DEPARTMENT OF THE NAVY
OFFICE OF THE CHIEF OF NAVAL OPERATIONS
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OPNAVINST 1500.76D
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OPNAV INSTRUCTION 1500.76D

From: Chief of Naval Operations

Subj: NAVAL TRAINING SYSTEMS REQUIREMENTS, ACQUISITION AND MANAGEMENT

Ref: (a) OPNAVINST 5420.117
(b) DoD Instruction 5000.80 of 30 December 2019
(c) OPNAVINST 1500.27G
(d) SECNAVINST 5000.2F
(e) CJCSI 5123.01H
(f) OPNAVINST 5310.23A
(g) DOD Instruction 5000.75 of 2 February 2017
(h) OPNAVINST 1540.56B
(i) SECNAVINST 11011.47D
(j) OPNAVINST 3500.34G
(k) NAVSO P-1000 of November 2019
(l) SECNAVINST 5000.36A
(m) DoD Directive 5000.59 of 8 August 2007
(n) OPNAVINST 11010.20H
(o) OPNAVINST 4790.4F
(p) COMUSFLTFORCOMINST/COMPACFLTINST 3501.3D
(q) OPNAVINST 4790.16B
(r) MIL-STD-46855a, Human Engineering Requirements for Military Systems, Equipment and Facilities, 24 May 2011
(s) OPNAVINST 1000.16L
(t) DoD Instruction 5000.02T of 7 January 2015
(u) OPNAVINST 3500.23D

Encl: (1) Manpower and Training Requirements Planning
(2) Training Estimate and Navy Training System Plan Format
(3) Training Effectiveness Evaluation Plan
(4) Training Installation and Transfer Agreement
(5) Rating Continuum
(6) Glossary and Acronyms

1. Purpose. To establish policy for planning, determining and documenting Manpower, Personnel and Training (MPT) requirements and development for Navy and Navy and Marine Corps integrated weapons and warfare systems across the entire continuum of Naval training

(Apprentice, Journeyman and Supervisor). The revision aligns with changes in acquisition policy, procedures, responsibility and reporting identified in the Navy Resource Requirements Review Board (R3B) process per reference (a). This instruction is a complete revision and should be reviewed in its entirety.

2. Cancellation. OPNAVINST 1500.76C, OPNAVINST 11102.2.

3. Scope and Applicability. This instruction applies to all Navy and Marine Corps programs that deliver Acquisition Category I through IV programs, non-acquisition category programs, modernization and rapid acquisition programs. The instruction is also applicable to abbreviated acquisition programs, non-developmental items, commercial off-the-shelf (COTS), rapid deployment capability, business systems and urgent need programs (e.g., Government Off-the-Shelf (GOTS) systems). Middle Tier acquisition programs will follow procedures identified in reference (b). Inter-Service Training programs will follow the procedures outlined in reference (c). This instruction facilitates the alignment of the system, manpower and training requirements throughout the lifecycle of the system and Rating Continuums. This instruction also serves as the Department of the Navy (DON) guidance to building a training effectiveness assessment model(s). Compliance with this policy will ensure MPT requirements traceability in support of new or modernized (or both) Navy training capabilities via enclosures (1) through (6).

4. Background. This instruction requires the identification of total force manpower and training requirements and the development of a training sustainment plan for support of Navy and integrated Navy and Marine Corps acquisition or modernization programs. Navy Training System Plans (NTSP) are regulatory documents identified by reference (d) used in planning during the Department of Defense (DoD) acquisition process. References (d) and (e) provide procedural guidance for the Joint Capabilities Integration and Development System (JCIDS) as the primary means for the Joint Requirements Oversight Council (JROC) to fulfill its statutory responsibilities. This instruction includes assessing joint military capabilities and identifying, approving and prioritizing gaps in these capabilities to meet requirements in the National Defense Strategy. Reference (f) addresses the requirements development for human systems integration.

5. Policy.

a. A Training Estimate (TE) must be initiated by Milestone (MS) B and completed by MS C for new programs and programs that are initiated at MS B. The completion of the TE is the entrance criteria for the development of an NTSP. The NTSP is submitted for Resource Sponsor (RS) approval, if applicable, during the Production and Deployment (P&D) phase and completed by MS C. RS(s) are required to obtain concurrence from Deputy Chief of Naval Operations (DCNO) for MPT before approving an NTSP. Once approved by the RS, the NTSP is the official record of Navy MPT requirements. Urgent or Joint Emergent Needs programs, non-acquisition programs, modernization and rapid or abbreviated programs, including non-developmental items, COTS, rapid deployment capability recommended for the transition into a

program of record will be incorporated in a TE and follow-on NTSP. Business Systems will follow procedures in reference (g).

b. A Training Installation and Transfer Agreement (TITA) is required before the Ready for Training (RFT) date. The application of System Command (SYSCOM) procedures for Configuration Data Management Data Managers' Database Open Architecture, configuration changes and installation execution is authorized. The document ensures training products, equipment, facilities and infrastructure are in place to support the implementation of the transfer of responsibility for a complete training system from the Training Support Agency (TSA) to the identified Training Agency (TA).

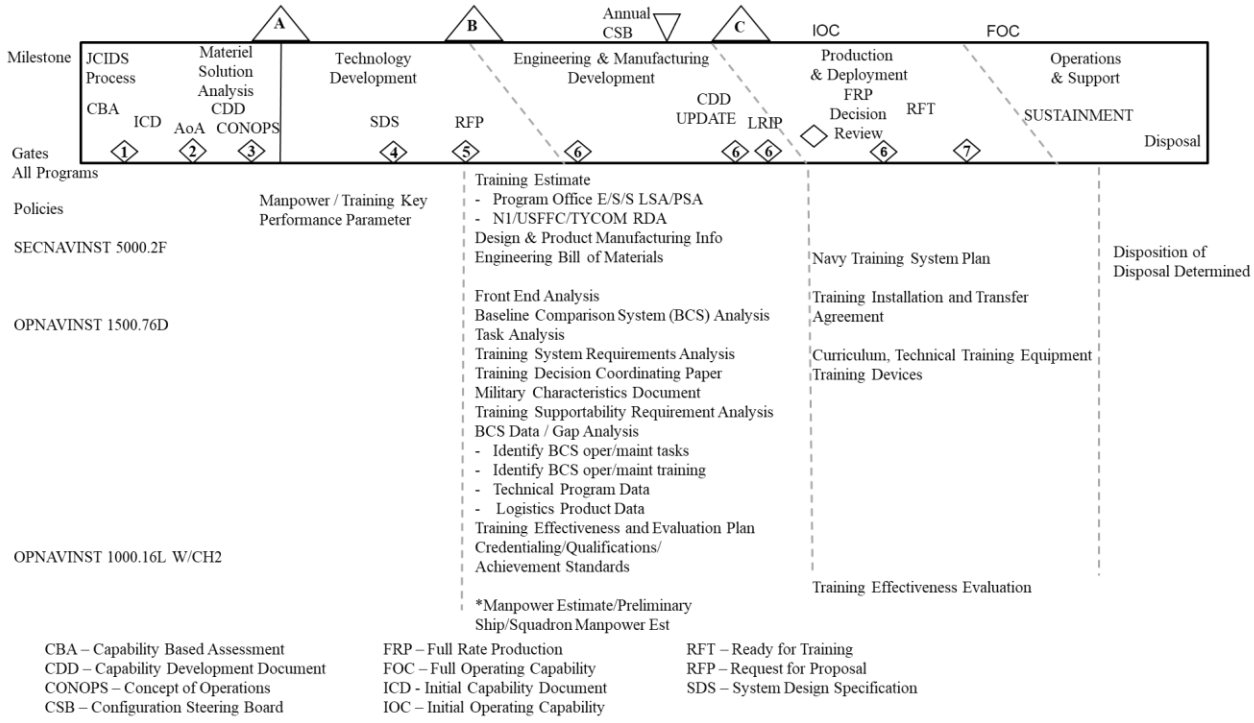


Exhibit 1. DON Requirements and Acquisition Process with Timeline for Manpower and Training Requirements Documents

c. Exhibit 1 details the timeline for acquisition category and non-acquisition category programs with the exception of business support and rapid acquisition programs (e.g., non-developmental items, COTS, GOTS, rapid deployment capability, abbreviated acquisition program, Speed to Fleet and urgent operational need initiatives). A rapid acquisition program will follow a more constrained milestone schedule aligned to meet warfighter readiness requirements until formal lifecycle sustainment training is in place. Reference (g) describes the business support acquisition cycle with Authority-To-Proceed.

d. The TE is required 5 years before system Initial Operational Capability (IOC) for programs requiring military construction (MILCON), or by the date indicated for programs meeting the criteria in subparagraphs 5d(1) through 5d(3):

(1) Four years before system IOC for Acquisition Category I or II programs requiring training device research, development, test and evaluation.

(2) Before initial operational test and evaluation or low-rate initial production, whichever comes first.

(3) Three months before IOC for rapid acquisition programs such as non-developmental items, COTS, GOTS, rapid deployment capability, abbreviated acquisition program and urgent need initiatives.

(a) Reference (d) defines the DON urgent needs and rapid development process that can be fielded in less than 2 years and are below the cost thresholds of Acquisition Category I and IA programs. During the P&D phase, the acquiring organization will provide the identified training and produce a TE to support the operation and sustainment phase requirements. The PM will develop the NTSP to meet operation and sustainment requirements.

(b) Integrated weapons, warfare systems and functional areas (e.g., habitability, damage control, etc.) require NTSPs.

e. Manpower and Training Requirements Planning (MTRP) document, Front End Analysis (FEA), Rating Domain Analysis (RDA) or a Functional Requirements Document (FRD) should include Fleet substantive and critical recommendations for review during a R3B or other governing decision-making processes. Findings will be posted on relevant Web sites or in official repositories.

6. TE and NTSP Development and Approval Process.

a. Program Managers (PM) are required to implement the MTRP using enclosure (1). The PM will also submit preliminary Program Budget Information System (PBIS) issues to the RS for considerations that support early cost product or logistics support analysis and any unfunded issues within the Program Objective Memorandum (POM) cycle. PMs will produce prescribed products used in the development of a TE, informed by the results of a Type Commander (TYCOM) approved RDA. An NTSP must be informed by a product or logistics support analysis and authoritative data as available. Training solutions development will not start until the TYCOM, TSA and TA concur and the RS approves the MTRP for incorporation into an NTSP.

b. TE approval process consists of:

(1) The TE consists of training requirements. The training requirements are derived from the program office's approved Equipment Systems and Sub-Systems (E/S/S) Logistics Support Analysis and Product Support Analysis, task analysis (maintenance, operations tasks) and TYCOM approved RDA. This milestone B product is developed using MTRP data. The TE will be aligned with the manpower estimate or preliminary manpower documents (or both). The analysis will be updated and transitioned into an NTSP at MS C (See Exhibit 1 in enclosure (2)).

(2) The RS must provide adequate funding, subject to the availability of funds, with sufficient time to meet warfighter training requirements (e.g., initial, interim and follow-on training). The program office obtains concurrence from key stakeholders and submits a TE to the RS. The critical stakeholders include the RS, United States Fleet Forces (USFF), TSA, Training System Program Office (TSPO), TYCOM, TA, OPNAV N13 and Deputy Chief of Naval Operations for Fleet Readiness and Logistics (CNO N4). These stakeholders are responsible for coordinating with their subordinate activities as applicable. The RS initiates a 21-day concurrence validation on appropriate Web sites (e.g., Naval Sea Systems Command (NAVSEA) Systems Command Training Acquisition, Aviation Technical Training (AVTECHTRA), Human Analysis and Requirements Planning System, MyNavy Portal, etc.). Stakeholders validate those MPT requirements in the TE and submit comments. Coordination with USFF and TYCOMs must be completed via DON tracker. The RS will validate the TE using enclosure (2) to communicate the MPT needs and identify gaps in support of acquisition or modernization programs before an approved TE. After establishing adequate Planning, Programming, Budgeting and Execution (PPBE) resources for training during the initial or interim phases throughout the Future Years Defense Plan (FYDP), the RSs will obtain concurrence from Director, Manpower, Personnel, Training and Education (MPTE) Requirements OPNAV N13 before approving a TE. When approved by the RS, the TE is the estimated training requirement until the requirement is finalized via an approved NTSP to include Total Ownership Cost data.

(3) The RS determines if an MPT Advisory Board is warranted. If warranted, the RS organizes and chairs the board, supported by the PM and TSPO. The PM will adjudicate all action items identified during the board and publish the results expeditiously. If a board is not warranted, the TE is updated based on the adjudicated comments.

(4) Following the 21-calendar day requirements validation and concurrence, the program office incorporates TE changes and submits the TE (to include a summary of adjudicated comments) to the RS. The identification of substantive comments requires the stakeholders to inform the RS and determine the feasibility of comment adjudication. OPNAV N13 will provide formal concurrence to the RS before approval. The RS will validate the TE is funded for execution before approval. Where the TE lacks funding, the RS will annotate exceptions and upload a TE approval letter into the approved Naval tracking system.

(5) Programs designated with JROC or Joint Capabilities Board-interest and major defense acquisition programs (Acquisition Category 1D and Acquisition Category 1C) will not

receive TE approval by the RS until the accomplishment of additional process steps delineated in reference (e).

c. The TE approval process for abbreviated acquisition programs and rapid acquisition programs, such as rapid deployment capability, will follow the same procedures starting in subparagraph 6b(1) through 6b(5). Abbreviated acquisition programs will be integrated with a program of record unless the RS requires a stand-alone TE. Three months before the abbreviated acquisition program's IOC involves the posting of an approved TE. At this point, the requirement for the MTRP ends and the development of the NTSP begins using the format in enclosure (2).

d. The program office is responsible for TE updates as required until approval of the NTSP. Updating the TE continues until the acquisition's MPT concepts and issues are firm and resolved. Until the NTSP is approved, the RS and Program Office continues to fund initial and interim training.

e. The NTSP is the output of MTRP. The MTRP consists of the items in Exhibit 1 (enclosure 1) with the applicable product support analysis data, lifecycle management data, maintenance task analysis and credential transparency description language and Personnel Qualification Standards (PQS). Resource Sponsors, SYSCOMs, Program Office's and Training System Program Office's must migrate to a single Naval Training System Plan development tool. The assumptions for this tool include that it will do "no harm" to fleet readiness or the Planning, Programming and Budgeting System and process. The tool can be used in conjunction with existing NTSP Web repositories and import information and data from various sources (e.g., Total Force Manpower Management System, Corporate Enterprise Training Activity Resource System, Model Based Product Support, Naval Operational Business Logistics Enterprise, Navy Enterprise Resource Planning, Aviation Sustainment, Supply Chain Management, Navy Maintenance Repair and Overhaul and Product Lifecycle Management). Furthermore, include any MILCON, facilities, Technical Training Equipment (TTE), courseware program of actions and milestones and points of contact.

f. NTSP approval process consists of:

(1) The program office submits the NTSP to the RS. The RS initiates a 45-calendar day requirements validation (pass one) via CTS Tasker System "Naval tracking system" (e.g. DON Tasker System (DON Tracker) or similar). Stakeholders validate MPT requirements in the NTSP and submit comments. FFC and TYCOM will provide comments via DON taskers. The RS determines if an MPT Advisory Board is warranted and organizes and chairs the board, supported by the PM and TSPO. The PM will adjudicate all action items identified during the board and publish the results expeditiously. If a board is not warranted, the NTSP is updated based on the adjudicated comments.

(2) Following the 45-calendar day requirements validation, the program office incorporates NTSP changes and submits the NTSP (to include a summary of adjudicated comments) to the RS. The RS initiates a 30-calendar day concurrence validation (pass two), coordinating applicable stakeholders via the approved DON tracker system. The originator will notify the RS of any substantive comments and determine if the NTSP review process continues. After the 30-calendar day concurrence period and assuming all stakeholders concur, OPNAV N13 will provide formal concurrence to the RS. The NTSP's approval is contingent on funding the requirements. Where the NTSP requirements lack funding, the RS will annotate exceptions and upload an NTSP approval letter in the approved Naval tracking system.

Note: RS will coordinate Acquisition Category I and DON selected programs at the Flag or Senior Executive Service-level during pass two validation to obtain OPNAV N13 concurrence.

(a) Mandatory stakeholders on both the pass one requirements validation and the pass two concurrence validation include the RS, USFF, TSA, TA, TSPO, TYCOM, OPNAV N13 and CNO N4. These stakeholders will coordinate with their subordinate activities as applicable.

(b) The purpose of the pass two concurrence validation is to mitigate or resolve those issues identified during pass one and validate that programmed funding is available for development, execution and support of the training solutions.

(c) Programs designated with JROC or Joint Capabilities Board-interest and major defense acquisition programs (Acquisition Category 1D and Acquisition Category 1C) will not receive NTSP approval by the RS until the accomplishment of additional process steps delineated in reference (e).

g. If transitioning to a program of record, the NTSP approval process for abbreviated acquisition programs and rapid acquisition programs such as rapid deployment capability will follow the same procedures as in subparagraph 6f(1) through 6f(2) but with a 30-calendar-day requirements validation period (pass one) and a 14-calendar day concurrence (pass two) validation. Abbreviated acquisition and rapid acquisition programs will be integrated with a program of record unless a separate NTSP is required. The approved NTSP will be developed and posted no later than three months before the POM cycle and the training solutions will be delivered before RFT.

h. The program office must determine if program changes (e.g., equipment change, Doctrine, Organization, Training, materiel, Leadership and Education, Personnel and Facilities change request, modernization, training effectiveness evaluation results, etc.) require an NTSP update. The program office will also conduct an annual NTSP review to determine if an update is required and report their findings to the RS no later than 1 February. The program office is encouraged to use pen and ink changes for minor edits (i.e., administrative changes) and then load them on the applicable Web site(s). The next NTSP update will incorporate pen and ink

changes. Change pages are recommended and are to be submitted to the PM to determine if an update or pen and ink change is warranted. Based on the program office's recommendation, the RS makes the final determination and notifies all stakeholders of changes.

i. The Training Effectiveness Evaluation Plan (TEEP) describes the strategy, goals and objectives to conduct a Training Effectiveness Evaluation (TEE) of the Key Performance Parameter (KPP) or Key System Attribute (KSA) (or both), critical tasks and associated standards related to the training delivered. The TEEP also identifies a methodology to collect and evaluate performance data of E/S/S training, systems, curricula and sailors to inform future requirements or changes that improve readiness (or both). The strategy, schedule, TYCOM's measures of effectiveness, Naval Education and Training Command (NETC) and other stakeholders will coordinate with the PM responsible for the TEEP. At a minimum, a TEEP development can use data from any of the following: MTRP, test and evaluation master plan (TEMP) and builder's trial cards to ensure alignment with the occupational standards and Rating Continuums. Updates will be developed based on MTRP triggers and incorporated into the next scheduled TEE. A TEE will be conducted no earlier than six months after completion of the pilot training event and when the system and fleet performance data is available for collection and evaluation. The results of the TEE may drive revisions to MTRP products (FEA, RDA, etc.)

7. Roles and Responsibilities.

a. Deputy Chief of Naval Operations (Manpower, Personnel, Training and Education) (CNO N1) will:

(1) Assess the impact and equities of acquisition, modernization and configuration management on DON resources. Assess resourcing and programming of training plans in collaboration with RS via the POM process and provide results to USFF and Deputy Chief of Naval Operations (Warfighting Requirements and Capabilities) (CNO N9).

(2) Concur on NTSPs. Concurrence indicates the validation of the planned, executable requirements per stakeholder review and adjudication.

(3) Validate and approve the Preliminary Ship or Squadron Manpower Document (PSMD), Navy Officer Occupational Classification System and Navy Enlisted Occupational Classification System (NEOCS) packages. Validate and concur when Crew Scheduling and Phasing Plans manpower is programmed and aligned to PSMDs and NTSPs. Validate enlisted and officer distribution, training quota management, temporary duty under instruction and permanent change of station (PCS) move requirements.

(4) When applicable, coordinate with respective Marine Corps occupational field sponsor to ensure manpower equities and requirements are appropriately addressed and vetted through the Marine Corps manpower stakeholders.

(5) Advocate for SYSCOM technical authority reviews per references (d) and (f).

