Transportation Security Administration

ACQUISITION Program Management

QUALIFICATION MANAGEMENT PLAN

FOR THE

CHECKPOINT PROPERTY SCREENING SYSTEM PROGRAM

VERSION 3.0

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Approval

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1.0		Original Version	10/11/2019
2.0		Updated for Standalone Configuration	See Signature Page
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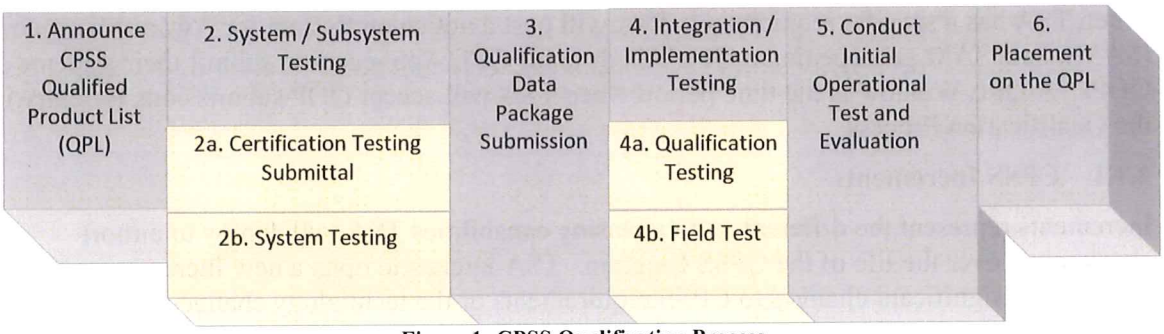

Figure 1: CPSS Qualification Process

1.2 Production Representative Systems

TSA will require at least three (3) production representative systems: one (1) system will support Qualification Testing (QT) at TSA Systems Integration Facility (TSIF) and two (2) systems will support Field and IOT&E activities. Upon submitting a QDP, a QPL Applicant may start to deliver and install systems being submitted for Qualification and Field Testing. In the event that the QPL Applicant's QDP is not approved, the QPL Applicant will be allowed to update and resubmit once. If documentation provided by the QPL Applicant results in discrepancies noted that would not permit TSA to establish a baseline for documentation or for QT the QDP will be rejected. Qualification and Field Testing activities will not start until the QPL Applicant's QDP is approved. The QPL Applicant shall provide equipment, peripherals, and networking equipment for all systems as noted within this document. The systems shall be delivered with, but not limited to, the following:

1. Site-planning guides and installation manuals to prepare a site for installation, integration, and networking, as appropriate.
2. All engineering services to include installation, crating, decommissioning, reinstallation of systems, and ancillary equipment, as needed.
3. Site acceptance test plans and procedures.
4. Installation and reinstallation support (as needed) for all test sites.
5. Shipping and rigging of all property as directed by the Government.
6. Training as well as training materials.
7. Implementation of all hardware and software upgrades and reconfigurations required for Test and Evaluation (T&E) of all property.
8. Engineering services and proper communications for integration with relevant systems.
9. Test Article Development support, Test Readiness Review (TRR), Site Acceptance Test (SAT), and Integrated Site Acceptance Test (iSAT) support to achieve safe and reliable operational performance.
10. Preventive and corrective maintenance, as needed.

2 Qualification Process Steps and Requirements

This section provides the description of the Qualification Process, requirements and actions that shall be used to gain qualification of a CPSS system and acceptance onto the QPL.

After completion of CERT the QPL Applicant system configuration is established based on those components that may affect detection performance and include, but is not limited to, system hardware, software, and tuning parameters. No system modifications will be allowed after the completion of certification testing without written approval from the Government.

2.2.2 Step 2b: System Testing

The QPL Applicant shall conduct internal system testing in accordance with the QPL Applicant's System Test Plans and Procedures. The QPL Applicant shall procure or fabricate any special test articles and instrumentation for such tests. The QPL Applicant is responsible for contacting, communicating expectations, and acquiring results or reporting documentation for any third-party testing utilized during the System Testing phase. The QPL Applicant must verify that any third-party testers utilized are reputable and industry leaders in the field of verification. It is the QPL Applicant's responsibility to ensure the testing adequately verifies the requirement and that the data and documentation provided by the third-party tester is thorough and complete.

During the execution of Step 2b: System Testing, the QPL Applicant shall identify all hardware and software defects and deficiencies found as a result of Step 2b: System Testing (internal QPL Applicant testing) and generate a Change Request package. The QPL Applicant shall submit all Change Request packages to CPSSComms@tsa.dhs.gov in accordance with the APM Configuration Management Plan (Rev E) and Office Security Capabilities (OSC) Configuration Management Guidance Version 2; June 30, 2015.

2.3 Step 3: QDP Submission

The QPL Applicant shall submit a QDP to TSA, to continue with the TSA Qualification Process. TSA will provide the QPL Applicant a formal approval of the QDP through email if accepted. The QPL Applicant system will continue into Step 4: Integration / Implementation Testing of the TSA Qualification Process.

