consistent locations regardless of window sizing.
	Labels for fields should be left aligned to facilitate quick visual scan and make forms and field groupings appear more organized.
	Avoid using acronyms unless (a) they are widely understood/well known or (b) there is very limited space to display the full meaning. This supports naïve user understanding. If limited

⁷ Camp Lejeune PL 112-154 Veterans Systems Changes BRD v10 p.11

⁸ Camp Lejeune PL 112-154 Veterans Systems Changes BRD v10 pp.10-11

	space results in using a non-common acronym, ensure it is specified within Help and/or as a tooltip.
	Use colors such as red and green only for status driven content. Avoid using red for text/content, links, button labels, etc. This will reduce risk for user error, improve link discoverability, and facilitate understanding of differences in navigation/actions/content. It will also help users to isolate important status information (using red, green, etc.) from other less important information when viewing and processing information provided to them on a page.
	Provide visual separation between the navigation space and the main content area.
	Add field level validation and notification of missing information on the same page without launching a new window or navigating to another page.
	Make all text hyperlinks appear consistent in style.
	Make drop-down selection box widths appropriate for content and visual appeal.
	Use standard and always visible radio buttons for Yes/No options instead of requiring the user to click in a drop down box and then click to select the Yes Or No option.
	Use standard date and time selection widgets. Where date and time are selected/picked from a standard widget, also provide direct data entry to support keyboard navigation. Enable field level validation immediately upon entry. Include instructional format text within the field entry box.
	Provide standard sort behavior and visual indications on columns in all tables.
	Define and adhere to a standard model for use and design of controls, buttons, hyperlinks, and navigation elements.
	Avoid abbreviations.
	Ensure that text is sized to be readable (for example by using the 007 Rule to assure text size is readable for users with 20/40 vision. The formula: Text height = .007 * distance between eyes and screen).
	Place common navigation elements in consistent locations
	Place critical information “above the fold” (i.e., in the top portion of the screen that is immediately viewable).
	Use consistent screen flow models, elements, and terms to support similar workflows
	Use consistently named buttons when actions are the same (e.g., Add vs. Save vs. Submit).
	Enable users to print views from where they are in the interface. Avoid requiring the user to “run a report” in order to print something that is viewable on the screen.
	Provide field entry tooltips at the field location. Ensure consistency across the application in field labels, formats, location of tooltips, and tooltip text.
	Provide visual indication of required fields.
	Display field labels in close proximity to entry elements.
	Use consistent elements to filter data.
	Use consistent elements to sort data.
	Use a consistent model for display, layout, and grouping of data entry fields.
	Provide alternate row shading in lengthy tables of data, form elements, etc.
	Ensure that icons are recognized by users.

	Provide some “white space” between status icons in report views, white board views, etc.
	Auto-populate default values in entry/selection fields when possible and appropriate.
	Visually differentiate status icons from clickable icons, when appropriate
	Define and support the appropriate user tab sequence through fields in forms in order to support keyboard navigation when entering data in forms.
	Define and adhere to standard action button placement on screens, forms, etc.
	Visually distinguish the primary action button on a page.
	Consistently use screen elements, action elements, workflow sequences within/across screens, language, etc
	Provide error messages in user-centric language with specific instructions on the meaning of the error and how to recover from it. Use error messages and method of display consistently across the interface.
	Provide context specific Help.
	Do not use the term “sex” or any like abbreviations of that to represent gender.