(6) Maintain close liaison with RSs, TSA and TA to meet RFT for delivered training systems.

(7) Validate that development, procurements, operational and support costs are programmed and funded, including Contractor Operated Maintenance Support (COMS) before concurring.

(8) Validate that the training products are aligned to the task analysis, TE, MTRP and Rating Continuum established by the TSA, TA and Fleet before RFT.

(9) Validate that the TEEP provides an assessment based on the criteria identified in subparagraph 6i for a training system and Rating Continuum. Also, ensure results of the TEE are validated by the TYCOM and coordinated with NETC, including future training requirements for system(s) and Rating Continuum.

(10) Fund development and update of the RDA for each Rating Continuum affected by the system or engineering changes. Maintain Rating Continuums in a common data source or authoritative data environment.

(11) Identify and fund credentialing requirements supported by reference (h).

(12) Serve as a member of the MPT Advisory Board.

(13) Provide oversight of process, policy and procedures for this instruction.

(14) Advocate for systems command technical authority reviews of Human System Integration (HSI) before CNO N1 concurrence.

(15) Act as the executive agent" (EA) for MPT integration and the CNO's principal advisor on all manpower and training issues impacting the cost and executability of military manpower, personnel policy decisions and fleet manning levels.

b. CNO N4 will:

(1) Integrate training facility construction requirements into overall Navy project programming and prioritization processes utilizing DD 1391 Fiscal Year (FY) MILCON Project Data per reference (i) and enclosure (4).

(2) Fund training facility maintenance, modernization and sustainment.

(3) Complete the facilities planning, development and implementation portion of the TITA, leading to the final acceptance of the training system from the TSA. Coordinate with applicable RS for completion of TITA.

c. RSs (CNO N1, Deputy Chief of Naval Operations (Information Warfare/Director of Naval Intelligence) (CNO N2/N6), CNO N9) will:

(1) Identify fleet training readiness requirements for fleet live virtual constructive training, the afloat training groups, information warfare training groups, tactical training groups and Navy maritime operations centers. Validate identification of fleet requirements for advanced, integrated and unit training. Comply with Inter-Service Training procedures identified in reference (c).

(2) Coordinate with the TAs and other RSs to program for sustainment and resource requirements, including resolution of seams issues in the POM before and after RFT(s).

(3) Establish and validate requirements and capabilities identified in Required Operational Capability (ROC) and Projected Operational Environment (POE), Concept of Operations (CONOPS), JCIDS documents, KPPs and KSAs. Plan, program and fund requirements for design, development, procurement, engineering changes, alterations, modifications, modernization and sustainment for the lifecycle of the system(s). Integrate and coordinate cross-RS MPT requirements before the submission of budgets. Prioritize requirements and wholeness issues in the PPBE process.

(4) Prioritize and fund Military Personnel Navy, Reserve Personnel Navy (RPN), Manpower Personnel Navy (MPN), temporary duty under instruction, students' individual account and Operation and Maintenance, Navy (O&MN) sustainment funding required to sustain and meet RFT date through the FYDP. Identify excess shortfalls in students' individual accounts or temporary duty under instruction funding (or both).

(5) Fund necessary appropriations including MTRP, PQS, training system development, Rating Continuum, curricula, studies, operations refresh, Contractor Maintenance Service (CMS) and sustainment of approved training systems.

(6) Fund associated training equipment, devices and materials based on the same precedence as the system the training supports. Assess acquisition, modernization and configuration management processes to ensure training systems support the requirements identified in the MTRP and updated FEA.

(7) Fund new requirements (training devices, curriculum, facilities and contract operations maintenance and sustainment) of Ready Relevant Learning training solutions. USFF, PACFLT and TYCOMs identify and approve requirements; the RSs fund requirements and the SYSCOM and TSPO develops the FRD in consultation with NETC Learning Centers to align

with the TITA or MTRP that is validated by the applicable TSPO and approved by the EA for RRL. The RS for the new requirements is the RS with existing responsibility for the applicable system requiring training. In the case of new RRL training not directly tied to a system, the responsible RS is the sponsor resourcing the affected Learning Center. An exception to this policy is when one sponsor or TYCOM requires training on a system resourced by a different sponsor. When this occurs, the sponsor and TYCOM requiring the training will resolve the new training requirement.

(8) Fund the training by:

(a) Initial or interim training (Original Equipment Manufacturer (OEM) or vendor-provided) in a digital format or a methodology prescribed at applicable R3Bs until RFT.

(b) Support for vendor training (including modifications), operational equipment and technical manuals for training purposes (other than training aircraft and expendable ordnance), technical documentation and courseware.

(c) Additional duty travel for initial training, Navy Enlisted Classification (NEC) and Military Occupational Specialty (MOS) producing courses and non-NEC and non-MOS producing courses.

(d) Initial production equipment, training material, training systems (including curriculum, job aids, performance support, training devices, etc.) and technical manuals for the new system's delivery. The installation schedule must align with the training schedules to ensure the availability of adequately trained personnel for the first operational unit.

(e) System Maintainers at the Regional Maintenance Centers (RMC) will be provided initial training by the OEM or In-Service Engineering Agent (ISEA) to support their roles as Subject Matter Experts, Fleet Technical Assistance and associated fleet support personnel (e.g., Operational Test and Evaluation Force (OPTEVFOR), Afloat Training Group, Board of Inspection and Survey, Navy shipyards, etc.).

(9) Assess MPT supportability of all acquisition and modernization programs. Initiate appropriate action to align MPT issues identified by USFF, fleet commanders, TYCOMs, program offices, Participating Acquisition Resource Managers and Naval Education and Training Command (NETC) Learning Centers. Inform stakeholders if fleet training requirements cannot be fully supported (resourced).

(10) Provide NTSP numbering per enclosure (2).

(11) Chair MPT Advisory Boards if required. Approve the MTRP, NTSP and TITA. TITAs that transition training solutions to NETC require OPNAV N13 concurrence via Navy Taskers.

(12) Conduct NTSP issue resolution with key stakeholders before an NTSP is approved.

(13) Fund development or revisions to Navy PQS per reference (j) or equivalent Marine Corps Training and Readiness Program products (or both) for new and modernized aircraft and ship classes, systems and equipment.

(14) Identify and fund the development of Military Characteristics Documents (MCD) and approve MCDs before the procurement of training devices, per enclosure (1).

(15) Program and approve training system to meet RFT date, listed by Course Identification Number (CIN) and Course Description Package in the NTSP.

(16) Assess the planning, development and implementation of the TITA, leading to the final acceptance of the training system from the TSA to meet the established RFT date, per enclosure (4). Maintain formal liaison with CNO N1; USFF; fleet commanders; Commander, Navy Reserve Force; applicable TSAs or TAs; and inter-Service agencies or services in the case of joint programs to achieve satisfactory final acceptance of the training system at RFT.

(17) Assess and fund a TEEP, including Training Effectiveness Evaluation Agent(s) (TEEA(s)) designation (in coordination with PM or TYCOMs and TA) and execution of the TEE per enclosure (3).

(18) Coordinate actions with the Marine Corps Resource Advocate when applicable.

(19) Program infrastructure support requirements for all warfare systems, weapons or Command, Control, Communications, Computers, Combat Systems and Intelligence (C5I) system acquisitions per reference (k), aligned with major delivery milestones across the FYDP, including initial outfitting of facilities.

(20) Coordinate with the fleet to ensure NTSP requirements are clearly articulated and addressed. Provide feedback to the fleet when time or resources preclude completion of fleet MPT requirements ahead of IOC.

(21) Ensure requirements and priority justification are provided for MILCON or Unspecified Minor Construction (UMC) projects and submitted to the appropriate real property requirements generators as requested for their completion and submittal of the DD 1391, per enclosure (4) and reference (i).

(22) Perform additional NTSP process steps for programs that are designated with JROC or Joint Capabilities Board-interest and major defense acquisition programs (Acquisition Category 1D and Acquisition Category 1C), per reference (d).

(23) Identify the appropriate online repository for MTRP, NTSP and TITA.

(24) OPNAV N9I designates the lead RS for the training requirements that cross multiple RSs.

(25) Fund credentialing requirements supported by reference (h).

d. SYSCOMs will:

(1) In addition to the roles and responsibilities listed in references (d) and (l):

(a) Comply with reference (m) during the development of acquisition systems and before approval of onboard installation or fielding of system equipment or software. Comply with Alterations to Ships Accomplished by Alteration Installation Teams (SL720-AA-MAN-030), commonly referred to as the "One Book," before approval of onboard installation.

(b) Ensure appropriate technical authority, TSA and TA concur with maintenance task analysis and manpower analysis results before commencing development of the training system. Ensure maintenance task analysis and manpower analysis results are justified by subsequent updates of the NTSP during System Engineering Technical Review. Submit digital copies of certification and validation of the maintenance task and manpower analyses to the RS and RDA analyst.

(2) Serve as a member of the MPT Advisory Board.

(3) Conduct or participate in any engineering site surveys.

(4) Execute MILCON and Special Projects following the TITA and reference (n) as directed and funded by Commander, Navy Installations Command.

(5) Maintain configuration of learning facility drawings.

e. PMs will:

(1) For acquisition and modernization system(s), identify training requirements, including training infrastructure, instructors (as required), contracted maintenance and Fleet Technical Support Training. The training requirements should also include interim training, training devices, TTE, capability upgrades, course curriculum, courseware, significant revisions (e.g., enabling and terminal learning objectives) and emerging C5I systems. Ensure completion of a cost analysis for the transition of specific interim training courses to formal Navy schoolhouses in time for RS submission of POM. Provide life cycle support until training system(s) or curriculum has reached RFT and been accepted by the TA and validated by the RS. Inter-Service Training Organization programs will follow procedures identified in reference (c).

(2) Identify, plan and submit to RS all system and resource requirements, including the development of the NTSP per enclosures (2) and (4) and coordinate current and future FY cost estimates and priorities for training systems with RS(s). Document the current and future FY cost estimates in the program's cost analysis requirements document and the program lifecycle cost estimates. New or modified training may require program funding in coordination with applicable RS and TYCOMs.

(3) Develop and submit the NTSP to the RS to meet the schedules described in Exhibit (1).

(4) When the program crosses multiple program office boundaries, coordinate with the appropriate organizations.

(5) Support the systems' modernization process.

(6) Perform MTRP as described in enclosure (1).

(7) Develop training solutions for applicable initial, interim and follow-on training. As required, ensure System Maintainers at the RMCs are provided with initial training by the OEM or ISEA to support their roles as SMEs.

(8) Announce, host and provide administrative support for MPT Advisory Board, ensuring compliance with DoD and DON conference and travel guidance.

(9) Coordinate with the TA responsible for follow-on training. Arrange inter-service training support, per reference (c), if required.

(10) Provide resources for conversion and restoration of TA facilities when installing and removing training equipment, per references (j) and (l).

(11) Develop, procure, deliver, install and modernize TTE, training devices and other training material requirements identified in the TE, NTSP and NTSP updates throughout the lifecycle of the system.

(12) Develop technical manuals, documentation and updates for use in initial and follow-on training. Develop technical manual(s) concurrently with the development of the training system. Distribute technical documents and subsequent updates to the TSA, TA and Learning Centers.

(13) Provide the TA with updated curriculum materials, technical manuals, Maintenance Index Pages (if applicable) and Maintenance Assist Modules for training equipment, PQS or equivalent Marine Corps Training and Readiness Program (or both) as described in enclosure (4).

(14) Provide the TA with initial outfitting of new or modified training equipment before RFT, as applicable.

(15) Determine the need for and develop MCDs per enclosure (1).

(16) Manage disposal of excess TTE and training devices, as applicable.

(17) Notify the RS and Program Executive Officer by traceable means (e.g., e-mail, letter or Navy message) promptly to allow appropriate risk mitigation action (e.g., manpower, equipment and resources) for training systems' funding discrepancies.

(18) Provide initial operational equipment, alternative media, technical manuals and acquisition logistics products to the training commands in a digital format prescribed by applicable R3B decisions for those items required to train personnel in the operation, maintenance, employment and equipment support.

(19) Ensure the TITA documents the formal security Risk Management Framework for curriculum materials and the transition of all individual and fleet training requirements and resourcing from the RS(s) and program office(s) to the TSA and TA.

(20) Provide a list of TE or NTSPs to be developed, updated or recommended for cancellation to the RSs and OPNAV N13M5 as needed to support budget planning and update TE or NTSPs as required to ensure current and accurate TE or NTSPs are provided to the RSs for approval and distribution to stakeholders.

(21) In coordination with CNO N1 and USFF, validate the effectiveness of training products and processes as prescribed in the TE or NTSP, NETC Training Requirement Review messages and other TA, fleet or SYSCOM technical training audits. Training effectiveness will be evaluated according to the industry best practices and TYCOM recommendations based on approved RDA. RSs will provide feedback for action items associated with the TE or NTSPs and address action items during annual validations and future programming actions.

(22) Validate TE or NTSPs as program changes dictate and, at a minimum, annually review the TE or NTSPs to determine if updates are required. Report results to the applicable RSs and post the results on the appropriate SYSCOM Web site. Minimum required data reported is:

(a) Title and number of the TE or NTSP.

(b) Date of completed validation.

(c) PM point of contact (POC).

(d) TE or NTSP updates required or not required.

(e) TEEP updates required or not required.

(f) If an update is required, provide justification and impact and indicate the FY the TE or NTSP will be updated.

(23) Validate measures of effectiveness for KPP or KSA associated with the critical tasks identified in enclosures (2) and (4). For E/S/S that do not have a system training KPP or KSA, the results of the FEA will be used to establish measures of effectiveness for the acquisition logistics products and included in the NTSP.

(24) Coordinate with NETC and TYCOMs to ensure training requirements for new and modernized training systems are identified in the Corporate Enterprise and Training Activity Resource System (CeTARS) and Fleet Training Management and Planning System (FLTMPS).

(25) Plan and execute CMS contracts for training systems under TSA custody and responsibility. Submit CMS changes to the RS before the end of the warranty period.

(26) Identify the TA and host installation public works department facility requirements (i.e., air, water, power, space, etc.) to support the installation of the training system and training system changes and execution of site surveys as required.

(27) Provide the TEEP in coordination with NETC and TYCOM.

(28) Serve as initial acquisition PQS model manager and transfer responsibilities to the TA per reference (j), except submarine qualification programs which are managed by the TYCOM.

f. Training Support Agency will:

(1) Along with the PM, coordinate with the TA to determine funding information for maintaining the training. The TSA is responsible for funding the maintenance of the training until RFT, along with the TA acceptance. The TSA must ensure the PM and TSPO develop training aligned with completed sustainment engineering analyses (e.g., operational, organizational, intermediate and depot level tasks) and fund training until transition.

(2) As required, plan for and provide budget submissions with the PM for development of task analysis, FEA, PQS, media analysis, studies, curriculum, operations refresh, CMS, NTSPs, approved training systems and train the trainer for modernization of systems. Provide reimbursable funding as appropriate for coordination, development and contracts.

(3) Conduct training system audits and identify overhaul candidates as required.

(4) Develop and deliver the OPNAV 4790/CK Ship's Configuration Change Form and the OPNAV 4790/CK(c) Ship's Configuration Change Form Continuation to the TA in order to support configuration management of the installed/delivered TTE as described in reference (l). Develop and deliver Requisition and Invoice/Shipping Documents (DD Form 1149) for all delivered TTE, TD and PTT.

(5) Transfer Plant Property to Commander, Navy Installations Command, Navy Region or their designated representatives per references (f) and (c).

(6) Execute the transition of responsibility for the training system(s), training devices and support equipment, including acceptance testing and delivery.

(7) Coordinate with the PM or TA for scheduling of training device maintenance and overhauls, as well as depot-level calibrations.

g. Training Systems Program Office includes:

(1) Program Manager, Ships (PMS) 339 represents the Naval Surface and Expeditionary Enterprise Training within NAVSEA, per OPNAVINST 1500.57 Series. Serve as the OPNAV N95/N96 single POC for strategic program planning, policy, acquisition, life-cycle management, research and development and technical insertion into all existing and future Navy surface and expeditionary warfare training systems. Act as lead for NAVSEA managed common systems and models.

(2) Program Management Activity (PMA) 205 represents the Naval Aviation Training and Naval Air Systems Command (NAVAIR). Ensure the Naval Air Warfare Center Training Systems Division is informed and consulted regarding TSPO plans and decisions. Act as lead for NAVAIR managed common systems and models for TSPOs.

(3) Naval Information Warfare (NAVWAR) Systems Department (Code 4.4) represents the information warfare enterprise (Program Executive Officer (PEO) Enterprise Information System and PEO Command, Control, Communications, Computers and Intelligence (C4I) and Space Systems) as SMEs who provide people, processes and tools for MPT Analysis, NTSP development, training integration, training assessment and training transition. Additionally, promote consistency of products through the implementation of OPNAV instruction to drive success in effectively training the Fleet on new technologies. Furthermore, provide a holistic view of the NAVWAR enterprise and maintain close connections with external stakeholders such as CNO N2/N6; Commander, Navy Information Force; and the NETC. Finally, initiate acts in a unified collaborative approach for the management, design, delivery and sustainment of quality and cost-effective training across all C4I, Surveillance and Reconnaissance capabilities fielded by the NAVWAR enterprise.

(4) NAVSEA 07TR performs as the Undersea Warfare Enterprise Training Support Agent for Submarine Training per OPNAVINST 3502.5 Series. Serve as the OPNAV N97 single POC for all submarine training systems strategic program planning, policy, acquisition, life-cycle management, research and development and technical insertion into all existing and future Navy submarine training systems. Except for training material or training systems equipment under the cognizance of NAVSEA 08 or the strategic weapon system under the cognizance of Director, Strategic Systems Programs, act as lead for NAVSEA submarine managed common systems and models. As such, SEA 07TR will be responsible for configuration management and lifecycle support for all trainers and training support materials under their cognizance.

(5) Naval Facilities Engineering Systems Command (NAVFAC) acts for ASN (RD&A). NAVFAC exercises the authority of the Naval Acquisition Executive to manage construction, facility and contingency engineering programs, including those in support of other SYSCOMs, program executive officers, direct reporting PM, PMs and their assigned acquisition programs. Serve as the Navy single manager for civil engineer support equipment and expeditionary combat force systems operated ashore. NAVFAC Engineering and Expeditionary Warfare Center (EXWC) executes NAVFAC's assigned SYSCOM responsibilities through Expeditionary Program Office (EX2/Program Management Division).

(6) PEO Carriers (PMS 312/PMS 378/PMS 379) represents PEO Carriers enterprise training within NAVSEA per OPNAVINST 1500.57 Series. Represent the NAVAIR Carriers platforms enterprise as SMEs who provide people, processes and tools for MPT Analysis, NTSP Development, Training Integration, Training Assessment and Training Transition. Serve as the OPNAV N98 single POC for strategic program planning, policy, acquisition, life-cycle management, research and development and technical insertion into all existing and future Navy Carrier training systems except for training material or trainer systems equipment under the cognizance of NAVSEA 08. Act as lead for NAVSEA Carrier managed common systems and models. Responsible for configuration management and lifecycle support for all trainers and training support materials under their cognizance.

(7) Serve as a member of the MPT Advisory Board.

h. TA will:

(1) Execute approved training system sustainment requirements at RFT date, if assigned. The TA may expressly provide for the delegation of TA responsibilities within its chain of command.

(2) Execute funded follow-on training requirements of the approved training system.

(3) Execute responsibilities of PQS model manager after fleet introduction, per reference (g).

(4) Provide support as required for TEEP planning and TEE execution.

(5) Provide support for MPT advisory boards.

(6) Validate training curriculum materials to ensure initial training and follow-on training meet requirements. Validate type of curriculum update; develop a plan in coordination with the TSA to transition updated materials that are not classified as a revision.

(7) Participate in the planning, development, implementation and validation of NTSPs and TITA, leading to TA final acceptance of the training system from the TSA to meet the established RFT date.

(8) Provide the PM, USFF, fleet commander and subordinate commander staff with training effectiveness data per enclosure (3).

(9) Coordinate with TSA to validate the delivery of the TITA requirement during installation. Coordinate with the RS for programming sustainment resource requirements in the POM before RFT if required.