In the QDP, the QPL Applicant shall provide all test data, evaluation tools (including simulations) and results to TSA for performance evaluation and to assist in the QDP acceptance decision. The QPL Applicant shall document any major issues experienced during QPL Applicant System Testing and document any system modifications which could impact previously completed, ongoing, or upcoming test events. TSA will review QPL Applicant system test results as part of reviewing and accepting the QDP.

The QPL Applicant's QDP must contain the required information and be presented in a manner that is clear, concise, and unambiguous, following the Data Item Description (DID). The QPL Applicants must use proprietary and Sensitive Security Information (SSI) markings according to standard marking procedures. SSI must be handled according to the requirements of 49 Part 1520. The TSIF has instituted procedures to safeguard proprietary data that are used during CPSS QDP evaluation. The QDP will become a part of the official records of compliance testing for each system submitted.

The level of substantiation that needs to be submitted for each requirement is outlined in the CPSS FRD. Complete identification of the systems used to collect the substantiation data must be provided in the QDP and match the system being proposed for TSA testing. This includes:

a) Model number(s) of equipment tested.
b) Serial number(s) of equipment tested.

provide the threshold value for the requirement, a flow-down to A-Specifications and budgets, and any additional justification necessary to support its derivation.

2.3.1.2 System Level Architecture and Design

The QPL Applicant shall provide a description of the overall system level architecture and design. This description shall include a discussion of the overall capability of the system, and integration of the system's subsystems and external systems.

The QPL Applicant shall provide a Systems Architecture Document. The Systems Architecture Document shall contain the context, operation, functions, interfaces and activities of the system and integration with any external systems.

The Systems Architecture Document shall also contain operationally-oriented diagrams that describe the functionality of the system using Unified Modeling Language (UML) and Systems Modeling Language (SysML). The operational activity and sequence diagrams shall contain information on the following:

a) Complete description of all operational activities;
b) Mapping of operational activities to subsystem;
c) Identification of driving system throughput and timing (stated in the context of operational requirements);
d) Identification of parallelism or sequential operation;
e) Concurrent operations support, including overload processing;
f) Supporting context of Software CIs; and
g) Complete data flow that depicts all the subsystems and the communication between those subsystems.

Further, the QPL Applicant shall develop documentation that describes the context, functions, and resource flows of the system. The documents shall be focused on external data exchanges and resource. The QPL Applicant documents shall be explicitly linked to lower level architecture products contained in the System / Subsystem Specifications (A-Specifications), which details internal system operations and interactions.

The System Architecture Document shall include the following subsection hardware and software descriptions:

1) **Hardware Description**: The QPL Applicant shall provide a detailed description of the hardware design. This description shall include a discussion of the adequacy of the system design in meeting the allocated requirements:
   a) **Detection Subsystems**: The QPL Applicant shall provide a detailed discussion of all aspects of the proposed detection design. At a minimum, the detailed discussion shall include performance projections and requirements for the overall detection subsystem.
   b) **Other Subsystems**: The QPL Applicant shall provide a detailed discussion of all aspects of other subsystems to include, at a minimum a comprehensive system design description, requirements and performance projections.
   c) **System Calibration Approach**: The QPL Applicant shall provide a detailed description, to include requirements and performance projections of the system calibration approach(es):

3. Network diagram.

4. Logical Design Document/Logical Data Model diagram.

5. All organizational physical and information assurance security policies and procedures.

6. Logical Design Document/Logical Data Model diagram.

7. Complete Network diagram to include any architecture design documentation, subsystems and external system connections;

8. A list of finalized organizational policies and/or procedures that support NIST SP 800-53 compliance or industry security best practices. Be prepared to provide these documents upon request by TSA.

2.3.2 System Integration Approach

The QPL Applicant shall discuss the approach that will be followed for integration of the system internally and externally to identified System of Systems (SoS), if applicable (applicability is defined as the ability to integrate to functionality and capabilities not limited to: Automated Conveyance Systems and network connectivity to external systems such as STIP). Although CPSS systems will not initially connect to the TSA STIP Network, systems will need to meet minimum STIP resource and protocol requirements as defined in the FRD. When applicable, the QPL Applicant shall discuss integration of each element's interface, as well as the testing necessary to validate the integration of the system as a whole and within the SoS. The QPL Applicant shall discuss any risks that have been identified with this integration.

2.3.3 Electromagnetic Interoperability (EMI) / Electromagnetic Compatibility (EMC) and Hazard of Electromagnetic Radiation to Personnel (HERP) CONOPS

The QPL Applicant shall provide a description of the design features, algorithms and other methods used to ensure Electromagnetic Interoperability (EMI) / Electromagnetic Compatibility (EMC) and minimization or elimination of Hazard of Electromagnetic Radiation to Personnel (HERP) with other TSA assets. The effect of these assets on the QPL Applicant's proposed system and vice versa shall be described.