3. Applicable Standards

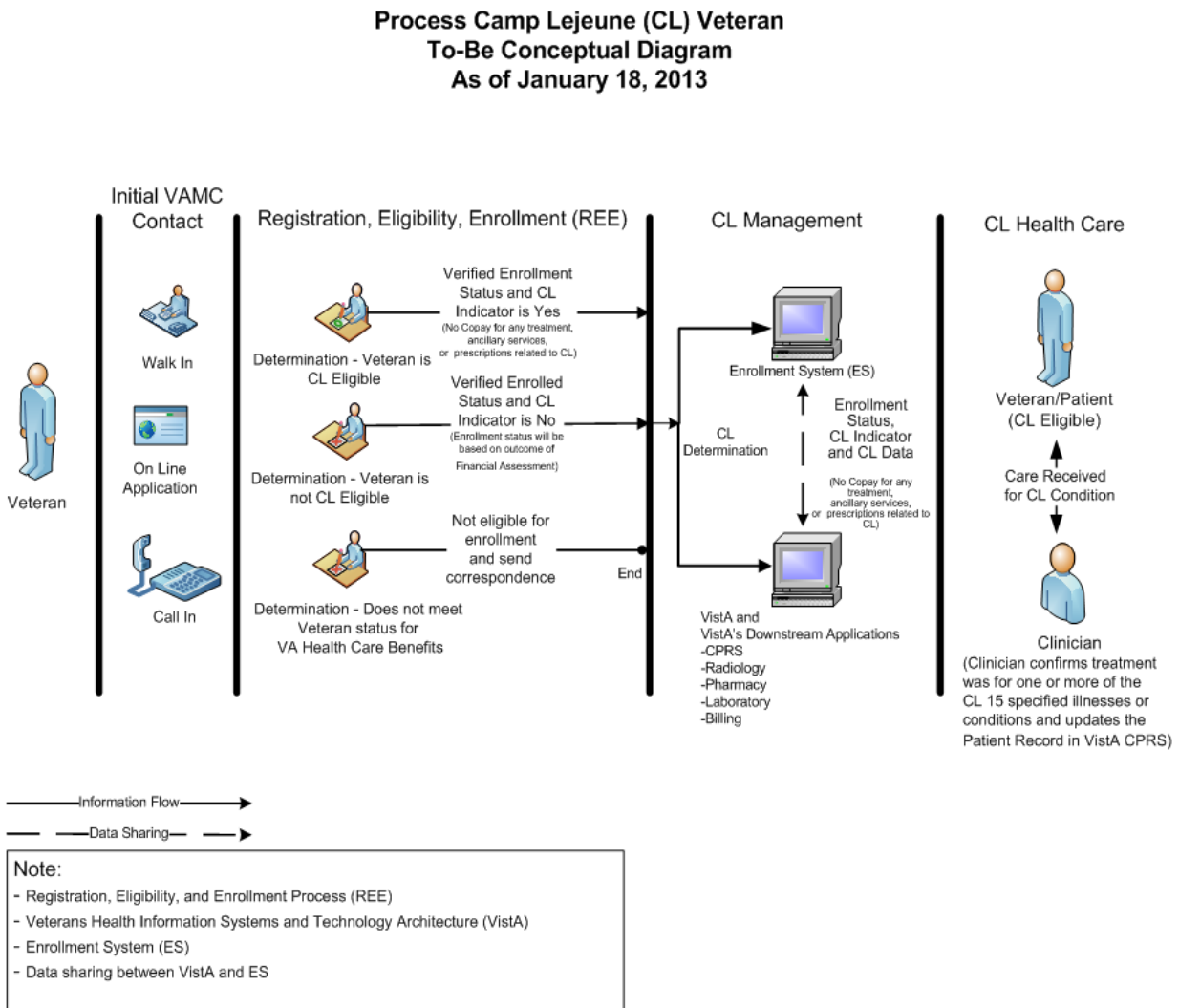
The following is a list of applicable standards:

- Compliance with standards and regulatory requirements published in VA Handbook and Directive 6500
- Compliance with standards and regulatory requirements published in VA Handbook and Directive 6513
- Compliance with Federal Information Processing Standards Publication (FIPS PUB) 140-2, Security Requirements for Cryptographic Modules, for all voice and data traffic encryption
- Compliance and certification of Section 508 Information Technology (IT) accessibility standards governed under 29 U.S.C 794d
- Compliance with Federal Information Processing Standards Publication (FIPS PUB) 200, Minimum Security Requirements for Federal Information and Information Systems including controls for Access Control (AC), Audit and Accountability (AU), Configuration Management (CM), Identification and Authentication (IA), Maintenance (MA), Media Protection (MP), System and Communications Protection (SC), and System and Information Integrity (SI).
- FIPS PUB 199, Standards for Security Categorization of Federal Information and information Systems
- National Institute of Standards and Technology (NIST) Special Publication (SP) 800-30, 800-37, 800-53, 800-60 rev 1, 800-53 rev 3, 800-111.