(10) Assign appropriate Learning Center, who will identify POC's to coordinate with the SYSCOMs, TSPOs and TSAs during the TITA process.

(11) Participate in the planning, development, implementation and validation of Installation Design Plans consists of:

(a) Provide early identification of facilities (i.e., buildings, spaces, utilities, etc.) available to accommodate the establishment of a training system.

(b) Coordinate facility impacts with the host command, as appropriate.

(c) Monitor and support MILCON and Special Projects requirements identification, when applicable.

(d) Participate in the acceptance testing of the new or modified or changed training system.

(e) Accept the transfer of responsibility for the training system from the Acquisition PM, TSPO and TSA. Upon agreement with Acquisition PM, TSPO and TSA that installation deficiencies exist, monitor deficiencies until all deficiencies are resolved.

(f) Deliver TSA-provided facility drawings and updates to local NAVFAC or Commander Navy Installations Command representatives (e.g., Public Works).

(12) Provide the PM or TSA with input for the update of TITAs through final acceptance.

(13) Compile TITA data for identification and inclusion in the Real Property Inventory.

(14) Provide OPNAV 4790/CKs (hardcopy or electronic) to the Configuration Data Manager for incorporation in the Configuration Data Managers Database - Open Architecture (CDMD-OA). The OPNAV 4790/CK ensures appropriate configuration management of new and modified training capabilities as well as signs for and provides records management for Requisition and Invoice or Shipping Documents (DD Form 1149s).

(15) Lead the training analysis in coordination with the program office using authoritative task-based data derived from the original equipment manufacturer and electronic computer-aided design data configured to the approved task analysis and product supportability.

(16) Coordinate the results of the RDA with the Learning Center to align and sequence the new or revised work a Sailor is expected to perform before approval by TYCOM. Conduct learning performance evaluation and TEE planning with measures of effectiveness that align learning objectives in the Navy Task Classification system and common database with fleet performance indicators.

i. NETC will:

(1) When applicable, serve as the TA for individual training within the NETC enterprise.

(2) Validate MTRP provided by the PM or CNO N1 and identify how the learning gaps between baseline comparison MPT requirements and new E/S/S will be integrated for follow-on sustainment training solutions.

(3) Validate the Business Case Analysis (BCA) and that the training requirements listed in NTSPs are included in officer and enlisted school and skill development plans.

(4) Coordinate and resource subordinate activities and Learning Centers for participation supporting the NTSP process.

(5) In coordination with the RS, plan and execute applicable CMS contracts for training systems under NETC custody and responsibility. Submit CMS changes to the RS before the end of the warranty period.

(6) Coordinate with the respective TYCOM to determine the adequacy of individual skills training as it affects mission capability and fleet and Fleet Marine Force readiness per enclosure (3).

(7) Designate the lead Learning Center for those programs that cross multiple Learning Centers.

(8) Provide computation on instructor, throughput, average of board, annual training input requirements and individual's account requirements for the development of NTSPs within 30 days of the request. Additionally, provide the process (e.g., instructor computation model) to determine requirements.

(9) Validate draft NTSP requirements and provide concurrence recommendation to CNO N1 on proposed NTSPs.

(10) Comply with Inter-Service Training Review Organization training policies and procedures identified in reference (c).

(11) Provide a standardized equipment list to PM or TSA for learning resource centers.

(12) Serve as a member of the MPT Advisory Board.

(13) Validate RDA (e.g., learning performance assessment) results and recommendations in coordination with TYCOM (fleet performance assessment) based on the performance of tasks identified in TYCOM approved task analysis.

(14) Maintain training within Rating Continuums in alignment with Navy Task Classifications and Occupational Standards.

j. USFF and U.S. Pacific Fleet, in coordination with TYCOMs, will:

(1) Validate and prioritize fleet training requirements.

(2) Provide policy, guidance and oversight for fleet training, per reference (p).

(3) Provide notification to RS and PM for all ship availabilities.

(4) Validate NTSPs, coordinate RDA for Rating Continuum requirements inclusion in Training Project Plan (TPP) updates to NETC, FRDs, TEs and submit to RS.

(5) Provide PM, TA or TYCOM Rating Continuum Model and RDA guidance to address the insertion of rating profile gaps, measures of effectiveness, throughput, choke points and training system gaps.

(6) Provide TYCOM direction and guidance for TEEP planning and TEE execution. At a minimum, supported by readiness evaluation criteria onboard ships and aircraft, validate Sailor course retention of knowledge, skills and proficiency associated with fleet assignment.

(7) Provide PM and TA concurrence on the TEEP measures of effectiveness criteria identified in the KPP or KSA requirements strategy outlined in enclosure (3).

(8) Serve as a member of the MPT Advisory Board.

(9) Approve RDA in coordination with NETC and the respective Learning Center.

(10) Conduct fleet performance evaluation and TEEP with TA, TSPO and NETC.

k. Deputy Commandant for Combat Development and Integration and Headquarters Marine Corps, Deputy Commandant for Aviation will:

(1) Serve as the primary conduit for all aviation-related JCIDS issues.

(2) Provide guidance to subordinate activities to prioritize and fund Capability Development Documents and participate in the NTSP process.

(3) Validate NTSPs for integrated Navy and Marine Corps training programs.

l. Commander, Navy Installations Command will:

(1) Participate in site surveys as described in enclosure (4) and maintain liaison with cognizant offices and commands throughout the engineering process.

(2) Review TITAs to ensure facility impacts have been addressed and that potential facility risks are adequately mitigated.

(3) Coordinate with other RS or SYSCOMs for the planning, programming and budgeting of MILCON and Special Projects as described in reference (n).

(4) Review and update the training requirements as necessary.

(5) Ensure the recording and maintenance of Real Property.

m. Commander, Naval Facilities Engineering Systems Command (NAVFAC) will:

(1) Represent the NAVFAC and Fleet Technical Support Providers on training and manpower requirements for Fleet Technical Assistance.

(2) Collaborate with the appropriate Program Manager (if required) to schedule NAVFAC Fleet Technical Support training.

(3) Provide consolidated feedback to appropriate program offices for Fleet Technical Support training conducted to help improve the training process.

(4) Review and update requirements for Fleet Technical Support training during NTSP development.

(5) Serve as a member of the MPT Advisory Board.

8. Action. OPNAV activities will ensure that NTSPs and training planning documents comply with requirements set forth within this instruction.

9. Definitions and Acronyms. See enclosure (6).

10. Records Management.

a. Records created as a result of this instruction, regardless of format or media, must be maintained and dispositioned per the records disposition schedules located on the DON Assistant for Administration, Directives and Records Management Division portal page at https://portal.secnav.navy.mil/orgs/DUSNM/DONAA/DRM/Records-and-Information-Management/Approved%20Record%20Schedules/Forms/AllItems.aspx.

b. For questions concerning the management of records related to this instruction or the records disposition schedules, please contact the local records manager or the OPNAV Records Management Program (DNS-16).

11. Review and Effective Date. Per OPNAVINST 5215.17A, OPNAV N13M will review this instruction annually around the anniversary of its issuance date to ensure applicability, currency and consistency with Federal, DoD, Secretary of the Navy and Navy policy and statutory authority using OPNAV 5215/40 Review of Instruction. This instruction will be in effect for 10 years, unless revised or cancelled in the interim and will be reissued by the 10-year anniversary date if it is still required, unless it meets one of the exceptions in OPNAVINST 5215.17A, paragraph 9. Otherwise, if the instruction is no longer required, it will be processed for

cancellation as soon as the need for cancellation is known following the guidance in OPNAV Manual 5215.1 of May 2016.

JOHN B. NOWELL, JR
Deputy Chief of Naval Operations
(Manpower, Personnel, Training and Education)

Releasability and distribution:

This instruction is cleared for public release and is available electronically only via DON Issuances Web site, https://www.secnav.navy.mil/doni/default.aspx.

MANPOWER AND TRAINING REQUIREMENTS PLANNING

1. Introduction. MTRP communicates the "who," "what," "where," "when," and "how" strategy needed to develop and integrate sustainment requirements into system design, development, testing, fielding and operations and support. In support of this effort, this enclosure guides the production and sustainment of the MTRP to meet the user's operational needs, lifecycle, performance support and the estimation of total ownership costs. The focus is to maintain the readiness of a system and describe the role the human plays to make the system mission capable. Enclosure (1) supports RS planning and programming of requirements and resources necessary to deliver effective integrated logistics products supporting integrated weapons and warfare system readiness. The MTRP process is only applicable to Urgent Capability Acquisition programs when the program enters the P&D phase (reference b). The MTRP is task-based to ensure production and sustainment meet the user's operational needs, lifecycle, performance support and the estimation of total ownership costs.

a. Although a significant amount of data types is common between E/S/S, there are distinct differences in detail and scope. Additionally, there is a significant amount of E/S/S Government Furnished Information required to track, monitor and ensure deliveries to support alignment with requirements. The Baseline Comparison System (BCS) establishes the foundational starting point for follow-on MPT requirements analysis, development and assessment efforts. The BCS also ensures that MPT stakeholders use the same set of baseline data when subsequently considering and evaluating new, modified or updated system(s) training requirements and alternatives. See Appendix (A) for BCS Analysis procedures.

b. During the Materiel Solution Analysis (MSA) phase, a BCS Analysis specifies assessment of mission effectiveness, operational suitability and estimated lifecycle costs of alternative solutions based on system design specifications. During these engagements with stakeholders, logistics supportability, configuration management, materiel options and limitations of future training for Abbreviated Acquisition Programs and Rapid Acquisition Program will be assessed to establish any triggers for execution.

c. Each PM should tailor their process to ensure that training is included in the development of the intellectual property strategy. Stakeholders will participate in preliminary design reviews to advocate for requirements before completing a Cost Analysis Requirements Description (CARD), Program Lifecycle Cost Estimate (PLCCE) and an approved Lifecycle Sustainment Plan.

d. This enclosure consists of three sections: Section I MPT Advisory Board, Section II FEA and Section III Rating Continuum. The processes may be tailored to meet KPP or Key System Attribute (KSA) items identified in reference.

e. The RSs will use the inputs and MTRP process steps to validate the MPT requirements shown in Exhibit 1.

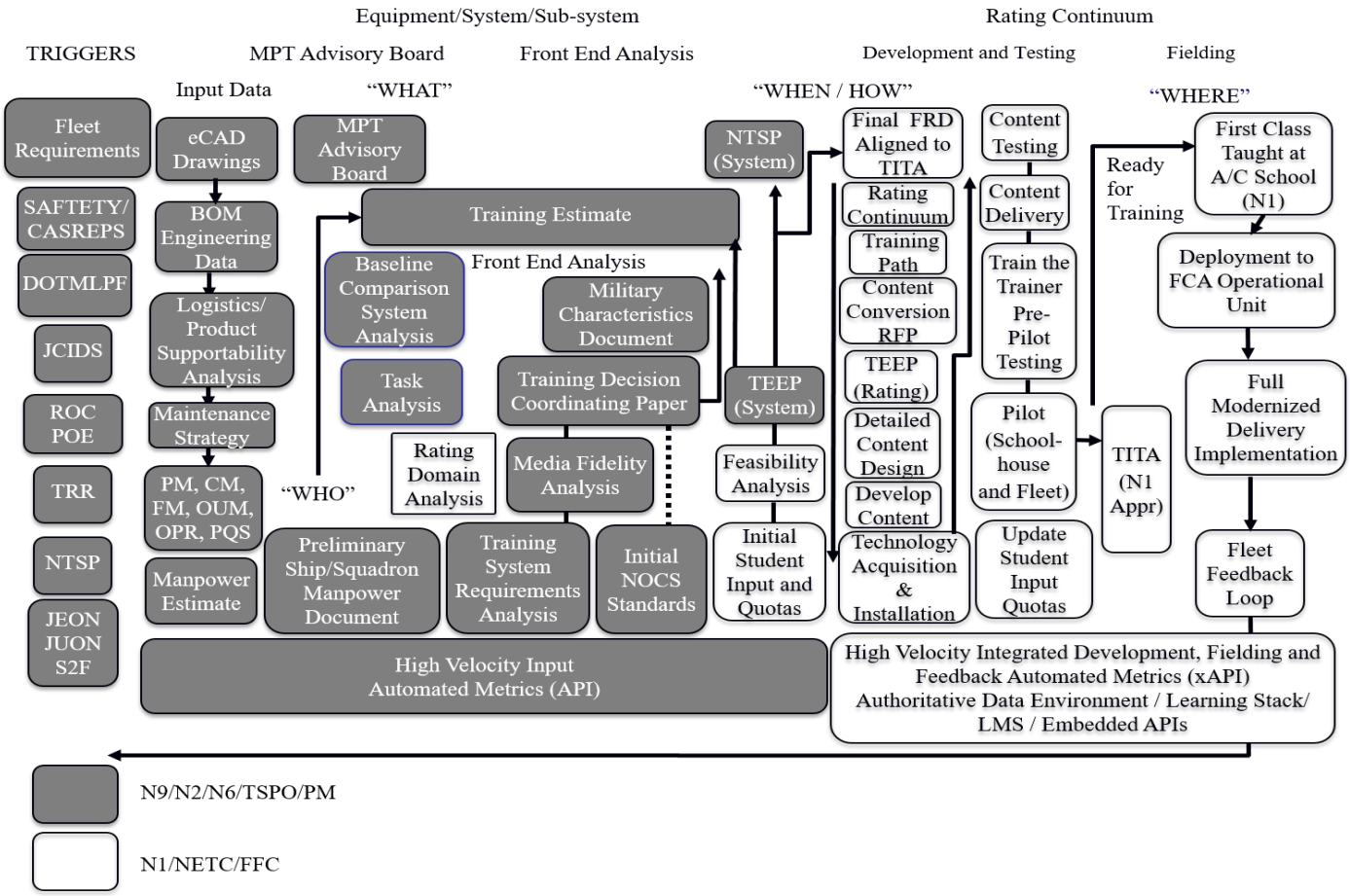


Exhibit 2. Manpower and Training Requirements Planning Process

Note 1: Before completing this enclosure, specific to technical training for engineered systems, Logistics Supportability Analysis (LSA) and Product Supportability Analysis (PSA) data (i.e., physical system design, maintenance significant items and maintenance task analysis) developed during the Engineering and Manufacturing Development (EMD) phase will be used to identify the tasks that need to be trained or require performance support (or both). A similar process for identifying tasks associated with operating tactical systems defined in MIL-STD-46855A (reference (r), Human Engineering Requirements for Military System, Equipment and Facilities) will identify authoritative operator tasks. Whether for tactical operations or in support of maintenance, LSA and PSA data provides input to the MTRP process by describing the work, as well as the conditions and standards to enable readiness. These same tasks determine the requisite knowledge, skills and abilities (KSA) to perform the task and align Occupational Standards (OCCSTD) and career continuums for each rating. As an output, the Rating Continuum will be developed, managed and sustained by CNO N1, in coordination with USFF, PACFLT and TYCOMs.

Note 2: Provided a program enters the acquisition process at a point where approved LSA and PSA is supported by technical data or mature product technical data exists, the PMs may proceed directly to Section II (FEA) and complete any applicable portions of the BCA's planning for those data elements not previously addressed in the FEA.

2. Section I. MPT Advisory Board.

a. Function. The MPT Advisory Board ensures effective communications are in place between the respective PMs, OPNAV, the MPT community and the fleet.

b. Establishment. The MPT Advisory Board is required early in the program, preferably after approval of the system design specifications. Once established, the board will continue throughout the E/S/S lifecycle program of record.

c. Membership. The RS chairs the MPT Advisory Board. Participating organizations will designate representatives who are knowledgeable of their organizations' involvement in acquisition programs and empowered to make decisions on behalf of their organization. Membership of the MPT Advisory Board will include, but not be limited to, representation from:

(1) RS.

(2) PM.

(3) OPNAV N13M5.

(4) SYSCOMs and TSPO.

(5) USFF including PACFLT and TYCOM.

(6) NETC and Learning Center(s).

(7) NAVFAC and Commander Navy Installations Command, Joint and other Service Representatives, as required.

d. Minimum requirements. MPT Advisory Boards provide a stakeholder participation forum to facilitate the MTRP validation to consist of:

(1) FEA.

(2) Rating Continuum.

(3) TE.

(4) Navy Training Systems Plan (NTSP).

e. Other considerations. The RS may convene additional MPT Advisory Boards when necessary.

3. Section II. FEA.

a. Introduction. The FEA is a multi-phased, sequenced process to identify the proposed training system solution(s) and manpower required to operate and maintain E/S/S. The FEA process considers all interventions to improve the system and human performance to satisfy the training requirements.

b. Purpose. The FEA process provides a comprehensive analysis of the manpower, personnel, training, acquisition, development and sustainment requirements for new or modified E/S/S. FEA enables stakeholders to project new or revised E/S/S training and manpower requirements throughout the lifecycle of the E/S/S.

c. Process. The FEA process includes sequential analyses. The Baseline Comparison System Analysis, Task Analysis, RDA and Training System Requirements Analysis (TSRA) determines the "what, when and how" to deliver training. A Media Fidelity Analysis (MFA) identifies the media and capability required to provide the training. The Training Decision Coordinating Paper (TDCP) and Military Characteristics Document determines the Technical Training Equipment (TTE) and projected military environment for the training. The results of the RDA inform the Program Office, NETC and TYCOM training plans and delivery in alignment with RFT and follow-on performance in the fleet.

d. Procedure. Complete the actions in subparagraphs 4d(1) through 4d(7) to determine if a new or modified task is required with the introduction of new or modified warfare system acquisition. Procedures may vary by SYSCOM.

(1) BCS Analysis.

(a) The BCS Analysis establishes the foundational starting point for follow-on MPT requirements analysis, development and assessment efforts. The analysis will also ensure that MPT Stakeholders use the same set of baseline data when subsequently considering and evaluating new, modified or updated system(s) training requirements and alternatives. The BCS Analysis defines a quantitative baseline from which training and manpower projections for the new or modified warfare system and provide a starting point for any subsequent study or analysis. The BCS Analysis is thereby a method for estimating and projecting manpower and training impacts and resource requirements early on in a warfare system's acquisition lifecycle with the goal of establishing estimated requirements, training devices, equipment and facility installation requirements and integrated product data for initial acquisition or modernized warfare systems. Additionally, the BCS Analysis provides a task analysis of an existing system

for use in the examination of alternative technologies and engineering solutions. The application of this process ensures the integration of MPT into the design effort of the warfare system to improve system performance and reduce lifecycle costs. The deliverable is the BCS Analysis (See Appendix (A) for a detailed procedure to conduct the BCS Analysis).

(b) The PM selects or develops the new or modified warfare system and identifies the BCS to generate the training requirements and cost estimates. The TE will reflect this data after alignment with the Analysis of Alternatives results and Lifecycle Sustainment Plan. The data informs the CARD (when available) and consists of a short descriptive paragraph(s) of the early known O&M functional characteristics. The PM identifies the "as is" training and cost.

(c) BCS Analysis is based on an operational warfare system or a composite derived from multiple operational warfare systems. In selecting a BCS, the goal is to choose the system(s) that most closely represent the design, operational and support characteristics of the warfare system(s) under development. Initially and as a minimum, the estimate for new MPT requirements should be based on the BCS Analysis when no other integrated engineering product data, engineering changes or manpower documentation is available for projecting out-year requirements.

1. The PM can tailor the BCS Analysis to identify training requirements in two categories:

a. Equipment driven (e.g., Maintenance personnel, equipment operators and underway and in port watch stations, etc.).

b. Non-equipment driven (e.g., Supervisors, division and department heads, damage control personnel and administrative personnel, etc.).

2. The TE will reflect the BCS Analysis results, as identified in Appendix A of this enclosure.

3. The deliverable is the BCS Analysis (See Appendix (A) for a detailed procedure to conduct the BCS Analysis).

(2) Task Analysis.

(a) The PM will complete a Task Analysis to document the tasks required to operate (watchstation requirements) and maintain the new E/S/S. The maintenance will include Organizational (O) level, Intermediate (I) level and Depot (D) level maintenance tasks (including planned maintenance, corrective maintenance and troubleshooting). Furthermore, cybersecurity-cyber hygiene maintenance tasks must be identified for all shipboard and maritime operations center network systems and hosted applications, including non-network systems with information assurance vulnerability concerns.