The QPL Applicant shall provide an Environmental, Safety and Occupational Health (ESOH) assessment that includes data, studies, and reports necessary to demonstrate full compliance with all Federal, State, and Local environmental laws including any known potential compliance issues associated with the system manufacturing, testing, operations, and disposal. This assessment shall include at a minimum, EMC, Electromagnetic Vulnerability (EMV), Electrostatic Discharge (ESD), Radiation Hazards (RADHAZ), electromagnetic fields, and intentional EMI and lightning.

2.3.4 Life Cycle Support Concept

The QPL Applicant shall discuss the concept that will be followed to meet the Reliability, Maintainability, and Availability (RMA) requirements identified in the FRD. The QPL Applicant shall discuss the design features in the system architecture that support the RMA

demonstration. Each BOM itself needs to contain a revision and effective date to show it is controlled by the QPL Applicant. The QPL Applicant can determine the BOM format, however, the BOM must include the following:

1. Nomenclature for each CI (official part name used in QPL Applicant's internal drawings and BOMs).
2. Part number (P/N) of each CI (official P/N used in QPL Applicant's internal BOMs and product labels).
3. Current approved Revision level of each CI.
4. Unit of Measure (UOM).
5. Quantity for each CI.
6. If Buy, provide manufacturer (3rd Party) name and the part number.
7. Part Country of Origin.

2.3.8 Source Control Documentation (SCD)

The QPL Applicant shall also provide three (3) types of source control documents to validate the physical item; the design documentation (Engineering Drawings), component specification sheets, software release notes, and select manuals. These documents provide the Government assurance that the as-delivered physical item(s) is representative of the as-designed system.

2.3.8.1 Engineering Drawings

The QPL Applicant shall provide Engineering Drawings in English, Standard UOM, and version controlled. The drawings are used to define the designed CIs physical geometry, composition and may contain component specifications. The QPL Applicant shall generate, maintain and provide a set of CPSS Product Drawings / Models Source Control Drawings / Models and Associated Lists, Special Inspection Equipment Drawings / Models and Associated Lists and Special Tooling Drawings / Models and Associated Lists to support the fabrication, coding, integration and testing of the subsystems, software and overall CPSS.

In support of drawings / models development, the QPL Applicant shall generate and maintain CPSS Source Control Drawing Approval Requests, Drawing Number Assignment Reports, and proposed Critical Manufacturing Process Descriptions to support the fabrication, coding, integration and testing of the subsystems, software and overall CPSS.

2.3.8.2 Product Specification Sheets

For Commercial-off-The-Shelf (COTS) products, the QPL applicant shall submit 3rd party specifications, with clear indication of any subsequent modifications performed by the QPL Applicant. For example, for hardware products designed by a third party per QPL Applicant requirements. The QPL Applicant shall submit specification sheet(s) that identify the attributes and characteristics of the product. Additionally, the spec sheets indicating the document used to substantiate the product is in under configuration control. Any end-product that contains a Material Safety Data Sheets (MSDS) as part of that physical item's hierarchy should also be provided to substantiate the end-product. For example, coolant, lead curtains.

2.3.8.3 Software Release Notes

The software release notes should contain revision history, introduction, new features and enhancements, bug fixes, corrections, known issues, documentation references, special

associated with specific system configuration(s) used during the QPL Applicant's testing (Step 2b: QPL Applicant System Testing). The QPL Applicant is not permitted to alter any configuration parameters on systems submitted to TSA for testing (Certification and Qualification testing) unless specifically approved by the Government. All changes to the system configuration must be documented through a Trouble Report.

2.3.13 QPL Applicant System Test Plan

The QPL Applicant shall produce a System Test Plan to verify the requirements of the A-Specification, the and FRD. This plan shall identify the methods to be used to verify requirements' compliance. The test plan shall include what is to be tested (e.g., A-Specification requirement), the test methodology (e.g., demonstration using simulated inputs and operator actions) and the criteria for passing the test. This test plan shall also identify the location of the testing procedure, such as: stand-alone CI testing in the factory, CIs in sub-systems, or CIs in the final configuration at a test facility. This test plan shall also identify all test limitations and provide detailed mitigation descriptions. For test limitations that are due to facility / infrastructure limitations, the QPL Applicant is to identify required infrastructure needed to complete the verification events and identify alternate test sites to conduct the events (i.e., Third-Party Facilities).

The QPL Applicant shall describe the testing conducted to demonstrate the individual system component performance and software, firmware or hardware readiness for system integration and test. This description shall cover test events, facilities, and assumptions required to satisfy all test objectives. QPL Applicant System Testing shall be conducted by the QPL Applicant and Third-Party Testing Organizations (when required).