4. Interfaces

The Master Veteran Index (MVI) identifies all Veterans within the Veterans Health Administration. Any social security or personal identifiable information is only available through the MVI as well as the date of death of any Veteran. The Administrative Data Repository (ADR) is the ESR database for storage and file retrieval of Veteran data. Expected dependencies with other systems include interfaces with the Fee Basis Claims System (FBCS), Central Fee/Financial Management System (FMS), Fee Payment Processing System (FPPS), Prosthetic GUI, and the Austin Information Technology Center (AITC).⁹

The following provides a to-be conceptual diagram with relevant system integration points.¹⁰



⁹ Camp Lejeune PL 112-154 Veterans Systems Changes BRD v10 p.13

¹⁰ Camp Lejeune PL 112-154 Veterans Systems Changes BRD v10 p.17

Additional interfaces will be provided within a CL-V Interface Control Document.

4.1. Communications Interfaces

Refer to section 4 of this document.

4.2. Hardware Interfaces

Refer to section 4 of this document.

4.3. Software Interfaces

Refer to section 4 of this document.

4.4. User Interfaces

Refer to section 4 of this document.

5. Legal, Copyright, and Other Notices

CL-V will comply with 508 requirements as noted in section 2.1 of this document. There are no other legal or copyright notices for this specification.

6. Purchased Components

CL-V will utilize existing infrastructure. No current need exists for the purchase of additional components.

6.1. Defect Source (TOP 5)

A graph depicting the Defect Source (Top 5) will be provided upon availability. This graph will show the number of defects discovered by component.

7. User Class Characteristics

CL-V user class characteristics are as follows:¹¹

Type of User	Description	Responsibilities
Primary Users	Health Benefit Advisors	Captures Details, coordinates work
Secondary Users	First and Third Party Billing Enrollment Coordinators Pharmacy personnel Scheduling clerks	Responsible for entering Veterans' eligibility information into VistA, Captures Details, coordinates work, produces reports, schedules appointments

8. Estimation

If CL-V chooses to use function point estimation, the function point estimate will be provided via the following Function Point Analysis Results Table upon availability.

¹¹ Camp Lejeune PL 112-154 Veterans Systems Changes BRD v10 p.19

Project Software Functional Size and Size-Based Effort and Duration Estimate

Application

Item	A	B	C	D	E	Total
Counted Function Points						
Estimated Scope Growth						
Estimated Size at Release						

Size-Based Effort Estimates	Labor Hours	Probability
Low-Effort Estimate – With indicated probability, project will consume no more than:		
High-Effort Estimate – With indicated probability, project will consume no more than:		

Size-Based Duration Estimates	Work Days	Probability
Low-Duration Estimate – With indicated probability, project will consume no more than:		
High-Duration Estimate -- With indicated probability, project will consume no more than:		

Figure 1: Cumulative Probability (“S-curve”) Chart

[Insert Cumulative Probability (“S-curve”) Charts here]

9. Approval Signatures

REVIEW DATE: <date>

SCRIBE: <name>

Signed:



A. Omotoso
Signature.msg

5/23/10



Integrated Project Team (IPT) Co-Chair

Date



Proxy



Integrated Project Team (IPT) Co-Chair

Date



Business Sponsor

Date



IT Program Manager, Product Development

Date



A. Omotoso
Signature.msg

5/23/10



CL-V Project Manager

Date



Proxy

Appendix A Use Case Specification

Use case specifications will be added upon availability.