(b) The Task Analysis includes tasks, conditions, performance standards, task attributes, task references and sources, task criterion and required tools.

(c) The results of the Task Analysis inform the subsequent development of the TSRA, TDCP and MCD.

(d) The PM will submit the Task Analysis to OPNAV N13 and USFF to evaluate the impacts to the applicable Rating Continuum(s), OCCSTDs, Navy Enlisted Classifications (NEC), credentialing, development costs and analytics for future POM submission. Phases may occur in coordination with the PM or the program office.

(e) The PM validates the task's data during the task analysis requirements definition and design of an engineered system in coordination with the TYCOM.

(f) The MPT Advisory Board will endorse to the TA prior to RS approval of the Task Analysis.

(g) Existing operation and maintenance (O&M) requirements inform out-year MPT estimates for the new or modified warfare system. Upon approval of system engineering technical data, all MPT estimates for the new or modified warfare system provide a basis for planning and programming. These estimates should continue to be refined before submitting a required FEA deliverable for RS approval and inclusion in the TE or NTSP.

(3) RDA.

(a) After completion of the MTRP process and an approved TSRA document is provided, CNO N1 will fund the planning and execution of an RDA (see Exhibit 1) with NETC and the TYCOM to determine "when," and "where" new or revised training (or both) will be integrated into a Rating Continuum(s). The results of an RDA will be used to update the Task Analysis or TSRA (or both).

(b) The RDA is an assessment of the professional, technical (e.g., learning and performance tasks or needs) and leadership outcomes represented in a gap analysis or defined in a FRD for a rating at a specific time in the sailor's career.

(c) The RDA identifies and sequences the new or revised performance tasks a Sailor is expected to perform based on TYCOM recommendations for a given Rating Continuum. A gap analysis is performed between the "As is" and "To be" task analysis, learning (objectives) and performance tasks. The output of an RDA is a Rating Continuum (see enclosure 5). RDAs will include:

1. Crosswalk of the critical and non-critical tasks from the task analysis to ensure alignment with the Navy Task Classification (NTC). Explanation of the training gaps (learning

or fleet performance) and recommendations for revised OCCSTD data as necessary. Work elements are depicted based on when a Sailor is expected to perform the task. Deliverable: RDA.

2. Link the new or revised learning objective (or both) from the approved TA, RDA and TSRA to the performance tasks in the NTC and assign them in the Rating Continuum(s) when appropriate. TYCOM and NETC will coordinate with assigned shipboard observers from the Afloat Training Group (ATG) to select and conduct skill/evolution performance checks to determine if the right work elements were used during instruction. TYCOMs will develop a short (five question) survey for use during the READ-E to capture feedback and skill decay analysis.

3. Changes derived from a RDA impacting a Rating Continuum(s) may revise PQS, Rate Training Manuals, NECs, credentials, achievement standards and training requirements.

4. Deliverable: E/S/S-specific information used to inform both the FEA or training requirements review process (or both).

(4) Training System Requirements Analysis (TSRA).

(a) The TSRA is a sequenced process to identify and recommend appropriate training strategies for any new or modified training requirement(s).

(b) The TSRA fully defines training requirements (e.g., learning objectives, throughput and facilities), identifies training development and implementation risks and provides the rationale for developing training devices.

(c) The TSRA captures “what” is to be trained "As Is," "To Be," and training "Gap" analysis to evaluate if new or modified training requirement(s) are needed and to expand the appropriate training strategy (“how,” “when,” “where,” what,” and “who”) for any new training requirement(s) identified. The approved Task Analysis will be included (either in full or by reference as an appendix) within the TSRA.

1. For each E/S/S equipment training requirement, determine at which level (apprentice, journeyman or supervisor) the training should be. Deliverable: TSRA.

2. For each E/S/S billet, determine the formal training courses annual student throughput, TTE, training device and test equipment. For enlisted personnel, class “A” school will be used unless the appropriate place for the required training is different. For officers, training related to the commissioning source will be used unless it is in another place. Training to obtain a designator or qualification will be determined. For officers and enlisted operators,

estimated course titles, length, source ratings, NECs or Navy Officer Billet Classification (NOBC) awarded (if applicable), prerequisites and logical course locations. Deliverable: TSRA.

(d) Deliverable: TSRA. Exhibit 3 is an example of a TSRA format (this can be tailored as necessary, it is only an example):

Cover Page Table of Contents Executive Summary - Provide a high-level summary of the analysis conducted with a conclusion, recommendations and cost estimate, if required.
I. Introduction. a. Objective – Identify the purpose of the Training System Requirements Analysis (TSRA). b. Background and Evolution of Requirements – Provide information on who directed the E/S/S analysis performed and why it is needed. c. System Description – Briefly identify the purpose of the E/S/S when delivered to the fleet and its mission role. Briefly describe the E/S/S highlighting any unique capabilities, high-level operational and maintenance concepts and embedded training capabilities for both shore-based and onboard training (if applicable). d. Assumptions – Identify any assumptions or restrictions used in performing this task.
II. Training Analysis. a. Personnel Requiring Training – Identify who receives the current training by rating, NEC or designator (or all); and identify their role as it relates to the E/S/S (e.g., operator, mechanical maintenance, electrical maintenance, watchstanders, supervisor, etc.). b. Existing Rating Continuum – Describe where the current training appears in the rating training continuum of the personnel requiring training. c. Existing Training – Describe the current "As Is" training being provided to support the E/S/S where existing equipment is being modified or where new equipment replaces an existing one. Briefly describe any existing courses, including CINs, course titles, instructional

methodology, associated training device(s), where applicable and any other relevant information (e.g., course locations, number of convening's, course utilization, etc.).

d. Qualification and Certification Standards – If applicable, identify any qualification (e.g., PQS) or certification standards that use or are affected by the E/S/S.

III. Methodology.

a. Data Collection – Describe the process(es) (e.g., interviews, document review, course observations, etc.) and source(s) (e.g., individuals names and organizations; document numbers, titles and dates; CIN, the course title, location and date; etc.) for the data gathered (e.g., database search, technical documentation review, interviews, workshops, etc.) and analyzed (e.g., training task analysis, learning analysis, assessment strategy selection, instructional strategy selection, method and media analysis, rating domain analysis, etc.) to complete the analysis. (i.e., who was interviewed, interviewee's organization and contact information, etc.).

b. Data Analysis – Describe the analyses that were conducted and how any analytics were applied (e.g., algorithms, calculations, etc.).

c. Training Situation Analysis – Identify the current "As Is" training being provided to support the E/S/S where the new equipment replaces an existing one. List any existing CIN, where applicable.

d. Personnel Requiring Training – Identify who receives this training by rating, NEC or designator (or both).

e. Proposed "To Be" Training – Identify what modified or new training is needed and which CIN learning objectives should be revised, as appropriate.

IV. New Training Requirements.

a. Training Requirements Source – Identify the source of the training requirements (i.e., TYCOM requirements or Task Analysis, TE, etc.).

b. Training Objectives – Identify the knowledge, skills and proficiency required to support the E/S/S.

c. Training Media – Identify the media required to convey the training objectives, including any baseline capabilities for training equipment or devices.

d. Training "Gap" Analysis Summary – Summarize the “gap” between current training and any new training requirements. e. Training Requirements – Summarize the training requirements, including “what” modified or new training is needed, “who” requires the training, “where” the training is needed and “when” the training is required. Identify any changes to the Rating Continuum.
V. Recommendations and Conclusions. Identify recommendations and provide supporting rationale, including instructional strategies, assessment strategies and potential costs associated with each recommendation. If the recommendation includes a training device or complex instructional media (i.e., virtual environment), cost estimates may be deferred to the development of the TDCP.
Appendix A - Points of Contact – List personnel who were involved in conducting this analysis (stakeholders, instructors, fleet personnel, etc.) their organization, their functional role for the TSRA (e.g., RS, MPT Advisory Board member, Subject Matter Expert (SME)) and contact information.
Appendix B - List of Acronyms
Appendix C - References (List applicable references, as required)

Exhibit 3: Sample TSRA

Note: RDA determines “when” work occurs. The TDCP outlines “how and where” training fielding happens. The outputs of the TSRA and Enclosure 5 help to identify Rating continuums, including “when, how and where” training delivery occurs. Rating Domain Analysis includes OCCSTDs, achievement standards, credentialing and career continuums along with analytics for assessment of training. The learning objectives (aligned to OCCSTDs) from the TSRA are inputs to the RDA process. The RDA process maps the learning objectives to the Rating Continuum. See the RDA portion of this enclosure for more details on the RDA process.

(e) The PM will submit the TSRA to OPNAV N13 and USFF to evaluate the impacts on the applicable Rating Continuum(s), OCCSTDs, NECs, credentialing, development costs and analytics for future POM submission.

(f) The RS will approve the TSRA for systems requirements. The PM in coordination with the MPT Advisory Board and the RS will determine when to proceed to the next phase of the requirements process, as predicated on the outcome of the approved TSRA and any new training requirement(s) identified. Identify new E/S/S training requirements.

1. For each E/S/S non-equipment billet course, identify training type, environment, media and training path.

2. For each E/S/S provide a list of all required in-service training.

(5) Media Fidelity Analysis.

(a) The Media Fidelity Analysis (MFA) provides the PM with effective methods and modalities for teaching each training task. The MFA will be based on the findings of the RDA and produce the most effective delivery methodology and modality for each learning objective based on the science of learning and cost constraints.

(b) The MFA can be completed as part of the TSRA if all of the tasks, criticality, and difficulty and performance criteria are available.

(6) TDCP.

(a) The TDCP is a technical assessment of potential training systems recommended as a result of the Media Fidelity Analysis and TSRA. The TDCP includes a complete description of the alternatives (including costing data for development, implementation and sustainment) and a recommended solution with supporting rationale.

(b) The TDCP provides the PM a technical assessment of potential training system solution(s) based on the required operational capability and environment using the results of the TSRA, media selection process and an analysis of training alternatives. The MPT Advisory Board will validate or endorse the TDCP before RS approval.

(c) The TDCP maps the learning objectives, instructional strategies and methods identified in the TSRA to a set of media alternatives to be prioritized in the Media Fidelity Analysis process. Each of these alternatives needs to be a 100 percent solution and justified in terms of instructional effectiveness, cost and risk (e.g., TEEP). This process can be combined.

Note: The TDCP reflects the approved analysis in the Task Analysis and TSRA.

(d) Deliverable: TDCP. Exhibit 4 is an example of a TDCP format:

Cover Page Table of Contents Executive Summary – Provide a high-level summary of the analysis conducted with a conclusion, recommendations and cost estimate, if tasked to provide.
I. Background.

a. General – Purpose of the E/S/S.

b. Tasking – Provide information on who directed the development of this document and why it is needed.

II. Task Analysis and Training Systems Requirements Analysis (TSRA).

a. Operational Requirements – Briefly identify the purpose of the E/S/S in the fleet. Identify the E/S/S being replaced or modified.

b. Proposed Training – The identification of what modified or new training is needed and the enlisted ratings, NEC's or officer designators involved.

c. Training Requirements – Identify the new or modified operator and maintenance skills required to support the E/S/S.

d. Training Objectives – Identify the learning objectives for the training.

e. Functional Requirements of Training System – Identify what the training device or media capability (or both) must do to convey all training objectives.

III. Training Equipment, Devices and Design Alternatives. Provide at least three alternatives with associated costs.

IV. Conclusion. Provide conclusions about each alternative.

V. Recommendations. Provide the recommended alternative with supporting rationale.

Appendix A – Provide a summary of the options in a table format similar to what follows.

Option	Description	Cost	Advantage or Disadvantage	Remarks

Exhibit 4: Sample TDCP

(e) Upon TDCP review and approval, the PM will update the TITA to support the RFT date including facility modification, trainer design, procurement and delivery, as required.

(7) Military Characteristics Document.

(a) The Military Characteristics Documents (MCDs) discuss how the training device integrates with the training system to fulfill the training requirements outlined in the TSRA and TDCP. The MCD provides a functional description of the training device within the respective program's training plan (e.g., TE or NTSP). The MCD describe how to develop the training device. The development phase must consider known constraints on cost, production, supportability and maintainability.

(b) The MCD describes the training device's physical, functional and operational characteristics needed to improve human performance to achieve system readiness.

(c) The initial MCD provides a conceptual description of the training device in terms of the functions and tasks it will support, with additional technical details provided later as the concept is refined and physical characteristics and functional descriptions are defined. The MCD ultimately describes the physical and functional baseline characteristics a TTE or TD must have to fulfill its requirements as one component of an instructional system. The MCD must also include the results from a task analysis that identifies requirements to operate and maintain the new or modified warfare system. Exhibit 5 is an example of an MCD format.

Cover Page Table of Contents Executive Summary - Provide a high-level summary of the analysis conducted with a conclusion, recommendations and cost estimate, if tasked to provide.
I. Requirement. This section identifies the training need for which this document is being prepared. It includes a description of the operational or tactical E/S/S that forms the basis of the training requirement and discusses the purpose and functional use of the operational E/S/S.
II. Training Analysis. Assumptions, methodology, training goals and TTE or TD operation and projected utilization.
III. Training Technical Training Equipment or Device Description. This section describes the functional characteristics of the proposed training device to enable visualization of its physical configuration and capability to achieve the learning objectives.

IV. Training Technical Training Equipment or Device Support. This section provides the concepts, goals and constraints that will control the development of the Life-cycle Sustainment Plan for the training device and stored in model-based product support.
V. Training Technical Training Equipment or Device Test and Evaluation. This section identifies the tests and evaluations.
VI. Training Technical Training Equipment or Device Updates. This section recognizes a requirement for a preplanned product improvement program and future considerations.

Exhibit 5: Sample MCD

(d) Product: MCD. Detailed instructions for the preparation of each part of the military characteristics are contained in Exhibit 5:

(e) After the distribution of the draft MCD to the MPT Advisory Board, the PM will adjudicate any comments and produce a proposed final MCD. The RS will approve the MCD for subsequent development of the training solution and update of all related program documentation, e.g., NTSP, TITA, etc. Refer to OPNAV Instruction 4790.16B (reference (q)) for more clarifying information for MCDs if needed.

4. BCS Analysis.

a. The BCS analysis procedure is divided into six steps (last two are informational) with platform-specific E/S/S completion requirements in subparagraphs 1a(1) through 1a(4):

(1) For E/S/S, complete steps 2.a, b and e.

(2) For complex E/S/S entering the weapon system acquisition process pre-Milestone A, also perform 2.f.

(3) For ship platforms, complete steps 2.a, b, d, e and f.

(4) For aircraft platforms, complete steps 2.a, b, c, e and f.

Note: An analyst knowledgeable and adept in the MPT disciplines should perform each step.

b. When the BCS is not the operational platform or E/S/S being replaced, then a hybrid baseline system is used. The hybrid baseline is a composite, of equipment, systems or subsystems from several different end items which, when taken together, closely resemble the

new equipment, system or subsystem. The MPT Advisory Board concurrence with the hybrid baseline system is required.

c. All BCS analysis data can be tailored for projected requirements based on known data associated with the new platform and E/S/S, noting where there are differences to help defend or modify the projections as necessary.

d. The MPT requirements for a total platform can be divided into two categories, equipment driven and non-equipment driven. Maintenance personnel, equipment operators and underway and in port watch stations are examples of equipment driven manpower. Supervisors, division and department heads, damage control personnel and administrative personnel are examples of non-equipment driven manpower.

(1) In determining the total platform MPT requirements, the analyst should first identify Joint and Joint service requirements and then select a comparable existing platform. Once this is completed, the ship's department (ship application) or aircraft squadron's department and work center (aircraft applications) composition must be determined.

(2) The non-equipment driven manpower requirements for a platform are based on performance tasks. The workload associated with completing the performance tasks is identified. Navy Manpower Analysis Center (NAVMAC) will incorporate associated workload into the Navy Manpower Requirements System Model to determine billet requirements to support the workload.

(3) See Exhibit 6 for a reference chart for the procedures in the next section.

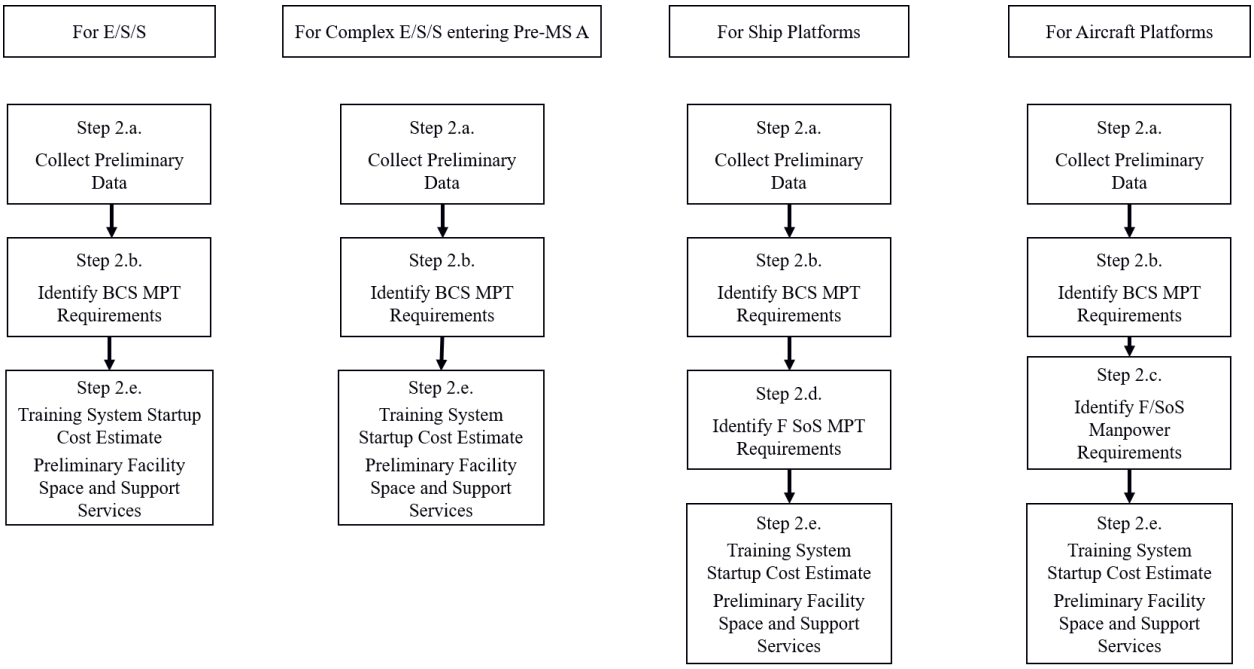


Exhibit 6. BCS Analysis Flow Chart

5. BCS Procedure.

a. Collect preliminary data for the corresponding Part, Section and Element of the NTSP format (enclosure (2)) for the new weapon system. Refer to enclosure (2) for more definition of the respective data elements and potential sources.

(1) Points of contact. Output: List of principals, stakeholders, PM, TSPO key personnel, their activity, code and office contact information, including program-specific contacts and MPT Advisory Board members.

(2) New or modified program documentation. Output: Unclassified narrative summary of the operational uses of the new weapon system, its functional description, known operational and maintenance concepts.

(3) Components and configurations. Output: List of the components and configurations of the new or modernized weapon system, its mission, performance goals, constraints and interfaces.

(4) Replacement(s). Output: List each platform or E/S/S (or both) replaced by the new or modified weapon system.

b. Identify BCS's manpower and training requirements.

(1) Collect BCS's manpower data.