QPL Applicant System Testing shall follow a common T&E process that isolates and evaluates every system from the component level through the Automated Conveyance System (ACS) in an operationally realistic environment. This robust T&E process allows the TSA and QPL Applicant to fully vet the proposed systems to ensure compliance with TSA capability, functional and operational requirements. The specifics of each test shall be described in the QPL Applicant's QDP submission.

QPL Applicant System Testing determines the maturity of the system design to meet the TSA FRD requirements and will be used to determine system readiness to proceed into QT. This consists of component, subsystem and string integration testing at the QPL Applicant's facilities or Third-Party Test Facilities, of the proposed system prior to installation at the TSIF or a field site. The QPL Applicant shall plan for Government participation in all aspects of testing.

2.3.14 Safety

The QPL Applicant shall provide third party certification that the system meets the safety requirements as specified in the FRD and Appendix B of this QMP.

2.3.15 Test Reports

The QPL Applicant shall provide a Test Report that provides the detailed results of the Step 2b: QPL Applicant System Testing conducted during Step 2: System / Subsystem Testing. The Test Report shall document the completion of all test events and all requirements' verification. Also, the Test Report shall include an overview of the testing (e.g., dates, facilities, systems under test). For any requirement with a "B" substantiation, at a minimum, the QPL Applicant shall provide the test methodology, all test data, a list of evaluation tools (including simulations) used

2.4.1.2 Execution

Once the QPL Applicant has successfully installed the SUT at the TSIF, and the system has passed all configuration audits, a Test Readiness Notification (TRN) will be prepared by the QPL Applicant and provided to the TSIF Test Director. The TRN is the final notice that the QPL Applicant has successfully installed the SUT at TSIF, that the system is fully functional, and the system is ready for evaluation by the Government without further QPL Applicant involvement, unless specifically directed. If QPL Applicant support is required during QT, the Government will document all requests and any involvement by the QPL Applicant will be observed and recorded. The Government will conduct an internal Test Readiness Review as the final confirmation before entering official QT at TSIF

2.4.1.3 QT Failures

The TSIF Test Branch will track and document all SUT failures, malfunctions, and / or anomalies encountered during QT. The TSIF Test Branch will review observed issues that affect testing activities and will coordinate with the QPL Applicant for resolution of any required corrective actions for critical failures.

QT will be suspended if the SUT malfunctions or has a critical failure that impedes the progress of testing and cannot be repaired or replaced within three business days of QPL Applicant notification or a time frame specified by TSA. Repeated critical failures, or a critical failure that remains unresolved, may also result in suspension or termination. If it is determined at any time during QT that the SUT fails to meet requirements, testing may be suspended or terminated and the QPL Applicant will be notified by the Government.

TSA may perform re-test or regression testing following a repair or replacement of parts, or after any software modification.

The Government reserves the right to remove any QPL Applicant from QT and require Third Party substantiation of QPL Applicant fixes if:

- The SUT experiences at least one TSA defined significant failure during QT;
- TSA determines the Transportation Security Equipment (TSE) has an unacceptable cluster of non-significant failures during QT; and/or
- TSA determines the TSE has significant issues prior to testing that will prevent passing QT or IOT&E.

2.4.1.4 QT Reporting

The TSIF Test Branch will produce a QT Report at the conclusion of test activities, after any deficiencies have been properly adjudicated. The QPL Applicant will be notified of test results after the conclusion of the QT reporting period. The next steps in the process will also be provided and may include termination, deficiency investigation, correction or continuation through the Qualification Process.

2.4.2 Step 4b: Field Test

Field Testing is conducted by the Government or Government's Authorized Agent in an operationally realistic environment prior to IOT&E and is used to ensure the SUT is installed, integrated and ready to proceed to IOT&E. This test event will be done in parallel, or immediately following QT, and used to inform IOT&E as one last test prior to IOT&E, to ensure

system administrator training materials, access and administrator privileges to all data recording (logging) capabilities of the system. The training shall demonstrate how to extract FDRS data from the system, how to access and download all system log files and how to access, download raw and processed image files, as well as how to import and run image files in the system M&S.

At a minimum, the training shall cover the following topics:

1. The basic scientific and engineering principles applied in the technology (such as the physics behind the equipment) to include:
    a. Overview of the system and all major components.
    b. .
    c. High-level description of the system.
    d. How the system operates.
2. Definition of "threat envelope" and detection or false-alarm tradeoff:
    a. Describe system performance across the threat space, regions of responsibility, size packaging, physical configuration, material make up. Also, provide QPL Applicant Test Performance Data.
3. System data collection, high-level processing steps, and data representation (including bag and detection results, along with basic operation decisions).
4. Equipment components (i.e., scanner, Inlet module, Outlet module, Primary Viewing Station, Secondary Viewing Station, Master Control Station) and network equipment (including function, interactions between components, calibration, failure modes and radiation safety):
    a. Include a block diagram format showing all the major hardware components of the system and how those components interact with one another. Block diagrams should also be provided for ancillary equipment components.
5. System day-to-day operation (start-up and shut-down procedures, mechanical system operations, use of image quality and Operational Test Kit bags).
6. User interface features and capability along with an overview of system maintenance.
7. FDRS data collection, standard reports, download system data (i.e., System Status, FDRS reports, system logs files, system error log reporting).
8. Step-by-step instructions to access, change, and download all configurable settings, to include the following topics:
    a. Definition of the configurable settings and configurable settings' value.
    b. Steps on how to revert set configurable settings back to a value of choice.
    c. Access to the configurable settings (logins) to include any instructions on how to use hardware / software associated.
9. Step-by-step instructions to locate and download all image files (i.e., raw image and reconstructed image).
10. Step-by-step instructions on how to restore the system to operating condition after a system error or fault.

The QPL Applicant shall provide the trainees with a hands-on demonstration of the system and demonstrate all the required tools and user access to perform the testing activities. The QPL

QPL Applicant's system is considered "Qualified" TSA will provide a Qualification Letter to the QPL Applicant.

3 System Failures

After a deficiency is found during testing causing a suspension of testing and at the TSA's discretion, the QPL Applicant may re-enter the TSA acquisition process by submitting change documentation and an updated QDP that provides all required information and detailed descriptions of the deficiencies found, actions taken to correct the deficiencies and the Third Party Test results verifying the corrected deficiencies. The change documentation and QDP will be considered as a new submission and shall contain all required information. If approved, the QPL Applicant will enter the T&E process either at the test phase where the deficiencies were identified or at some other point in the T&E process based on the nature of the deficiencies found and the scope of changes within the system, at the Government's discretion.

4 Technical Data Package

After notification by the Government that the system has successfully completed Operational Testing and prior to placement on the CPSS QPL, the QPL Applicant must be able to provide a Technical Data Package (TDP).

5 Configuration Management

The QPL Applicant shall establish, implement, and maintain the Configuration Management (CM) Program for all proposed systems during developmental testing and for the production based environment. The CM Program shall include the hardware/software CIs using ANSI/EIA 649 and the Configuration Management QDP Review, Version C, 4 OCT 2018 in Appendix F and shall include the following:

- CI Definitions.
- Hardware and software.
- Mapping of CI to functional requirements using template in Appendix D. The mapping shall indicate to TSA the specific requirements requiring regression testing if the CI should be updated in the future.
- Allocated, Functional and Product baselines.
- Configuration control / configuration status accounting.
- Performance of configuration audits as necessary.

The QPL Applicant shall allow the Government access to its baseline data, configuration control and configuration status accounting data and software tools. During the Qualification Process, the QPL Applicant shall inform the Program Management Office of proposed changes in accordance with the CM Guidance and its associated procedures at CPSSComms@tsa.dhs.gov.

The QPL Applicant is not permitted to alter any configuration parameters on any SUT (Certification, Qualification Testing, or Operational Test & Evaluation) unless specifically authorized by the Government. All changes to the configuration must route through the Government Configuration Control Board (CCB). The QPL Applicant is responsible for the generation and submission of the initial change package and responding to the government change package review questions.

Appendix A: Acronyms and Abbreviations

ACS	Automated Conveyance System
APM	Acquisition Program Management
BOM	Bill of Material
CCB	Configuration Control Board
CERT	Certification Testing
CFR	Code of Federal Regulations
CDP	Certification Data Package
CI	Configuration Item
CLIN	Contract Line Item Number
CM	Configuration Management
CMP	Configuration Management Plan
COR	Contracting Officer Representative
COTS	Commercial-off-The-Shelf
CPSS	Checkpoint Property Screening System
DHS	Department of Homeland Security
DID	Data Item Description
DMSMS	Diminishing Manufacturing Sources and Material Shortage
EMC	Electromagnetic Compatibility
EMI	Electromagnetic Interoperability
EMV	Electromagnetic Vulnerability
ESD	Electrostatic Discharge
ESOH	Environment Safety and Occupational Health
ERP	Enterprise Resource Planning
FAR	Federal Acquisition Regulation
FD	Failure Detection
FDRS	Field Data Reporting System
FI	Fault Isolation
FITARA	Federal Information Technology Acquisition Reform Act
FOT&E	Follow-on Operational Test and Evaluation
FRD	Functional Requirements Document
GPU	Graphics Processing Units
HIS	Human Systems Integration
HME	Home Made Explosives
INCO	Install and Checkout
IOT&E	Initial Operational Test and Evaluation
iSAT	Integrated Site Acceptance Test
LRU	Line Replaceable Unit
MBOM	Manufacturing Bill of Materials
MCIL	Master Configuration Item List
MRP	Manufacturing Resource Planning
MSDS	Material Safety Data Sheets
M&S	Modeling and Simulation
NIST	National Institute of Standards and Technology
PAM	Privileged Access Management
PCA	Physical Configuration Audit

Appendix B: CPSS QPL Applicant Required Substantiation

This appendix defines each level of substantiation required to be provided by the QPL Applicant in the QDP.