(a) Consistent with skill identifiers utilized in Total Force Structure Management System (TFSMS) and Total Force Manpower Management System (TFMMS) (e.g., quality), identify and record the type of current manpower resources required for the operation, maintenance and support of the Baseline Comparison System. The Ship or Squadron Manpower Document (SMD or SQMD) and activity manpower document for shore establishments are an excellent source for this information. Ensure the SMD or SQMD activity manpower document used as the source reflects current manpower requirements. Any changes to the manpower requirements should be submitted to NAVMAC per ref (o). The current manpower requirements are organized by manpower type under their associated department (ship applications) or department and work center (aircraft applications). Manpower type should be identified by using the descriptors:

1. Operator.

2. Organizational maintainer.

3. Intermediate level maintainer.

4. Depot level maintainer.

5. Watchstation - Readiness Conditions I to V.

6. Other manpower (e.g., OPTEVFOR staff, NETC instructor staff).

7. Supervisor.

(b) At shore activities, the BCS may be manned by multi-shifts (e.g., shift 1, shift 2 or shift 3). For airborne operators indicate the operator title and the number of operators per aircraft. The current manpower quality and quantity should be organized by manpower type and categorized as:

1. Officer (rank, designator, NOBC code or United States Marine Corps (USMC) equivalent).

2. Enlisted (rating, pay grade (GD), NEC(s) or USMC MOS).

3. Civil Service (type, grade, series).

4. Contractor (enter type as CTR, the salary range in thousands).

5. Output: List of the various manpower types by department or department and work center, including quality and quantity of the current manpower requirements.

(c) Manpower quality refers to the skill and experience level of personnel. Describe any special mission requirements or constraints (e.g., directed manning, two-person rule, etc.) that affect the determination of operator manning.

(d) Output: List of total manpower minus instructors.

(2) Identify BCS's operator tasks.

(a) Identify and record the operator titles associated with each operator type of manpower. Identify the frequency of involvement with the BCS for each operator. The frequency of involvement is the number of man-hours during peak usage conditions that the operator is involved in interacting with the BCS. If the BCS does not require a dedicated watchstation, describe other manning scenarios under which the equipment is operated. For example, electrical watchstanders powering-on or powering-off equipment; communications center watchstanders periodically changing frequency; bridge personnel operating the equipment as necessary; or roving patrols checking and adjusting equipment. Output: The production of a list that aligns operator titles with operator manpower types.

(b) Identify and record the specific performance tasks each operator of the BCS must perform and the component on which it is performed. The BCS components will be identified by work unit code (aircraft application), equipment identification code (shipboard applications) or other as specified by SYSCOM. Operator tasks are normally specified at a lower level of detail than maintenance tasks (e.g., identify aircraft, maintain aircraft tracks, enter periodic frequency change, start the engine, shift fuel pumps, etc.). Identify and record the minimum operator's skill set necessary to perform each task or group of tasks. The operator task skill set requirements are best obtained from or at least verified by an existing operator. At a minimum, indicate rate and rating for enlisted requirements and rank and designator for officer operators. If applicable, then document the NEC for enlisted requirements, NOBC for officers and series for civil service. Also, indicate any special skill requirements not identified by NEC, NOBC or MOS. Output: A list documenting the performance tasks by operator title and performance conditions.

(3) Identify BCS's maintainer tasks.

(a) Identify and record the maintainer titles associated with each maintainer type of manpower (e.g., electrical, mechanical, etc.). Output: Develop a maintainer titles list that aligns with the maintainer manpower types.

(b) Identify and record the specific organizational level corrective maintenance tasks performed by each maintainer on the BCS. Identify the components of the BCS by work unit

code (aviation applications) or equipment identification code (shipboard applications). The tasks should be grouped and recorded by work unit code for aviation applications and equipment identification code for shipboard applications. The tasks should be of a high level and correspond to the coding system of the maintenance data collection system used to record maintenance actions on the BCS. In the aviation community, the action taken codes used on OPNAV 4790/60 maintenance action forms and Naval Aviation Logistics Command Management Information System (NALCOMIS) will be used as tasks. In the surface and undersea communities, the action taken codes used on OPNAV 4790/2K Ship's Maintenance Action Forms will suffice. In this manner, historical data can be extracted to determine the amount of time expended on these tasks or project corrective maintenance based on preventative maintenance data. Output: The total number of hours spent on performing organizational level corrective maintenance tasks on the BCS.

(c) Identify and record, by work unit code or equipment identification code, the specific organizational level planned maintenance tasks associated with the BCS. These tasks should be of a high level, identified as planned maintenance tasks and correspond to the coding system of the maintenance data collection system used to record maintenance actions on the BCS or its component under analysis. The Maintenance Requirement Card (MRC) and Maintenance Index Page (MIP) are a good source of planned maintenance tasks. Equipment guide lists or some other method used for documenting the total equipment quantities can be used for determining the total planned maintenance workload hours. Output: List of hours for the organizational level planned maintenance tasks performed.

(d) Collect and record the historical organizational level corrective and planned maintenance hours for each work unit code or equipment identification code of the BCS. In most cases, a considerable number of ships or aircraft use the BCS being investigated. Since most equipment receives more frequent usage when at sea or on deployment, corrective and planned maintenance data collected from ships or aircraft squadrons should be for these times to ensure it reflects peak usage conditions. For aviation applications, total flight hours for the period of the historical data must also be determined. The hours expended on corrective maintenance and some planned maintenance should be expressed as man-hours per week for shipboard applications and maintenance man-hours per flight hour for aviation applications. Other kinds of planned maintenance actions may be more appropriately expressed in terms of man-hours per day, man-hours per sortie or other metrics. Those components of the BCS with the highest amount of maintenance hours should be flagged as high maintenance drivers. The Decision Knowledge Programming for Logistics Analysis and Technical Evaluation is the authoritative source for aviation data. NAVSEA is a suggested source for maintenance data trend analysis and verification of organizational maintenance. Output: List of the historical corrective and planned maintenance hours associated with each organizational level task performed.

(e) Identify and record the specific intermediate level corrective maintenance tasks performed by each maintainer of the BCS. Identify the components of the BCS by work unit

code (aviation applications) or equipment identification code (shipboard applications) using the appropriate maintenance data collection system. The tasks should be grouped and recorded by work unit code for aviation applications and equipment identification code for shipboard applications. Output: List of the intermediate level task man-hours per week performed on the intermediated level repairable components.

(f) Output: List of the depot level corrective maintenance workload by work unit code or equipment identification code.

(4) Identify BCS's operator training requirements.

(a) Output: List of the training courses required for each different operator by new or modified course title, course length, source rating, NEC or MOS awarded and course location.

(b) Output: Characteristics of each operator course, e.g., the training type, presentation environment, technique, media and training path.

(c) Output: Current annual student throughput and TD requirements, including facility footprint, hotel services and costs for each operator course.

(d) Output: List of the in-service training required by each operator.

Note: PQS, onboard training, on-the-job training handbooks and training system utilization handbooks are examples of in-service training.

(5) Identify BCS's maintainer training requirements.

(a) Output: List of the training courses required for each different maintainer by new or modified course title, length, source ratings, NEC and MOS awarded and course location.

(b) Output: Characteristics of each maintainer course, e.g., the training type, presentation environment, technique, media and training path.

(c) Output: Current annual throughput and training equipment and device requirements, including facility footprint, hotel services and costs for each maintainer course.

(d) Output: List of the in-service training required by each maintainer.

c. For aircraft programs, identify family or system of systems manpower and training requirements.

(1) Identify family or system of systems manpower requirements.

(a) Examine the predecessor and various Navy comparable squadrons that closely match the mission and operational scenario of the new squadron and select the type of squadron (e.g., patrol, etc.) that most closely matches. The chosen squadron will be the basis against which the new squadron will be compared to estimate the new squadron's baseline manpower data. Using comparability analysis, identify the baseline data required to determine the non-equipment and aircrew manpower requirements for the aircraft squadron. Non-equipment and aircrew manpower requirements are determined by various formulas, algorithms and matrices developed by NAVMAC or an individual or activity qualified in this discipline. Once the baseline data for these formulas, algorithms and matrices are identified, the equipment related, non-equipment related and aircrew manpower requirements should be developed by Naval Air Systems Command (NAVAIR), NAVMAC or an individual or activity qualified in this discipline. Output: List of baseline data for manpower formulas, algorithms, matrices, etc. The baseline data for the manpower formulas, algorithms and matrices consist of:

1. Number of aircraft in the squadron.

2. Monthly utilization rate.

3. Length of flying day.

4. Length of a maintenance day.

5. Average sortie length.

6. Workweek.

7. Number of shifts.

8. Seat factor.

9. Crew ratio.

10. Equipment workload by work center.

(b) Develop, with the assistance of NAVMAC or an individual or activity qualified in this discipline, an SQMD for the aircraft squadron as it will ultimately be. Ensure the SQMD contains the equipment-related manpower requirements as well as the non-equipment and aircrew requirements. Product: Preliminary Squadron Manpower Document (PSQMD) per reference (s).

(c) Output: Aircraft and squadron phase-in schedule.

(2) Identify predecessor aircraft non-equipment and aircrew training requirements.

(a) For each different non-equipment (e.g., plane captain, safety personnel, etc.) or aircrew (pilot, naval flight officer, etc.) billet title of the predecessor squadron, determine all the formal follow-on training courses that are required. Class "A" school for enlisted personnel school will be assumed unless it is the only training received. For officers, training related to the commissioning source will be assumed unless it is the only training received. Training received to obtain a designator or qualification will be identified. Determine new or modified course titles, course lengths, source ratings, source designators (officers), NECs, MOSs or NOBCs awarded (if applicable), prerequisites and course locations with Unit Identification Codes (UIC). Output: List of the follow-on training courses associated with the aircraft.

(b) Output: A list that identifies the presentation environment, technique and media and training path(s) associated with the follow-on training courses of the aircraft.

(c) Output: List of the follow-on courses, annual student throughput, TTE, training devices and test equipment, including facility footprint, hotel services and costs associated with the aircraft.

(d) Output: List of aircraft in-service training.

(3) Identify a new family or system of systems training requirements.

(a) For each different non-equipment or aircrew billet title requiring training, estimate the initial training requirements. Output: List of the initial training requirements for the family or system of systems.

(b) For each different non-equipment or aircrew billet title, determine all the formal follow-on training courses that will be required. For enlisted personnel, class "A" school will be assumed unless the appropriate place for the required training is the class "A" school. For officers, training related to the commissioning source should be assumed unless it is the appropriate place for the required training. Training to obtain a designator or qualification should be determined. For officers and enlisted operators, new or modified course titles, course lengths, source ratings, NECs, MOS or NOBC awarded (if applicable), prerequisites and logical course locations (with UICs). Output: List of the new or modified follow-on training courses associated with the family/system of systems.

(c) Output: A list identifying the presentation environment, technique and media and training path(s) associated with the follow-on training courses for the family or system of systems.

(d) Output: A list identifying the follow-on courses annual student throughput, TTE, TD and test equipment, including facility footprint, hotel services and costs associated with the family or system of systems.

(e) Output: A list identifying the family or system of systems for in-service training.

(f) Identify any alternative concepts or strategies that, with equipment design changes, could result in more efficient use of Navy and Marine Corps training resources. The goal of this task is to moderate training requirements and optimize the selection of training alternatives. As a part of this task, predecessor-training resources will be assessed to determine their ability to support either non-equipment or aircrew training needs. Develop a narrative explanation of either all feasible non-equipment or aircrew training requirements for the family or system of systems developed during the performance of this task. The statement will detail the advantages and disadvantages of each training scenario as well as the potential source of training resources (e.g., new, existing, etc.). Compile the equipment related training requirements and the non-equipment and aircrew training requirements. Output: Narrative explanation of family or system of systems equipment related, non-equipment related and aircrew training requirements.

d. For family or system of systems programs, either new construction, modernization or conversion, identify family or system of systems manpower and training requirements.

(1) Identify family or system of systems manpower requirements.

(a) Examine the predecessor and various Navy comparable ship classes that closely match the mission and operational scenario of the new ship and select the ship class that most closely matches. The chosen ship will be the basis against which the new ship will be compared to estimate the new ship's baseline manpower data. Using comparability analysis, NAVMAC will assist by identifying the baseline data required to determine the non-equipment manpower requirements for the ship. Non-equipment manpower requirements are determined by various formulas, algorithms and matrices developed by the NAVMAC. Once the baseline data for these formulas, algorithms and matrices are identified, the equipment related and non-equipment related manpower requirements should also be developed by NAVMAC. Output: List of baseline data for manpower formulas, algorithms, matrices, etc. The baseline data for the manpower formulas, algorithms and matrices consists of:

1. Staffing standards

2. Directed functions

3. Workweek

4. Watchstations

5. Battle bill watchstation titles

6. Equipment planned maintenance values

7. Equipment corrective maintenance ratios

8. Facility maintenance manpower factors (e.g., production delay, support actions, etc.)

(b) Develop, with the assistance of NAVMAC or an individual or activity qualified in this discipline, a preliminary ship manpower document for the new ship as it will ultimately be. Ensure the preliminary ship manpower document contains the equipment and the non-equipment manpower requirements developed earlier. Product: The development of a preliminary ship manpower document.

(c) Once the manpower requirements are developed, determine the source (e.g., new, existing, phased-out ship, etc.) of the required manpower resources. Typically, the majority of the manpower resources will come from the predecessor (replaced) ship. However, in some cases, a new ship will have more or less different resource requirements than the predecessor. During the performance of this task, ensure any excess, additional or differing quality of manpower resources is identified. Output: Changes in manpower from a predecessor to the new ship and rationale for the differences. The output may lead to NEC or NOBC change packages per OPNAVINST 1000.16 Series and NAVPERS 18068 and 15839 governing documents.

(2) Identify predecessor ship non-equipment training requirements.

(a) For each different non-equipment billet title of the predecessor ship, determine all the formal follow-on training courses that are required. Class "A" school for enlisted personnel will be assumed unless it is the only training received. For officers, training related to the commissioning source will be assumed unless it is the only training received. Training received to obtain a designator or qualification will be identified. Determine CIN (new and modified or all) course titles, course lengths, source ratings, source designators (officers), NECs or NOBCs awarded (if applicable), prerequisites and course locations (with UICs). Output: List of the follow-on training courses associated with the ship.

(b) Output: A list identifying the presentation environment, technique and media and training path(s) associated with the follow-on training courses of the ship.

(c) Output: A list identifying the annual student throughput, TTE, TD and test equipment, including facility footprint, hotel services and costs associated with the follow-on training courses of the ship.

(d) Output: A list identifying the in-service training associated with the ship.

(3) Identify a new E/S/S family/system of systems training requirements.

(a) For each different new or modified platform and E/S/S non-equipment billet title requiring training, estimate the initial training requirements. Output: List of the initial training requirements for the family or system of systems.

(b) For each different new platform and E/S/S non-equipment billet title, determine all the formal follow-on training courses that will be required. For enlisted personnel, class "A" school will be assumed unless the appropriate place for the required training is the class "A" school. For officers, training related to the commissioning source will be assumed unless it is the appropriate place for the required training. Training to obtain a designator or qualification will be determined. For officers and enlisted operators, new or modified course titles, course lengths, source ratings, NECs or NOBC awarded (if applicable), prerequisites and logical course locations (with UICs). Output: List of the follow-on training courses associated with the family/system of systems.

(c) Output: A list identifying the presentation's environment, technique, media and training path(s) associated with the follow-on training courses for the family or system of systems.

(d) Output: A list identifying the annual student throughput, TTE, TD and test equipment, including facility footprint, hotel services and costs associated with the follow-on training courses for the family or system of systems.

(e) Output: A list identifying the in-service training associated with the family/system of systems.

(f) Review the predecessor non-equipment training requirements and identify any alternative concepts or strategies that, with equipment design changes, could result in more efficient use of Navy training resources. The goal of this task is to optimize both training requirements and the selection of training alternatives. As a part of this task, predecessor-training resources should be assessed to determine their ability to support non-equipment training needs. Develop a narrative explanation of all feasible non-equipment training requirements for the new E/S/S (family or system of systems) developed during the performance of this task. The explanation should detail the advantages and disadvantages of each training scenario as well as the potential source of training resources (e.g., new, existing, etc.). Compile the E/S/S related training requirements and the non-equipment training requirements. Develop a narrative explanation of all possible E/S/S and non-equipment training requirements for the family or system of systems. Output: Narrative description of all reasonable E/S/S related and non-equipment related training requirements for the family or system of systems.

e. At this juncture, two preliminary critical actions occur. The first action is the development of the initial training system cost estimate for future funding requirements. The second is identifying any MILCON requirements for any facility modification or construction to support the new training systems requirements.

f. For those weapon systems entering before Milestone A and B, more programmatic and technical data should be available to assist in developing a TE utilizing the results of the BCS Analysis and what is known of the new weapon system.

TRAINING ESTIMATE AND NAVY TRAINING SYSTEM PLAN FORMAT

1. TE and Navy Training System Plan (NTSP).

a. Introduction. The effectiveness of the TE and NTSP depends on timely requirements development, validation and implementation. The objectives support program management requirements by developing an efficient and time-phased training program. The format is a multi-phased, sequenced process to identify the training system solution and manpower required to operate and maintain E/S/S. TE or NTSP documents all training requirements to improve the system and human performance identified through the FEA process. The TE or NTSP enables stakeholders to project MPT requirements and funding across the fiscal year defense program.

b. Purpose.

(1) The purpose of the TE is to provide a brief estimation of MPT requirements determination, costs and scheduling based on logistics, acquisition and MTRP data in a standard format. Where applicable, identify PBIS issues and contract amount with estimated delivery dates. Developers must justify any data elements deemed to be non-required (NR).

(2) The purpose of the NTSP is to provide comprehensive MPT requirements in support of acquisition logistics products in a standard format. Developers must justify any data elements deemed to be non-applicable.

c. Process. The PM documents the MPT requirements for an integrated weapon or warfare system in a TE or NTSP. The completion of the TE is a supporting-supported relationship between the PM and key stakeholders. Each TYCOM will coordinate with FFC and PM before approval by the RS in Navy Taskers. The sequential outline of the format in Table 1.

Note: A TE must be initiated by MS B and completed by MS C. Upon completion of a TE, the development of an NTSP must be initiated and submitted for RS approval during the P&D phase. RS(s) are required to obtain concurrence from Deputy CNO for MPT before approving an NTSP. Once approved by the RS, the NTSP is the official record of Navy MPT requirements.

TRAINING ESTIMATE	NAVY TRAINING SYSTEM PLAN
PART 1 Equipment, System, Sub-System Description	PART 1 Technical Program Data
PART II Equipment, System, Sub-System Logistics, Product Supportability Analysis, Training Requirements	PART II Billet and Personnel Requirements
PART III Rating Continuum	PART III Training Requirements
PART IV Acquisition Logistics Products	PART IV Training Logistics Support Requirements
Part V Individual, Fleet Fielding	PART V MPT Plan of Actions and Milestones
	PART VI Decision Items, Actions Required
	PART VII Points of Contact

Table 1. Comparison of TE and Navy Training System Plan Requirements

d. Procedure.