Table A-1 provides the required level of substantiation for requirements documented in the FRD. The levels of substantiation are coded as follows:

A = QPL Applicant certification of compliance (substantiation not required).

B = QPL Applicant certification of compliance (substantiation/test data/test reports required).

C = Independent / accredited third-party certification of compliance with substantiation.

A Certificate of Compliance (CoC) is a formal QPL Applicant claim that a method, such as test, demonstration, inspection, or analysis, was used to substantiate compliance to the specified procurement requirement. A CoC signed by the QPL Applicant's Project/Program Manager, Quality Assurance Manager, Engineering/Test Manager, and/or General Manager is required for all "A" and "B" level requirements listed in Table A-1. Independent (third-party) CoCs for all "C" level requirements shall identify the Nationally Recognized Test Laboratory (NRTL) that conducted the test and its accreditation and shall be signed by an official of the independent NRTL.

The CoC and substantiation documents must be numbered and ordered to match the paragraph and "shall" numbers of the requirement being verified. In the case where substantiation from an NRTL is required, data must be provided with the same level of detail.

All requirements having a substantiation level of "A" are to be listed in one signed CoC letter, submitted in the QDP. No substantiation is required.

All requirements having a substantiation level of "B" are to be substantiated and the resulting substantiation data, along with one signed CoC listing all the "B" requirements, submitted in the QDP. Every "B" requirement must be addressed and must have an evaluation approach and evaluation data available, including photographs/screenshots/reports (where applicable) documenting test results. A description of the verification method is acceptable for verifications using demonstration and inspection methods. If the verification is done using the test method, a test procedure, and test data are the minimum details necessary. For this level, the QPL Applicant submission will be reviewed by the government to determine system's capability of meeting requirements in governmental lab testing.

All requirements having a substantiation level of "C" are to be substantiated by an accredited NRTL, and must include the resulting substantiation data, along with one signed CoC for each requirement. The NRTL report must include the following items:

- The name of the testing laboratory.
- A list of the standards being verified.
- The test approach and results to include the following:
  - System identification, including model and serial number.
  - Test location and date.
  - A diagram or picture of the test setup.
  - Test standards and criteria.

Req. #	Paragraph	Paragraph Title	Required Level of Substantiation
24	3.2.1.1	Component Operation	A
25	3.2.1.1	Component Operation	A
26	3.2.1.1	Component Operation	A
27	3.2.1.2	Throughput	B
28	3.2.1.2	Throughput	B
29	3.2.1.3	Emergency Stop	A
30	3.2.1.3	Emergency Stop	A
31	3.2.1.3	Emergency Stop	A
32	3.2.1.3	Emergency Stop	A
33	3.2.1.3	Emergency Stop	A
34	3.2.1.4	Item Jam	A
35	3.2.1.4	Item Jam	B
36	3.2.1.4	Item Jam	A
37	3.2.1.4	Item Jam	A
38	3.2.1.4	Item Jam	A
39	3.2.1.4	Item Jam	B
40	3.2.2	Image Review Mode	A
41	3.2.2	Image Review Mode	B
42	3.2.2	Image Review Mode	B
43	3.2.2	Image Review Mode	B
44	3.2.2	Image Review Mode	B
45	3.2.2	Image Review Mode	B
46	3.2.2	Image Review Mode	B
47	3.2.2	Image Review Mode	A
48	3.2.2	Image Review Mode	A
49	3.2.2	Image Review Mode	A
50	3.2.2	Image Review Mode	A
51	3.2.2	Image Review Mode	A
52	3.2.2	Image Review Mode	A
53	3.2.2	Image Review Mode	A
54	3.2.2	Image Review Mode	A

Req. #	Paragraph	Paragraph Title	Required Level of Substantiation
86	3.3.3	Electrical	B
87	3.3.3	Electrical	B
88	3.3.3	Electrical	A
89	3.3.3.1	Uninterruptible Power Buff	A
90	3.3.3.1	Uninterruptible Power Buff	B
91	3.3.3.1	Uninterruptible Power Buff	A
92	3.3.4.1	Floor Loading	B
93	3.3.4.1	Floor Loading	B
94	3.3.4.1	Floor Loading	A
95	3.3.4.2	Surfaces	A
96	3.3.4.2	Surfaces	A
97	3.3.4.2	Surfaces	A
98	3.3.4.3	Curtains	A
99	3.3.5	Noise	B
100	3.3.6.1	Temperature and Humidity	B
101	3.3.6.1	Temperature and Humidity	B
102	3.3.6.1	Temperature and Humidity	B
103	3.3.6.2	Seismic Anchoring	B
104	3.3.6.2	Seismic Anchoring	A
105	3.3.6.3	Slopes	A
106	3.3.6.4	Altitude	B
107	3.3.6.5	Shock and Vibration	C
108	3.3.7	Electromagnetic Compatibility	C
109	3.3.8.1	Operability	B
110	3.3.8.1	Operability	B
111	3.3.8.1	Operability	A
112	3.3.8.1	Operability	A
113	3.3.8.2	User Interface	A
114	3.3.8.2	User Interface	B
115	3.3.8.2	User Interface	B
116	3.3.9	Identification Markings	A