(1) The sequential outline of the TE format follows:

(a) One or two pages by parts. Ensure TE number, when assigned (same as NTSP), appears on every page of the document on the upper-right hand corner, followed by the date of the TE. The RS will assign a unique identification number before beginning a new TE. The document identification number is alphanumeric, for example:

N97X -NTSP -S -20 -12 01 A
Sequential Update Letter
FY Sequential Number by Category

FY Designator

Category (00 = General 10 = Non-Hardware 20 = Undersea 30 = Surface 60 = Reserve 70 = Information Warfare 40 = Logistics 50 = Aviation 80 = Other)

SYSCOM Letter Designator (A-NAVAIR, E-NAVWAR, F- NAVFAC, S-NAVSEA, K-NAVSUP, X-OTHER)

Document Type (TE or NTSP)

RS (Various) (X denotes cross-RSs)

Diagram 1. NTSP Identification Numbering Process

(2) The sequential outline of the TE format follows:

(a) Use a separate cover page to describe any unique challenges in Parts I through V in the program or TE strategy (Exhibit 7). The PM, in coordination with the TYCOM, will review and verify the TE package is complete. The PM will then forward the TE to the RS for approval. This cover page may be tailored by the program office but not the TE. Develop and update the five parts of the TE using the sample format indicated in Exhibit 7:

TE (Notional)

Equipment/System/Subsystem (E/S/S)	Ship, Submarine, Aircraft, C5I, Expeditionary Integrated Weapon or Warfare System						
Milestone Decision Authority							
Program Office or TSPO							
E/S/S Acquisition Schedule (Milestones and IOC and FOC)	AOA	CDD	MS A	MS B CDR	MS C	FRP	IOC
Product: Widget	E/S/S						
Required Operational Capability and Projected Operating Environment	Estimated Approval			Notes:			
Other:							

Manpower & Training Requirements Planning (System Lifecycle))	Resource Sponsor or Program Office			Manpower and Training Requirements Planning (Rating Domain Analysis)	N1 or FFC or TYCOM		
II. E/S/S LSA/PSA Training Requirements				III. Rating Continuum			
	PBIS Issue	Contract Amount	Estimated Delivery Date		PBIS Issue	Contract Amount	Estimated Delivery Date
System Design Specification	[redacted]			Rating Continuum Model			
eComputer Aided Design				Occupational Standards			
Logistics Supportability Analysis				Credentialing Analysis			
Maintenance Strategy or Maintenance Concept Plan (O/I/D)				Achievement Standards (A/J/M)			

PMS, FM, CM, OPR, OUM, PQS Task Development				Initial NOCS or NECs (Certs or Quals)			
Manpower Estimate or Preliminary Ship or Squadron Manpower Document				[redacted]			
MPT Advisory Board							
FEA				Rating Continuum			
1. BCS Analysis				Rating Training Path Analysis			
2. Task Analysis				Learning Objectives Analysis			
4. Training System Requirements Analysis				Rating Domain Analysis			
5. Media Fidelity Analysis				Detailed Content Design			
Training Design Coordinating Paper				Content Development and Testing			
[redacted]				Initial and Updated NOCS or NEOCSS Rating Standards	[redacted]		
7. MCD				Technology Acquisition and Installation			
Training Effectiveness and Efficiency Plan (System)				Training Effectiveness and Evaluation (Rating)			
Initial Feasibility Analysis or Student Input Planning				Rating Community Management Analysis Planning			
Functional Requirements Document (if required)				Functional Requirements Document			
NTSP							
Acquisition Logistics Products				V. Individual or Fleet Fielding			

Familiarization or Interim Training Courses				Rating Continuum			
Learning Resource Center				Content Testing			
MILCON (P#)				Train the Trainer			
Technical Manuals				Pilot (Schoolhouse or Fleet)			
Curriculum Development (System)				Updated CETARS			
Training Installation & Transfer Agreement				Training Installation & Transfer Agreement			
Instructor Trainee Guides							
				RFT Dates			
Interactive Courseware				First Class A or C School			
Training Devices				Full Modernized Delivery			
Technical Training Equipment				Fleet Feedback Reporting			
Total				xAPIs to Model Based Product Support			
				APIs to ADE & Learning Stack			
				Total			

Exhibit 7. Training Estimate

2. NTSP Format.

a. Use the same document identification number as the TE. Number pages by parts such as I-1, I-2, etc. Ensure NTSP number, when assigned, appears on every page of the document on the upper right-hand corner, followed by the date of the NTSP. Information that does not apply will be marked "Not Applicable" stating why. The RS will assign a unique identification number before beginning a new NTSP. The document identification number is alphanumeric (same as TE).

b. Develop and update the seven parts of the NTSP using the detailed instructions and format to consist of:

(1) Cover Page. Include title, NTSP identification number and document date.

(2) Executive Summary. Include an executive summary of the NTSP. In the case of a new ship class or a family of systems, the NTSP will describe the applicability and relationship to the sub-system NTSPs. Describe the development in general terms highlighting the new features, operational uses, system(s) or equipment replaced, maintenance concepts, interim support requirements, types of manpower to operate and maintain the E/S/S and the training concept. Identify the acquisition category level, IOC and RFT dates for the sustainment lifecycle, including TITA (if available) with a system photograph (if desired on cover page). Identify deltas between any ECP, alterations or change orders affecting new MPT requirements.

(3) Table of Contents.

(4) List of Acronyms. Limit acronyms to those used more than once. Abbreviations may be listed if they are needed for clarification.

(5) Preface. Identify the date of the last approved NTSP and describe what impacts to MPT occurred since the approval of the document. Indicate any NTSP that will be superseded or incorporated into this NTSP. Include the NTSP annual review data, participants and results. Annotate the Requirements Officer (RO), PM and TSPO concurrences to begin the update because of the annual review. Include those outstanding Part VI Action Items from the prior iteration.

(6) PART I - Technical Program Data.

(a) Title-Nomenclature-Acronym. Specify the proposed or actual program title, equipment/nomenclature(s) and acronym if applicable.

(b) Program Element. Specify the funding program element number(s) for acquisition and sustainment, as applicable.

(c) Section I.A. Title-Nomenclature-Program.

(d) Section I.B. Security Classification. Provide a security classification for the data over three areas:

1. System Characteristics (select one): UNCLAS, CONF, SECRET, TOP SECRET.

2. Capabilities (select one): UNCLAS, CONF, SECRET, TOP SECRET.

3. Functions (select one): UNCLAS, CONF, SECRET, TOP SECRET.

(e) Section I.C. NTSP PRINCIPALS. List and identify the principals and their organizational codes to the division level. Principals are designated to ensure support of the

E/S/S, review and validate the NTSP, address and resolve issues and make decisions to ensure the training plan can be executed. As applicable:

OPNAV RS(s) CNO (NX)
Marine Corps Program Sponsor CMC (XXX) (as applicable)
PM
TA, e.g. (NETC, EWTG, Afloat Training Group, NCG, etc.)
TSA SYSCOM (XXX)
TSPO
Deputy Chief of Naval Operations (MPTE) (CNO N1)
Commander, Reserve Program Manager COMNAVAIRRESFOR (Code XXX)
U.S. Fleet Forces Command
COMNAVSURFRESFOR (Code XXX)
Commandant of the Marine Corps (CMC)

(f) Section I.D. System Description.

1. Operational Uses. Describe the tactical use of the E/S/S or reserve component program. Provide a statement of purpose, employment, mission and use consistent with the JCIDS documents, where applicable and compatible with the recipient platform ROC or POE. A basic overview can be provided along with references to other documents that contain operational uses.

2. Other Procurement. Indicate whether the E/S/S will be procured for Foreign Military Sales (FMS), Inter-Service Training Review Organization or by other sources (Coast Guard, Army and Air Force).

(g) Section I.E. Developmental Test and Operational Test (OT).

1. Developmental Test and OT Not Completed. Identify a plan of action and milestones and timeframes for Developmental Test and OT. State if a Non-Developmental Item or Commercial-Off-The Self acquisitions require no tests or evaluations. If needed, refer to Element III.A.1 for any required initial training for Developmental Test or OT.

2. Developmental Test and OT Completed. State the timeframe and results of any findings or recommendations affecting MPT. Refer to other program documentation as appropriate.

(h) Section I.F. Ship, Aircraft, Equipment, System, and Subsystem Replaced. Identify, in detail, the ship, aircraft or equipment, system or subsystem being replaced. Also, include either modernization or backfit programs. Indicate if no ship, aircraft or equipment, system or subsystem is being replaced.

(i) Section I.G. Description of E/S/S.

1. Functional Description. Provide a functional description of the E/S/S or reserve program. Avoid technical terms, unnecessary specifications and detail beyond that needed to grasp the functional aspects of the E/S/S. For Reserve Program Component NTSPs, provide a general description of external and internal organizational structure and functions of the reserve program units.

2. Physical Description. Provide a physical description of the E/S/S, such as the dimensions, weight, location on the ship, deck spotting factor, etc.

3. E/S/S Introduction. Describe the introduction of the E/S/S, such as new production, product improvement program, modernization retrofit and Service Life Extension Program (SLEP).

4. Significant Interfaces. Describe the significant interfaces with and impacts on other new developments or reserve programs (e.g., chilled water, maintenance responsibilities shift, requirements for special or additional power supply, Hull, Mechanical and Electrical, networks).

5. New Features, Configurations or Material. Identify new features, configurations and material changes such as changes in technology, state-of-the-art, environmental protection, electromagnetic compatibility, if any.

(j) Section I.H. Concepts.

1. Operational Concept. Provide a general explanation concerning how the E/S/S operates, such as unmanned or unmonitored, number of operators, watch condition, existing watch sharing or monitor relationships and who will operate it. When the E/S/S does not require a watch stander, describe the operational concept in terms of existing watch organization, time shared with other watch station(s), responsibility for monitoring system operation or other special-purpose operation. When Condition 1 and 3 watches are required, a table will be added to reflect the rate, rating and NEC requirements and locations. As necessary, address operational concepts associated with battle force, joint service, forward-deployed Navy force, forward-deployed rotational manpower, connectivity requirements, etc. List states and modes of operation.

2. Maintenance Concept. Describe the equipment maintenance process at the organizational level (e.g., replace the entire unit when it malfunctions, repair to the component level, replace circuit boards and return faulty ones to supply). Describe self- test capability, diagnostic capability, built-in test equipment or required special test equipment. Identify maintenance plans (reference available plans) based on logistic supportability analysis and include additional programs (e.g., Micro-Miniature (2M) Program). Describe briefly what

maintenance actions, if any, are planned for the IMA and depot level (e.g., all repairs, refurbishment of rotatable pool items, only problems the organizational level cannot solve, specified complex procedures such as alignment, etc.). Include whether supported by condition-based maintenance or remote monitoring or both.

a. Organizational. Describe what maintenance is performed, applicable work center and what rating and NEC or MOS maintains the E/S/S. Accurately describe the planned maintenance and corrective maintenance for the E/S/S addressed.

(1) Planned Maintenance. Describe the actions performed based on Original Equipment Manufacturer data derived during the Logistics Supportability Analysis (e.g., LSA "C, H, E, F records) including maintenance significant items and any records available from the records. Identify scheduled requirements as per Maintenance Requirement Card, systematic inspections or services. Include the PMS hours associated with the equipment or system broken down on a weekly or quarterly basis. Include NAVMAC proposed allowances and factors for maintenance actions (e.g., tagouts). PEO C4I programs must align with cybersecurity-cyber hygiene requirements; therefore, the planned maintenance system guidance requires program offices to take certain steps. At a minimum or as required, develop maintenance requirement cards that address the following six common core cybersecurity-cyber hygiene tasks: Scanning, Patching, Reporting, Configuration Management, Log File Analysis and Host Based Security System or Host Intrusion Prevention System. Develop additional maintenance requirement cards as needed to ensure all cybersecurity requirements are met for specific systems or applications.

(2) Corrective Maintenance. Provide the fault isolation, removal and replacement workload data for Weapon Replaceable Assembly (WRA), Shop Replaceable Assembly (SRA) and Lowest Replaceable Assembly (LRA), Level of Repair Analysis and Failure Modes, Effects and Critically Analysis (FMECA). Provide any details if limited intermediate maintenance on mission-essential equipment may be performed when deployed.

b. Intermediate. Describe if intermediate level maintenance is required on those WRAs and SRAs beyond the organizational level capability. Include any differences between ashore and afloat activities. Particularly, describe which Support Equipment (SE) is used for each subsystem, such as automatic test equipment, common support equipment or peculiar support equipment.

c. Depot. Identify how and where major overhaul, rebuilding, manufacture, modifications, etc. will be accomplished.

d. Interim Maintenance. Identify the sources of technical assistance such as Aviation Intermediate Maintenance Department, Naval Aviation Depot, Contractor Engineering and Technical Services or Civilian Augmented Training. Define the interim maintenance concept until full Navy organic support is achieved. Provide the Navy Support Date and identify

requirements for technical or advisory (or both) services for operational activities and the reserve program component. State the location, number of personnel, scope and duration of the requirement.

e. Lifecycle Maintenance Plan. Include a statement referencing the lifecycle maintenance plan (if one exists) such as Complex Overhaul, Regular Overhaul, Restricted Availability and Selected Availability.

3. Manpower Requirement. Provide a manning concept statement for the new weapons system. The statement should include a summary of the total Navy and Marine Corps, officer, enlisted, civilian and contractor manpower requirements and the summary organizational structure, including rotational crewing, forward-deployed Navy and Marine Corps forces and forward stationed units. Include a specific statement that describes all unique constraints, criteria or requirements to include any unique testing unit or training unit manpower and personnel requirements. Provide a specific statement of factors governing the manpower requirements for the E/S/S or reserve program components such as conditional watches, maintenance requirements, minimum manning, special watch conditions or mobilization requirements. Document any E/S/S drivers such as the need for any additions, deletions or mergers of ratings, changes in occupational standards or changes in NEC or MOS descriptions that may result in an increase or decrease to manpower and personnel requirements. As part of the requirements process, Cybersecurity Workforce positions will be documented.

4. Training Concept. An explanation of the types of training applicable to military, civilian and foreign personnel. Sustainment maintenance training should correspond to requirements for organizational, intermediate and depot level maintenance under I.H.2.

a. For each type of training:

(1) List courses and appropriate prerequisite training.

(2) Describe in Element IV.A.1 and Element IV.A.2 the purpose of any TTE and TD to be used in each course.

(3) Describe the strategy to meet the Key Performance Parameter (KPP) Key System Attribute (KSA) requirements identified in the Capability Development Document.

(4) List the measures of effectiveness approved by the TYCOM and include a strategy for the TEA (individual and Fleet training).

(5) Identify how the training strategy will be conducted in alignment with the RDA, TSRA and TDCP, such as team, inter-service, skill progression training, factory, industrial, formal, unit, exportable, consolidated, off-site or electronic-based training and distance learning. May not apply for updated NTSPs if the training strategy does not change.

Also, for reserve program units, provide a concise statement of how enlisted and officer mobilization and professional training requirements will be accomplished and the method used, such as unit consolidation, exportable, contract, active duty training and Inactive Duty Training Travel (IDTT).

b. Initial Training. List information only for the applicable methods of training, such as operator, maintenance, team, proficiency, officer, industrial, etc.

c. Interim Training. List information only for the applicable methods of training, such as operator, maintenance, team, proficiency, officer, industrial, etc.

d. Follow-on Training. List information only for the applicable methods of training identified in the acquisition logistics products, such as operator, maintenance, refresher, differences, team, proficiency, officer, industrial, etc. Include RFT date.

e. Student Profiles. List the source rating, prerequisite skill and knowledge requirements and NECs or MOSs required to support the E/S/S.

f. Training Paths. Provide a graphic illustration of new training paths or tracks included in a Rating Continuum(s) (in coordination with TYCOM and Learning Center). Include existing training tracks and indicate necessary changes to student profiles. The training path requirement does not apply for a single course; however, a statement to that fact is required. Indicate new NEC or MOS requirements or if an existing NEC or MOS is to be changed.

(k) Section I.I. Onboard (In-Service) Training. Identify onboard training or in-service training to be provided, such as PQS, electronic-based training, computer-based training or interactive courseware, distance learning, embedded training, pre and post-delivery crew watchstanding training.

1. Performance-based or proficiency-based and other training relevant to new or modernized E/S/S or revised Rating Continuum. Describe how training will be accomplished and the instructional system, media, onboard or embedded (or both) equipment supporting the requirement. Identify the TSA and date required by month and year.

2. PQS. List the operator, crew and watch station PQS requirements. Identify the TSA and date required by month and year.

3. Other Onboard or In-service Training Packages. List, as appropriate, any other formal training curricula and the date required by month and year.

(l) Section I.J. Logistics Support.

1. Manufacturer or Contract Numbers. List the name, address, contract numbers and location for the manufacturer(s) or shipbuilder(s) of the E/S/S(s).

2. Program Documentation. Include the status of technical documents that support the acquisition logistics products (such as Joint Capabilities Integrated Development System documents and Lifecycle Sustainment Plan).

3. Technical Data Plan. Include any requirement for technical manuals, maintenance requirement cards, maintenance index pages, Planned Maintenance System or plans applicable to the E/S/S such as status, type of manual or plan, medium, delivery dates. Do not duplicate IV.B.3 data instead of reference element IV.B.3 as appropriate.

4. Test Sets, Tools and Test Equipment. Include any unique requirement for special test sets, special tools, special test equipment and software support for E/S/S operational and training activities.

5. Repair Parts. Include any requirement for E/S/S spare and repair parts as well as the Material Support Date.

6. Human System Integration. Include the status of the Human System Integration Plan and reference any manpower and training KPP and KSA as applicable. The Human System Integration Plan establishes the basis for the effective integration of human factors in the acquisition program.

(m) Section I.K. Schedules.

1. Schedule of Events. Include all E/S/S schedules for all acquisition logistics and Individual or Fleet Fielding products pertinent to satisfying training objectives. Indicate source and dates of information such as task analysis completion dates, IOC through Full Operational Capacity dates, Training Need Dates (TND), RFT dates, delivery commencement dates, system deployment dates, facility Beneficial Occupancy Dates, facility Ready for Use (RFU) Dates and training equipment availability dates. List the rate of units per month and year, name and location of existing reserve units and activation dates of planned units and ship number and date (month and year). When the E/S/S is being installed on a new ship, also identify the dates for production delivery, commissioning, acceptance trials, etc.

a. Installation and Delivery Schedule. List the availability dates or installations (or both) by location and the installation date(s) by fiscal year (FY) or by a quarter per FY as appropriate.

b. Ready For Operational Use (RFOU) Schedule. List for each activity the RFOU date(s) by FY or by a quarter per FY as appropriate. This schedule is the basis for part

II.A.1.a. The RFOU for an aircraft squadron will coincide with the delivery of the first aircraft to the squadron.

c. Time Required to Install at Operational Sites. The time required installing and completing equipment installation at different sites, (e.g., new construction at builder site, replacement during restricted availability, SLEP and overhaul, etc.).

2. Foreign Military Sales (FMS) and Other Source Delivery Schedule. List the country, the date by FY or by a quarter per FY as appropriate and where the E/S/S is being delivered.

(n) Section I.L. Government Furnished Equipment (GFE) and Contractor Furnished Equipment Training Requirements. Identify all GFE and Contractor Furnished Equipment categories.

1. GFE and Contractor Furnished Equipment Training Requirements. List identification code such as Work Breakdown Structure (WBS), System Identification Code (SSIC or Equipment Identification Code, T/M/S), equipment nomenclature and quantity and software configuration. Also, include a list of acquisition sources (ACQ) such as contractor, project office, participating manager, status code, course and NTSP number. Include Rating, Designator and NEC required per E/S/S. Indicate in remarks if training is available in time and whether or not the capacity exists to accommodate E/S/S requirements.

2. Use this format (or tailorable as an Appendix).

GFE and Contractor Furnished Equipment Training Requirements:

ID #	Equip Name	QTY	ACQ Source	Course and Status	NTSP #	Rating NEC	(Note 1)

Note 1: The status of the training requirement for each piece of equipment will be identified by using one of these codes:

Status Codes	Definitions
FDR	Further Definition Required
EC	Existing Course
POEC	Part of Existing Course
NTSP	Navy Training System Plan
ND	New Development
ESC	Existing Segmented Course
NSC	New Segmented Course
NFTR	No Formal Training Required
ECR	Existing Course Reserve

PSC Planned Segmented Course

(o) Section I.M. Related NTSPs, TEEPs and Other Applicable Documents. List of sub-system NTSPs, training system TEEPs and other documents which affect, are related to, were used to develop or were developed in response to this NTSP. Provide the document title, number, cognizant PM code and status of the document. Use this format where the unit identification code is the UIC:

Document or NTSP Title	Document or NTSP Number	PM Code	Status

(7) PART II - Billet and Personnel Requirements.

(a) Section II.A. Billet Requirements.

1. Element II.A.1.a.

SOURCE: _____ DATE:_____

Activity, UIC	PFYs	CFY	FY	FY	FY	FY	FY	Totals

INSTRUCTIONS:

a. List the source and date of the schedule.

b. List the operational and Fleet support activities and corresponding UICs.

c. Previous Fiscal Years (PFY) indicate the number of activities activated in previous years. Under Current Fiscal Year (CFY), indicate the number of activities activated in the CFY. Under the remaining columns indicate the number of activities activated in the next five fiscal years.

Note: Tailor format to meet five fiscal year requirements.

d. For NTSPs with multiple E/S/S installations, site totals may be used along with a note explaining the situation.

Note: The figures displayed on this element reflect total sites or activities, not the actual number of equipment. For E/S/S NTSPs, the figures displayed on this element reflect the total sites or activities receiving the E/S/S.