Req. #	Paragraph	Paragraph Title	Required Level of Substantiation
148	3.6.1	Physical Access and Item Control	A
149	3.6.1	Physical Access and Item Control	B
150	3.6.1	Physical Access and Item Control	A
151	3.6.1	Physical Access and Item Control	A
152	3.6.2	Cybersecurity and Information Assurance	B
153	3.6.2	Cybersecurity and Information Assurance	B
154	3.6.2	Cybersecurity and Information Assurance	B
155	3.6.2	Cybersecurity and Information Assurance	B
156	3.6.2	Cybersecurity and Information Assurance	B
157	3.6.2	Cybersecurity and Information Assurance	B
158	3.6.2	Cybersecurity and Information Assurance	B
159	3.6.2	Cybersecurity and Information Assurance	A
160	3.6.2	Cybersecurity and Information Assurance	B
161	3.6.3	Software Access	A
162	3.6.3	Software Access	A
163	3.6.3	Software Access	A
164	3.6.3	Software Access	A
165	3.6.3	Software Access	A
166	3.6.3	Software Access	A
167	3.6.3	Software Access	A
168	3.6.3	Software Access	A
169	3.6.3	Software Access	A
170	3.6.3	Software Access	A
171	3.6.3	Software Access	A
172	3.6.3	Software Access	A
173	3.6.3	Software Access	A
174	3.6.3	Software Access	A
175	3.6.3	Software Access	A
176	3.6.3	Software Access	A
177	3.6.5	Security Technology Integrated Program (STIP)	B

Req. #	Paragraph	Paragraph Title	Required Level of Substantiation
207	C.4.3	Dimensions	A
208	C.4.4	Divestiture Subsystem	A
209	C.4.4	Divestiture Subsystem	A
210	C.4.4	Divestiture Subsystem	A
211	C.4.4	Divestiture Subsystem	A
212	C.4.4	Divestiture Subsystem	A
213	C.4.4	Divestiture Subsystem	A
214	C.4.5	Automated Secondary Screening Subsystem	A
215	C.4.5	Automated Secondary Screening Subsystem	A
216	C.4.6	Recomposure Subsystem	A
217	C.4.6	Recomposure Subsystem	A
218	C.4.7	Bin Return System	A
219	C.4.7	Bin Return System	A
220	C.4.7	Bin Return System	A
221	C.4.7	Bin Return System	A
222	C.4.7	Bin Return System	A
223	C.4.7	Bin Return System	A
224	C.4.7	Bin Return System	A
225	C.4.7	Bin Return System	A
226	C.4.8	High Threat Containment Subsystem	A
227	C.4.8	High Threat Containment Subsystem	A
228	C.4.8	High Threat Containment Subsystem	A
229	D.5.1	Baseline Voltage and Current Distortion	B
230	D.5.1	Baseline Voltage and Current Distortion	B
231	D.5.2	Power Usage Profile and Power Factor	B
232	D.5.3	Maximum Inrush Current Ratio	B
233	D.5.5	Maximum Leakage Current	B
234	D.5.6	Voltage Sag and Interruption Withstand Performance	B
235	E	Field Data Reporting System	A
236	E	Field Data Reporting System	A

DATA ITEM DESCRIPTION	
1. TITLE	2. IDENTIFICAITON NUMBER
Qualification Data Package (QDP) Procedures	DID-001
3. DESCRIPTION/PURPOSE	
The QDP Procedures define the QDP package's required content, format, and intended use, and provides the detailed procedures by which each Qualified Products List (QPL) Applicant shall complete and submit their QDP.	
4. INCREMENT	
Per beta.SAM.gov announcement.	
5. PREPERATION INSTRUCTIONS	

1 Scope

QPL Applicant must submit a QDP to include all material specified in this Data Item Description (DID) and the Qualification Management Plan (QMP) for each candidate system submitted for qualification. All materials must be submitted in a clear, concise, and unambiguous manner. The CPSS QDP must include information and material necessary for the Transportation Security Administration (TSA) to confirm that the CPSS is capable of meeting the specifications and requirements documented within the QMP and references.

1.1 Documentation

QPL Applicant shall submit a minimum of two (2) hard copies and two (2) electronic copies (CD or DVD).

1.1.1 Format

All QDP material(s) shall be submitted in Microsoft Office format (Microsoft Word, Excel, etc.) and Portable Document Format. All annotated screenshot printouts, or images shall be bitmap or tagged image file format. All forms of substantiation shall be clearly marked with the requirement number.

1.1.2 Language

All materials must be submitted in English.

1.1.3 Measurements

All dimensions and measurements shall be in standard US Customary Units.

1.1.4 Images

All image graphics must be high-quality and high-resolution of at least 600 pixels per inch.

2 Content

The information submitted will be grouped into two (2) Volumes: Technical Proposal and Test and Evaluation Proposal. The QDP shall be formatted into the below outline. QPL Applicant

2.1.2 Section 2: Management and Planning

The Management and Planning Section shall define how the QPL Applicant managed the work required to meet qualification requirements. It shall describe the executed approach to quality, management, planning, organizing, and controlling the development of the system, as well as the facilities used for designing, engineering, fabricating, integrating, and testing (to include integration into existing government and airport facilities if applicable).

In addition, this section should include an Integrated Master Schedule as prescribed in the QMP to cover the period from QDP acceptance to completion of system Initial Operational Test and Evaluation. The schedule shall clearly identify test and production activities for each subsystem for system(s) that will be provided to the TSA. At a minimum include detail for assembly, test, delivery / installation activities, and QPL Applicant support for TSA testing; the IMS shall also include elements detailing transition from testing to system production should QPL Applicant's placement on the CPSS QPL be achieved. Critical paths shall be identified.

2.1.2.1 Corporate Capacity

The QPL Applicant shall describe its experience in the development of Checkpoint Screening Equipment, CT systems manufacturing / installation, system integration with an ACS if applicable, and experience on previous projects of similar scope to the TSA.

2.1.2.2 Facilities

The QPL Applicant shall describe company, subcontractor, and / or third party test facilities that were used for the QPL Applicant's system engineering, development, assembly, testing, and manufacturing. The QPL Applicant shall identify any facility upgrades / modifications that were required to meet the requirements for qualification. The QPL Applicant shall define the communication's structure that was used to ensure efficient and cohesive interaction between physically separated development and / or testing activities, if applicable. The geographic location of all program related organizational units shall be identified.

2.1.2.3 Engineering / Manufacturing/Test Capability

The QPL Applicant shall describe the engineering, manufacturing, and testing capability within the company. The description shall include proposed equipment, processes, and personnel that ensured successful manufacture and test of the QPL Applicant's proposed system. The QPL Applicant shall describe its engineering, manufacturing, and testing capability through all phases of the Qualification Process and full or limited rate production.

2.1.2.4 Systems Engineering Process

The QPL Applicant shall provide an overview of their corporate Systems Engineering process used during Step 2 events for the development and integration of the proposed system, including assignment of personnel, personnel qualifications and responsibilities. The role of the Systems Engineering group and changes to existing Systems Engineering processes or methodology leveraged shall be described. The use of Computer-Aided Systems Engineering or similar tools and experience in using these tools in developing a structured process that encompasses all disciplines under Systems Engineering shall be described.

- or Parts lists

- Master Configuration Items List – QPL Applicant suggest list
- Source Control Documents:
  - Engineering Drawings – English, Standard units of measure (UOM)
  - Product Specification Sheets – Attributes and characteristics of the CI
  - Software Release Notes

2.1.6 Section 6: System Manuals

The QPL Applicant shall provide at a minimum the following manuals:

- Operator Manual
- Training Manual
- Installation Manual
- Maintenance Manual
- FDRS Manual
- Viewing Station Manual(s)

2.1.7 Section 7: System Training Materials

The QPL Applicant shall provide all training material as identified in the FRD and QMP. The QPL Applicant shall provide at a minimum operator and maintenance training for the proposed system and any associated M&S/emulators.

2.2 Volume 2: Test and Evaluation Proposal (200 pages)

Volume 2 of the QDP is intended to provide evidence that the QPL Applicant system is sufficiently mature for acceptance into the TSA Qualification Process. The QPL Applicant shall provide test reports that document how the QPL Applicant demonstrated the system performance and software / firmware / hardware readiness to proceed into Government testing at the TSIF. The QPL Applicant shall provide test data and other supporting evidence on the system for testing completed during Step 2 to substantiate findings found within the submitted test reports.

The QPL Applicant shall provide a description of testing and analysis that was performed to verify system maturity against the FRD referenced in the QMP. This volume must sufficiently show how the QPL Applicant proposed to and then complied with the Government's requirements and include a full explanation of the methodology and procedures that were followed. The QMP provides the detailed descriptions and requirements that shall be provided within the QDP. The following subsections are an outline of the information required to be addressed in the Test and Evaluation Volume.

2.2.1 Section 1: Test Configuration

The QPL Applicant shall provide a detailed description and drawing for the configuration of the system used to execute the *Step 2b: System Testing*. This shall include identification and

7	System Software	1,2,10,14,15
8	Viewing Station Software	3,4,11,12,14
N	Configuration Item	Requirements

Appendix F: Instructions for Preparing the Checkpoint Property Screening System Configuration Management Documentation

The QPL Applicant should refer to CM QDP Review Version C for Acquisition Program Management for additional information on the CM documentation submitted with the QDP.

CM QDP Review
Version C