2. Element II.A.1.b. Billets Required for Operational and Fleet Support Activities.

Activity, UIC	Phasing Increment	Billets OFF, ENL. CIV	Designator or Rating	PNEC, SNEC PMOS, SMOS PP, Series, GD

INSTRUCTIONS:

a. List the operational and Fleet support activities, corresponding UICs and phasing increments (if applicable). When an activity's billets are phased in over multiple fiscal years, list each fiscal year as a phasing increment.

b. List the number of billets required by Designator, Rating and NEC, MOS (primary MOS (PMOS) or secondary MOS (SMOS)) and civilian pay plan (PP), occupational series code (OCC) and pay grade (GD). List totals for each activity (including all phasing increments). For NTSPs that capture unique systems not covered in E/S/S, reference the approved preliminary ship or squadron manpower document and develop requirements based on billet data in this element. Changes may be incorporated via a change page.

c. Manpower will be based on workload derived from the MTRP. Actual partial or fractional billet requirements will be rounded up.

3. Element II.A.1.c. Total Billets Required for Operational and Fleet Support Activities.

	Designator or Rating	NEC, PMOS, SM, OS, PP, OCC, GD	PFYs	CFYs	FY +1-5
			ENL, OFF, CIV	ENL, OFF, CIV	ENL, OFF, CIV
OPERATIONAL:					
Active Duty					
Full Time Support					
Selective Reservist					
Marine Active Duty					

Marine Active Reservist					
Selected Marine Corps Reserve					
Civilian					
FLEET SUPPORT:					
Active Duty					
Full Time Support					
Selective Reservist					
Marine Active Duty					
Marine Active Reserve					
Selected Marine Corps Reserve					
Civilian					

Table 2: Total Billets for Operational and Fleet Support

	Designator or Rating	NEC, PMOS, SM, OS, PP, OCC, GD	PFYs	CFYs	FY +1-5
			ENL, OFF, CIV	ENL, OFF, CIV	ENL, OFF, CIV
OPERATIONAL:					
Active Duty					
Full Time Support					

Selective Reservist					
Marine Active Duty					
Marine Active Reservist					
Selected Marine Corps Reserve					
Civilian					
FLEET SUPPORT:					
Active Duty					
Full Time Support					
Selective Reservist					
Marine Active Duty					
Marine Active Reserve					
Selected Marine Corps Reserve					
Civilian					
GRAND TOTALS					
Active Duty					
Full Time Support					

Selective Reservist					
Marine Active Duty					
Marine Active Reserve					
Selected Marine Corps Reserve					
Civilian					

Table 3: Summary Totals

INSTRUCTIONS:

a. List the operational and fleet support billets required by Designator, Rating and NEC, MOS and civilian pay plan, occupational code and grade for each fiscal year by ACDU, full time support (FTS) or selected reservist (SELRES) for Navy, Active Duty (AD), Active Reserve (AR) or Selected Marine Corps Reserve (SMCR) for USMC or by Civilian. Compute requirements by multiplying II.A.1.a. by II.A.1.b. For family or system of systems NTSPs, if applicable, reference the manpower document listing billet data in this element. Indicate the required billets under the appropriate column by:

(1) Under PFYs, list the cumulative billets required in all previous fiscal years.

(2) Under CFY, list the billets required in the current fiscal year.

(3) Under the remaining columns, list the billets required for each of the next five fiscal years.

b. Include preliminary manpower documents as annexes to the NTSP.

c. Under summary totals, provide totals as indicated.

d. Under grand totals, provide totals as indicated.

Note: Do not lump together all out year billet figures as the fifth and final FY billet total for this element; list only the fifth FY total.

4. Element II.A.2.a. Operational and Fleet Support Activity Deactivation Schedule.

SOURCE: _____ DATE:_____

Activity, UIC	PFYs	CFY	FY	FY	FY	FY	FY	Totals

INSTRUCTIONS:

a. List the source and date of the schedule.

b. List the operational and fleet support activities and corresponding UICs.

c. Under PFYs, indicate the number of activities deactivated in previous years. Under CFY, indicate the number of activities deactivated in the current fiscal year. Under the remaining columns indicate the number of activities deactivated in the next five fiscal years.

d. For NTSPs with multiple deactivations, site totals may be used along with a note explaining the situation.

Note: The figures displayed on this element reflect total sites or activities, not the actual number of equipment. For E/S/S NTSPs, the figures displayed on this element reflect total sites or activities no longer employing the identified E/S/S.

5. Element II.A.2.b. Billets to be deleted in Operational and Fleet Support Activities.

Activity, UIC	Phasing Increment	Billets OFF, ENL, CIV	Designator or Rating	PNEC, SNEC PMOS, SMOS PP, Series, GD

INSTRUCTIONS:

a. List the operational and fleet support activities, corresponding UICs and phasing increments (if applicable). When an activity's billets are phased out over multiple fiscal years, list each fiscal year as a phasing increment.

b. List the number of billets to be deleted by Designator, Rating and NEC, MOS (PMOS or SMOS) and civilian pay plan, occupational code and grade. List totals for each activity (including all phasing increments). For family or system of systems NTSPs, reference the applicable manpower document instead of listing the detailed billet data in this element.

6. Element II.A.2.c. Total Billets to be deleted in Operational and Fleet Support. Activities.

	Designator or Rating	NEC, PMOS, SM, OS, PP, OCC, GD	PFYs	CFYs	FY +1-5
			ENL, OFF, CIV	ENL, OFF, CIV	ENL, OFF, CIV
OPERATIONAL:					
Active Duty					
Full Time Support					
Selective Reservist					
Marine Active Duty					
Marine Active Reservist					
Selected Marine Corps Reserve					
Civilian					
FLEET SUPPORT:					
Active Duty					
Full Time Support					
Selective Reservist					
Marine Active Duty					
Marine Active Reserve					

Selected Marine Corps Reserve					
Civilian					
GRAND TOTALS					
Active Duty					
Full Time Support					
Selective Reservist					
Marine Active Duty					
Marine Active Reserve					
Selected Marine Corps Reserve					
Civilian					

Table 4: Operational and Fleet Support

	Designator or Rating	NEC, PMOS, SM, OS, PP, OCC, GD	PFYs	CFYs	FY +1-5
			ENL, OFF, CIV	ENL, OFF, CIV	ENL, OFF, CIV
OPERATIONAL:					
Active Duty					
Full Time Support					
Selective Reservist					

Marine Active Duty					
Marine Active Reservist					
Selected Marine Corps Reserve					
Civilian					
FLEET SUPPORT:					
Active Duty					
Full Time Support					
Selective Reservist					
Marine Active Duty					
Marine Active Reserve					
Selected Marine Corps Reserve					
Civilian					
GRAND TOTALS					
Active Duty					
Full Time Support					
Selective Reservist					
Marine Active Duty					

Marine Active Reserve					
Selected Marine Corps Reserve					
Civilian					

Table 5: Operations and Fleet Support Summary

INSTRUCTIONS:

a. List the operational and fleet support billets to be deleted by Designator, Rating and NEC, MOS and civilian pay plan, occupational code and grade for each fiscal year by ACDU, FTS and SELRES for Navy; AD, AR and SMCR for USMC; and Civilian. Compute requirements by multiplying II.A.2.a. by II.A.2.b. For family or system of systems NTSPs, reference the applicable manpower document instead of listing billet data in this element.

b. Indicate the billets under the appropriate column by:

(1) Under PFYs, list the cumulative billets deleted in all previous fiscal years.

(2) Under CFY, list the billets to be deleted in the current fiscal year.

(3) Under the remaining FY__ columns, list the billets deleted for each of the next five fiscal years.

(4) Under summary totals, provide totals as indicated.

(5) Under grand totals, provide totals as indicated.

Note: Do not lump together all out year billet figures as the fifth and final FY billet total for this element.

7. Element II.A.3. Training Activities Instructor and Support Billet Requirements

			PFYs	CFYs	FY +1-5

	Designator or Rating	NEC, PMOS, SM, OS, PP, OCC, GD	ENL, OFF, CIV	ENL, OFF, CIV	ENL, OFF, CIV
Active Duty					
Full Time Support					
Selective Reservist					
Marine Active Duty					
Marine Active Reservist					
Selected Marine Corps Reserve					
Civilian					
TOTAL:					

Table 6 Instructor Billets:

	Designator or Rating	NEC, PMOS, SM, OS, PP, OCC, GD	PFYs	CFYs	FY +1-5
			ENL, OFF, CIV	ENL, OFF, CIV	ENL, OFF, CIV
Active Duty					
Full Time Support					

Selective Reservist					
Marine Active Duty					
Marine Active Reservist					
Selected Marine Corps Reserve					
Civilian					
TOTAL:					

Table 7 Training Activity, Location, UIC:

	Designator or Rating	NEC, PMOS, SM, OS, PP, OCC, GD	PFYs	CFYs	FY +1-5
			ENL, OFF, CIV	ENL, OFF, CIV	ENL, OFF, CIV
Active Duty					
Full Time Support					
Selective Reservist					
Marine Active Duty					
Marine Active Reservist					

Selected Marine Corps Reserve					
Civilian					
TOTAL:					

Table 8 Support Billets:

	Designator or Rating	NEC, PMOS, SM, OS, PP, OCC, GD	PFYs	CFYs	FY +1-5
			ENL, OFF, CIV	ENL, OFF, CIV	ENL, OFF, CIV
Active Duty					
Full Time Support					
Selective Reservist					
Marine Active Duty					
Marine Active Reservist					
Selected Marine Corps Reserve					
Civilian					
TOTAL:					

Table 9 Temporary Duty Under Instruction Billets:

Note: Temporary duty instruction and individual's account funds for training are programmed and budgeted for by RSs and execution by CNO N1. RSs or designated agency ensures funding is programmed prior to approval of a NTSP.

INSTRUCTIONS:

a. List the training activity, location and UIC.

b. List instructor and support billets separately by ACDU, FTS and SELRES for Navy; AD, AR and SMCR for USMC; and civilian. Identify Designator, Rating and NEC, MOS and civilian pay plan, occupational code and grade by:

(1) Under PFYs, list the cumulative billets required in all previous fiscal years.

(2) Under CFY, list the billets required in the current fiscal year.

(3) Under the remaining columns, list the billets required in each of the next five fiscal years.

c. Total billets by training activity, location and UIC.

8. Element II.A.4. Chargeable Student Billet Requirements.

INSTRUCTIONS:

	Activity, Location, UIC	USN, USMC	PFYs	CFYs	FY +1-5
			ENL, OFF, CIV	ENL, OFF, CIV	ENL, OFF, CIV
SUMMARY TOTALS					
USN					
USMC					
GRAND TOTAL:					

Table 10: Student Billet Requirements

a. Calculate the incremental increase or decrease in chargeable student billets for each applicable training course listed in element III.A.1 and III.A.2. List the aggregate incremental increase or decrease in USN and USMC chargeable billets separately for each quota control activity.

b. Under summary totals, provide total incremental increase or decrease of an officer and enlisted chargeable student billets.

Note: Chargeable student billets include ACDU and FTS for Navy and AD and AR for USMC. SELRES and SMCR are not to be included. USN or FTS officer and enlisted students requiring billets are defined as those on PCS orders regardless of the length of the training course to which they have been ordered.

9. Element II.A.5. Annual Incremental and Cumulative Billets.

a. Officer – USN:

	Designator	Billet Base	PFYs	CFYs	FY +1-5
			+ or - CUM	+ or - CUM	+ or - CUM
OPERATIONAL Billets:					
Active Duty					
Full Time Support					
FLEET SUPPORT Billets:					
Active Duty					
Full Time Support					
INSTRUCTOR AND SUPPORT (STAFF) Billets:					
Active Duty					
Full Time Support					
CHARGEABLE STUDENT Billets:					
Active Duty					

Full Time Support					

Table 11: Officer USN

b. Table 11 Total USN Officer Billets:

Total	PFYs	CFYs	FY +1-5
	+ or - CUM	+ or - CUM	+ or - CUM
OPERATIONAL			
FLEET SUPPORT			
STAFF			
STUDENT			
SELECT RESERVES			

Table 12: Total USN Officer

c. Enlisted or Civilian – USN:

	Rating	NEC, PP, OCC, GD	Billet Base	PFYs	CFYs	FY +1-5
				+ or - CUM	+ or - CUM	+ or - CUM
OPERATIONAL Billets:						
Active Duty						
Full Time Support						

FLEET SUPPORT Billets:						
Active Duty						
Full Time Support						
INSTRUCTOR AND SUPPORT (STAFF) Billets:						
Active Duty						
Full Time Support						
CHARGEABLE STUDENT Billets:						
Active Duty						
Full Time Support						

Table 13: Enlisted or Civilian – USN

d. Total USN Enlisted or Civilian Billets:

Total	PFYs	CFYs	FY +1-5
	+ or - CUM	+ or - CUM	+ or - CUM
OPERATIONAL			
FLEET SUPPORT			
STAFF			

STUDENT			
SELECT RESERVES			

Table 14: Total USN Enlisted or Civilian Billets

e. Officer – USMC:

	PMOS, SMOS	Billet Base	PFYs	CFYs	FY +1-5
			+ or - CUM	+ or - CUM	+ or - CUM
OPERATIONAL Billets:					
Active Duty					
Selected Marine Corp Reserve					
FLEET SUPPORT Billets:					
Active Duty					
Selected Marine Corp Reserve					
INSTRUCTOR AND SUPPORT (STAFF) Billets:					
Active Duty					
Selected Marine Corp Reserve					
CHARGEABLE STUDENT Billets:					

Active Duty					
Selected Marine Corp Reserve					

Table 15: Officer – USMC

f. Total USMC Officer Billets:

Total	PFYs	CFYs	FY +1-5
	+ or - CUM	+ or - CUM	+ or - CUM
OPERATIONAL			
FLEET SUPPORT			
STAFF			
STUDENT			
SELECT MARINE CORPS RESERVES			

Table 16: Total USMC Officer Billets

g. Enlisted or Civilian – USMC:

	PMOS, SMOS, PP, OOC, GD	Billet Base	PFYs	CFYs	FY +1-5
			+ or - CUM	+ or - CUM	+ or - CUM
OPERATIONAL Billets:					
Active Duty					

Selected Marine Corp Reserve					
FLEET SUPPORT Billets:					
Active Duty					
Selected Marine Corp Reserve					
INSTRUCTOR AND SUPPORT (STAFF) Billets:					
Active Duty					
Selected Marine Corp Reserve					
CHARGEABLE STUDENT Billets:					
Active Duty					
Selected Marine Corp Reserve					

Table 17: Total USMC Officer Billets

h. Total USMC Enlisted or Civilian Billets:

Total	PFYs	CFYs	FY +1-5
	+ or - CUM	+ or - CUM	+ or - CUM
OPERATIONAL			
FLEET SUPPORT			

STAFF			
STUDENT			
SELECT MARINE CORPS RESERVES			

Table 18: Total USMC Enlisted or Civilian Billets

INSTRUCTIONS:

i. List the annual incremental and cumulative billets for USN and USMC separately.

(1) Officer.

(a) For Officers, list the billet increases and decreases (by Designator for Navy and PMOS or SMOS for USMC) for Operational, Fleet Support and Instructor and Support Staff by ACDU and FTS for Navy and AD and AR for USMC.

(b) Under the billet base, identify the billets previously programmed, funded and allocated to the old and E/S/S or reserve program. The next fiscal year data reflects the changes to the billet base identified in this NTSP.

(c) Under CFY, indicate the net annual incremental and cumulative billet increases and decreases for the current fiscal year.

(d) Under the remaining columns, indicate the net annual incremental and cumulative billet increases and decreases identified for each of the next five fiscal years.

(e) For Officer Chargeable Student Billets, list the total from Element II.A.4. Chargeable Student Billets are not to be displayed by Designator. Only provide the Chargeable Student Summary Totals from II.A.4.

(f) Provide total USN or USMC officer billets by Operational, Fleet Support, Instructor and Support (Staff), Student and SELRES or SMCR categories.

(2) Enlisted or Civilian.

(a) List the billet increases and decreases for enlisted Navy by Rating, NEC, for USMC by PMOS or SMOS; and for civilians by pay plan, occupational code and grade; for Operational, Fleet Support and Instructor and Support (Staff) by ACDU and FTS for Navy; AD and AR for USMC; and Civilian.

(b) Under the billet base, identify the billets previously programmed, funded and allocated to the old and E/S/S or reserve program. The next fiscal year data reflects the changes to the billet base identified in this NTSP.

(c) Under CFY, indicate the net annual incremental and cumulative billet increases and decreases in the current fiscal year.

(d) Under the remaining columns, indicate the net annual incremental and cumulative billet increases and decreases for each of the next five fiscal years.

(e) For Enlisted Chargeable Student Billets, list the total from Element II.A.4. Chargeable Student Billets are not to be displayed by Rating and NEC or PMOS or SMOS. Only provide the Chargeable Student Summary Totals from II.A.4.

(f) Provide total USN or USMC Enlisted or Civilian billets by Operational, Fleet Support, Instructor and Support (Staff), Student and SELRES or SMCR categories.

(b) Section II.B. Personnel Requirements.

1. Annual Training Input Requirements (ATIR) Calculations. See enclosure (2), Appendix A.

2. Element II.B.1. ATIR.

CIN, Course Title:
Course Length:
Sea Tour Length:
Attrition Factor:
Backout Factor:

Training Activity	Source	Active Duty, Full Time Support, Selective Reserve	PFYs	CFYs	FY +1-5
			+ or - CUM	+ or - CUM	+ or - CUM

Totals:					

Table 19: ATIR Calculations

CIN, Course Title:
Course Length:
Sea Tour Length:
Attrition Factor:
Backout Factor:

Training Activity	Source	Active Duty, Full Time Support, Selective Reserve	PFYs	CFYs	FY +1-5
			+ or - CUM	+ or - CUM	+ or - CUM
Totals:					

Table 20: Activity Totals

Activity Totals:

INSTRUCTIONS:

Note: The procedures for calculating ATIR for personnel attending existing, planned and unique training courses are contained in paragraph 6 of this enclosure.

a. List the annual training input requirements for each CIN and course title, to include all III.A.2 types (existing, planned, unique and existing training phased out).

b. For each CIN, list the course length, the sea tour length, attrition factor and backout factor. Attrition Factor does not apply to USMC students; it pertains to USN students only.

c. For each training activity, list the source (Navy, Marine Corps, other Services, Foreign, Non-Military and Reserve), ACDU-FTS and SELRES for Navy and AD-AR

and SMCR for USMC and the total officer and enlisted personnel requiring training. Determine data from Elements II.A.1.c. (fleet and fleet support billets), II.A.3. (Instructor and support staff billet requirements) and by computing the adjusted ATIR.

d. Under CFY, indicate the number of personnel requiring training in the current fiscal year.

e. Under the remaining columns, indicate the number for personnel requiring training for the next five fiscal years.

f. Adequate time will be allocated to qualify an instructor. The backout factor is equal to two-hundredths the course length in weeks and is expressed as a percentage (20-week course x .02 = .4 backout factor).

(8) PART III - Training Requirements.

(a) Section III.A. Training Course Requirements.

1. Element III.A.1. Initial Training Requirements.

Course Title:
Course Developer:
Instructor:
Course Length:

		Students				
Location, UIC	Start Date	OFF	ENL	CIV	Input Chargeable	Activity Destination

Exhibit 8: Initial Training Requirements List

INSTRUCTIONS:

a. List the course title, course developer, instructor and course length.

b. For each course, list by location and UIC the beginning date, students and ultimate activity destination (such as Developmental Test or OT) for training required before the establishment of follow-on training capability for an officer, operations, maintenance, team and civilian personnel for which the TSA is responsible. List ACDU and FTS separately. The UIC listed is the activity having the administrative responsibility for the students.

c. Use the data from subparagraphs 2b(6) through 2b(8) and a Billet Training Profile (if applicable) for inputs, as appropriate. The output for initial training will be assumed to be the same as the input.

d. Determine chargeable student billets. USN or FTS officer and enlisted students requiring chargeable billets are defined as those on PCS orders regardless of the length of the training course to which they have been ordered. Officers and enlisted personnel on Temporary Additional Duty (TAD) orders and civilians do not require chargeable student billets. Not applicable to SELRES.

e. State directly on this chart if some or all initial training has been completed and removes the historical data.

f. Course length for courses of five working days or less equals the number of days. Courses over five working days include all weekends between the start of the day and the last working day.

2. Element III.A.2. Follow-on Training.

3. Element III.A.2.a. Existing Courses. To include formal Navy and other service courses or listed in the Catalog of Navy Training Courses, wherein training input requirements are included in the OPNAV Annual Class "C" school plans or fleet school plans. The RS submits the training input requirements for NEC awarding Class "C" school plans to the CNO N1 for revising the Class "C" school plans. Non-NEC awarding Class "C" school and fleet school requirement data are used by NETC and the fleet to update appropriate plans. Additional resources required are identified and requested by the applicable TA through the normal programming process. The PM coordinates the existing course input requirements development with the applicable TA(s). The coordination should start sufficiently in advance to ensure that any additional training resources required, including MILCON or facility restoration, renovation and modernization can be programmed in the POM year to meet required RFT dates.

Training Activity:
Location, UIC:

CIN, Course Title:
Source:
Student Category:
Note: Change page authorized instead of updating the NTSP.

	PFY	CFY	FYs +1-5

	OFF	ENL	OFF	ENL	OFF	ENL
ATIR						
Output						
AOB						
Chargeable						

Table 21: Navy Existing Courses

CIN, Course Title:
Source:
Student Category:

	PFY		CFY		FYs +1-5	
	OFF	ENL	OFF	ENL	OFF	ENL
ATIR						
Output						
AOB						
Chargeable						

Table 22: Other Existing Courses

INSTRUCTIONS:

a. Identify as total input, the aggregate Navy or Marine Corps ATIR.

b. List the activity, location and UIC (student), CIN, the course title, source (USN, USMC, Other Service, etc.) requirement and student category (ACDU-FTS and SELRES for Navy and AD-AR and SMCR for USMC).

c. Compute output by applying the school attrition factors to the ATIR figures.

d. Compute average onboard (AOB) to the nearest tenth by using this formula:

$$\frac{\text{ATIR+Output}}{2} \times \frac{\text{Length (days)}}{365}$$

Note: Course length for courses of five working days or less equals the number of days. Course lengths over five working days include all weekends between the first and last class day.

e. Determine chargeable student billets from AOB. The USN or FTS, officer and enlisted students requiring chargeable billets are defined as those on PCS orders regardless of the length of the training course to which they have been ordered. Officer, enlisted and civilian personnel on TAD orders do not require chargeable student billets. Round off chargeable student billets to the nearest whole number for each UIC (student) when transposing this data to Element II.A.4. List ACDU and FTS chargeable billets separately, not applicable to SELRES. The requirements identified here are related to this program only. If the requirements for this new program have been identified in another NTP, then so state.

4. Element III.A.2.b. Planned Courses. Formal new courses provided for in related NTSPs. Training input requirements identified in the family or system of systems and reserve program NTSP are coordinated with the appropriate aviation, E/S/S or family or system of systems NTSP. Accountability for planned courses is within the related NTSP.

Training Activity:
Location, UIC:

CIN, Course Title:
Source:
Student Category:

	PFY	CFY	FYs +1-5

	OFF	ENL	OFF	ENL	OFF	ENL
ATIR						
Output						
AOB						
Chargeable						

Table 23: Planned Courses

INSTRUCTIONS:

a. List the activity, location and UIC (student), CIN, the course title, source (USN, USMC, Other Service, etc.) requirement and student category (ACDU-FTS and SELRES for Navy and AD-AR and SMCR for USMC).

b. Identify as total input, the aggregate Navy or Marine Corps ATIR.

c. Compute Output by applying the school attrition factors to the ATIR figures.

d. Compute average onboard (AOB) to the nearest tenth by using this formula:

$$\frac{\text{ATIR+Output}}{2} \times \frac{\text{Length (days)}}{365}$$

Course length for courses of five working days or less equals the number of days. Course lengths over five working days include all weekends between the first and last class day.

e. Determine chargeable student billets from AOB. The USN or FTS officer and enlisted students requiring chargeable billets are defined as those on PCS orders regardless of the length of the training course to which they have been ordered. Officer, enlisted and civilian personnel on TAD orders do not require chargeable student billets. Round off chargeable student billets to the nearest whole number for each UIC (student) when transposing this data to Element II.A.4. List ACDU and FTS chargeable billets separately, not applicable to SELRES.

5. Element III.A.2.c. Unique Courses change pages as applicable. Formal new courses to be conducted at a training activity to support this E/S/S. Training input requirements and the associated resource requirements are identified within the NTSP, except those unique E/S/S supported by an individual NTSP. In the event training courses or resources are required to support E/S/S unique to the family or system of systems training input requirements are developed and training resource requirements will be listed in Part IV.

Training Activity:
Location, UIC:

CIN, Course Title:
Source:
Student Category:

	PFY		CFY		FYs +1-5	
	OFF	ENL	OFF	ENL	OFF	ENL
ATIR						
Output						
AOB						
Chargeable						

Table 24: Unique Courses

INSTRUCTIONS:

a. List the activity, location and UIC (student), CIN, the course title, source (USN, USMC, Other Service, etc.) requirement and student category (ACDU-FTS and SELRES for Navy and AD-AR and SMCR for USMC).

b. Identify as total input, the aggregate Navy or Marine Corps ATIR.

c. Compute Output by applying the school attrition factors used to the ATIR figures.

d. Compute AOB to the nearest tenth by using this formula:

$$\frac{\text{ATIR+Output}}{2} \times \frac{\text{Length (days)}}{365}$$

Note: Course length for courses of five working days or less equals the number of days. Courses in over five working days include all weekends between the first and last class day.

e. Determine chargeable student billets from AOB. The USN or FTS, officer and enlisted students requiring chargeable billets are defined as those on PCS orders regardless of the length of the training course to which they have been ordered. Officer, enlisted and civilian personnel on TAD orders do not require chargeable student billets. Round off chargeable student billets to the nearest whole number for each UIC (student) when transposing this data to Element II.A.4. List ACDU and FTS chargeable billets separately, not applicable to SELRES.

6. Element III.A.3. Existing Training Phased Out.

Training Activity:
Location, UIC:

CIN, Course Title:
Source:
Student Category:

	PFY		CFY		FYs +1-5	
	OFF	ENL	OFF	ENL	OFF	ENL
ATIR						
Output						
AOB						
Chargeable						

Table 25: Chargeable student billets

INSTRUCTIONS:

a. List the activity, location and UIC (student), CIN, the course title, source (USN, USMC, Other Service, etc.) requirement and student category (ACDU-FTS and SELRES for Navy and AD-AR and SMCR for USMC).

b. Identify as total input, the aggregate Navy or Marine Corps ATIR.

c. Compute Output by applying the school attrition factors to the ATIR figures.

d. Compute AOB to the nearest tenth by using this formula:

$$\frac{\text{ATIR+Output}}{2} \times \frac{\text{Length (days)}}{365}$$

Course length for courses of five working days or less equals the number of days. Courses in over five working days include all weekends between the start of the day and the last working day.

e. Determine chargeable student billets from AOB. The USN or FTS officer and enlisted students requiring chargeable billets are defined as those on PCS orders regardless of the length of the training course to which they have been ordered. Officers, enlisted and civilian personnel on TAD orders do not require chargeable student billets. Round off chargeable student billets to the nearest whole number for each UIC (student) when transposing this data to Element II.A.4. List ACDU and FTS chargeable billets separately, not applicable to SELRES.

(b) Section III.B. Ship Training Course Summary.

Note: Element III.B. The section only applies to Ship NTSPs. The Billet Training Profile (if applicable) can replace Element III.B.

1. Element III.B.1. Officer.

Billet Sequencing Code	Rank	Designator	NOBC	Billet Title	Code	CIN	Course Title	Location/UIC

Exhibit 9: Officer

INSTRUCTIONS:

a. Identify the course title, course or NTSP number, location and appropriate command UIC. List the officer training courses required by the billet title. Assign a lower case alphabetical code to each course, starting with "a." The lower case alphabetical code for pre-

commissioning courses should be underscored "a." Identify the Rank, Designator, NOBC and length of training.

b. This summary is required to provide a planning basis for determining training resource requirements and PCS funding requirements.

2. Element III.B.2. Enlisted.

Billet Sequencing Code	Rate	NEC	MOS	Billet Title	Code	CIN	Course Title	Location/UIC

Exhibit 10: Enlisted

INSTRUCTIONS:

a. Identify the course title, course or NTSP number, location and appropriate command UIC. List the enlisted training courses required by Rating or MOS in alphabetical order. Assign an upper case alphabetical code to each course, starting with "A." The upper case alphabetical code for pre-commissioning courses should be underscored "A." Identify Rating, NEC and length of training.

b. This summary is required to provide a planning basis for determining training resource requirements and PCS funding requirements.

3. Element III.C. Inactive Duty Training Travel (IDTT) and Annual Training (AT) Summary.

Note: Element III.C only applies to Reserve Component Program NTSPs.

PFY		CY		FYs +1-5	
OFF	ENL	OFF	ENL	OFF	ENL

Table 26: IDTT and AT Summary

INSTRUCTIONS: List for each fiscal year the number of total annual officers and enlisted requirements for IDTT to satisfy the training in part III.

*The Element II.C IDTT totals indicate the number of SELRES IDTT trips required by this NTSP per fiscal year. Each IDTT consists of two days (four drill periods).

AT**

PFY		CY		FYs +1-5	
OFF	ENL	OFF	ENL	OFF	ENL

Table 27: AT Summary

**The AT figures represent one AT per FY for each manpower requirement. ATs in this program average 14 days.

INSTRUCTIONS: List for each fiscal year the number of annual officer and enlisted total requirements for AT to satisfy the training in part III.

(9) PART IV - Training Logistics Support Requirements.

(a) Section IV.A. Training Hardware.

1. Element IV.A.1. TTE, General Purpose Test Equipment, Special Purpose Test Equipment (SPTE), ST, General Purpose Electronic Test Equipment, Special Purpose Electronic Test Equipment (SPETE).

Training Activity:
Location, UIC:
CIN, Course Title:

Item Number	Equipment	Type or Range of Repair Parts	Quantity Required	Date Required	Government Furnished Equipment, Contractor Furnished Equipment	Status
TTE-001						
SPETE-001						
General Purpose Test Equipment - 001						
SPTE-001						
ST-001						
General Purpose Electronic Test Equipment - 001						

Table 28: Test Equipment

INSTRUCTIONS:

a. List the training activity, location, UIC, CIN and course title.

b. Each piece of training hardware requires the assignment of an identification number starting with 001 within each category (TTE, General Purpose Test Equipment, SPTE, ST, General Purpose Electronic Test Equipment or SPETE) (e.g., TTE 001, General Purpose Test Equipment 001, etc.). When identifying specific hardware in other acquisition documents, the NTSP number followed by the item number should be provided, such as N98-NTSP-A-50-1201A-TTE-001.

c. List the item number and equipment designation for TTE. List the type and range of repair parts required, the quantity, date required for initial acquisition, replacement, modernization or overhaul of the hardware and the status for each piece, such as onboard.

d. Identify equipment required as GFE or Contractor Furnished Equipment in support of each TD listed in part IV.A.2.

e. When initial production equipment is not provided to the training command, annotate the item and state the rationale for non-compliance, the status of a request for deviation and action being taken to develop alternative training if a deviation is authorized.

f. Reference can be made to an official document providing it specifies all the hardware or repair parts to be delivered are available to the training activity. If a list or reference document is not prepared, indicate the status of development and the planned completion date.

2. Element IV.A.2. Training Devices.

Device:
Description of Device:
Manufacturer:
Contract Number:
TE Status:

Training Activity	Location, UIC	Quantity Required	Date Required	Ready For Training Date	Status	Courses Supported

Exhibit 11: Training Devices

INSTRUCTIONS:

a. For each TD, provide a brief description, manufacturer and contract number.

b. List the training activity, location, UIC, quantity required, date required, RFT date, the status of TD delivery such as onboard, delayed, etc. and training courses supported.

c. By footnote, reference the appropriate document(s) that provides the type and range of repair parts required to support the TD.

d. TTE required for TDs as GFE or Government Furnished Materials (GFM) (or both) is listed in IV.A.1.

e. By footnote, address requirements for Contractor Maintenance Service to include a statement on the use of Contractor Maintenance Services.

f. If a TD supports multiple courses (not just those unique to the E/S/S) and if these courses are documented in other NTSPs, cross-reference the related NTSPs through annotation and identify quantities.

(b) Section IV.B. Courseware Requirements.

1. Element IV.B.1. Training Services.

Course	Type of Training	School/Location/UIC	Number of Personnel	Man-Weeks Required	Start Date

INSTRUCTIONS:

a. List for each course or type of training, the school location or UIC, training services required in the number of personnel and man-weeks and begin date to meet the RFT date.

b. When two or more sites are utilized for training, training advisory services are required at each site.

2. Element IV.B.2. Curricula Materials and Training Aids.

Training Activity:
Location/UIC:
Course Identification Number:
Course Title:

Types of Material or Aid	Quantity Required	Date Required	Status

INSTRUCTIONS:

a. List the training activity, location, UIC, CIN and course title.

b. List the type of curriculum materials. List the quantity required and the date required to meet the RFT date. Indicate the status of material delivery, such as onboard, delayed, etc.

3. Element IV.B.3. Technical Manuals.

Training Activity:
Location/UIC:

Course Identification Number:
Course Title:

Technical Manual Title	Technical Manual #	Medium	Quantity Required	Date Required	Status

INSTRUCTIONS:

a. List the training activity, location, UIC, CIN and course title.

b. List the title and publication number of technical manuals or Interactive Electronic Technical Manuals necessary for training on the operation and maintenance of the development, medium (hardcopy, microfiche, Interactive Electronic Technical Manual disk or CD, etc.), quantity required, date required to meet RFT date and delivery status of items such as onboard, delayed, etc.

c. When initial production technical manuals are not provided to the training command, annotate the item and state the rationale for non-compliance, the status of a request for deviation and action being taken to develop alternative training if a deviation is authorized.

Note: When the list of required Technical Manuals is lengthy and available in another list, refer to that list.

(c) Section IV.C. Facility Requirements.

1. Element IV.C.1. Facility Requirements Summary (Space or Support) by Activity.

Training Activity	Location, UIC	Course Identification Number	Course Title	Required Ready For Training Date

Space Requirement (Square Feet)		Major Facility Requirements		Space Available		Facilities Support Availability	
Academic Class		Power (KW)		F		Power (KW)	
Lab		A/C (Tons)		P		A/C (Tons)	

Applied Class, Lab		Other, Critical		N		Other, Critical	
Admin, Other							

Exhibit 12: Facility Requirements Summary Example

INSTRUCTIONS:

a. List the training activity, location, UIC, CIN, course title and the required RFT date (insert "D" if in support of a TD and add a footnote identifying the TD).

b. List space requirements in square feet for the academic classroom, laboratory, applied classroom or laboratory, administrative offices, IT servers or switches (or both).

c. List major facility requirements such as electrical power in kilowatts, air conditioning in tons and other critical requirements such as chilled water, special electrical grounding, radio frequency interference shielding or physical security standards associated with training classification level.

d. Identify existing space availability in a full (F), partially (P) or not available (N) category.

e. Identify facility support availability in terms of electrical power in kilowatts, air conditioning in tons or other critical needs such as chilled water, special electrical grounding or radio frequency interference shielding or physical standards associated with training classification level.

f. Reference applicable TITAs.

Note: Reference can be made to an official document providing it specifies all the facility information. If a reference document is not prepared, indicate the status of development and the planned completion date.

2. Element IV.C.2. Facility Requirements Detailed by Activity and Course.

Training Activity:
Location, UIC:
CIN, Course Title:

Building And Room Number:
Type Of Facility Project:
Facility Project Number:
Required Project Award Date:
Required RFU Date:

INSTRUCTIONS:

a. List the activity, location, UIC, CIN, course title, building and room number, annotate NA if none.

b. List type of facility projects, such as MILCON, site preparation, alteration or conversion.

c. List the facility project number, required project award date, RFU date and the required RFT date (insert "D" if in support of a TD and add a footnote identifying the TD).

d. Reference applicable TITAs.

Note: Reference can be made to an official document providing it specifies all the facility information. If a reference document is not prepared, indicate the status of development and the planned completion date.

3. Element IV.C.3. Facility Project Summary by Program.

Training Activity:
Location, UIC:

Project Number	Projected Total Scope	Projected Award Date	RFU Date	Status

INSTRUCTIONS:

a. List the training activity, location and UIC.

b. The list project number, the total scope of the project in square feet (insert "D" if in support of a TD and add a footnote identifying the TD), the projected award date, projected RFU date and status such as project development, construction start date, completion date, delays, etc.

c. List other non-training facility projects resulting from this program such as Bachelors Officer Quarters, dining facility expansions or constructions, etc. Indicate whether these related facility projects are fully dedicated to or caused by this program.

(10) PART V – MPT Plan of Action and Milestones.

ACTIVITY	ACTION AND MILESTONES	DATE
PM	Product Supportability Analysis	
PM	Task Analysis	
RS	Identify and Fund manpower and training resource requirements before RFT	
PM	Manpower Analysis	
PM	FEA	
PM	Training Requirements Planning	
PM	NTSP	
PM	TITA	
PM	Ready For Training	

Table 29: MPT Plan of Action and Milestones

INSTRUCTIONS:

(a) List major MPT milestones and the key controlling events on the introduction of the E/S/S.

(b) List the activity that has cognizance over the milestone, date of the action and provide a status of the event. Key events are those that are included in the planning, identification, acquisition, detailing and sequence for manning and training personnel. The listings in subparagraph 2b(10) are samples of controlling events that generally govern the progress of MPT planning requirements. This list is not all-inclusive and can be modified, as necessary, to reflect the unique requirements.

(11) PART VI – Decision Items or Action Required.

Use this table to list the issue(s) or action item(s).

Issue Or Action Required	Command Action	Due Date	Status

INSTRUCTIONS:

(a) List MPT advisory board decisions and Chief of Naval Operations (CNO) directed actions to be taken by the principals, cognizant offices and commands which must be resolved to implement this NTSP. The RS issues action items and ensures they are incorporated into subsequent NTSP updates. List the command responsible for the action items; provide the due date and the status of action items.

(b) Completed action items listed in Part V can be deleted on the next NTSP update when no longer applicable.

Note: Only include those decisions or actions that have a significant MPT impact.

(12) PART VII - Points of Contact.

Name, Function, Activity, Code		Phone Number, E-MAIL Commercial DSN EMAIL

Table 30: Points of Contact Example

INSTRUCTIONS:

(a) List organizational name, code and POC of NTSP principals and other contacts. Under function, include a description of responsibility or title. Provide appropriate commercial and DSN telephone number for each contact (pen and ink change updated at annual review).

(b) List in order: the RS, PM, TSPO, then all other principals in hierarchical order.

(c) Include all personnel having a direct impact on MPT or as directed by the RS, PM or TSPO.

3. Annual Training Input Requirements Calulations in NTSPs - Calculating Adjusted ATIR. The procedures for calculating Adjusted ATIR for personnel attending existing, planned and unique training courses. Either methodology involves the adjustment of the number of required trained personnel to compensate for school attrition and to account for a backout factor. The application of a backout factor is to shift a percentage of input from 1 year back to the previous year to ensure original year student's output requirements. Applicable to courses over two weeks in length and convened on a back to back basis. The backout factor is equal to two-hundredths the course length in weeks and is expressed as a percentage (20-week course x .02 = .4 backout factor).

4. ATIR Methodology Assumptions.

a. For the ATIR methodology, the goal of personnel reassignments is to fill the same NEC coded billet for their entire career. This assumption is consistent with current career planning guidelines wherein "A" and "C" schools are going to closed-loop detailing philosophies. Personnel will know when they enter the Navy that they will work on, for example, the F/A-18 for their entire career.

b. The achievement of the Transient, Patient, Separations and Disciplinary (TPS&D) accountability is through the cumulative number of personnel transferred from duty. The

Attrition Factor accounts for the achievement of the Transient, Patient, Separations and Disciplinary (TPS&D) requirements.

c. The achievement of the Sea-to-Shore rotation goals is through the cumulative number of personnel transferred from duty. These methodologies provide the minimum procedures necessary to determine Adjusted ATIR. The application of additional procedures or algorithms for a more accurate determination of Adjusted ATIR requires concurrence by the appropriate RS and CNO N1. The appropriate worksheet documents the Adjusted ATIR for each course in the NTSP. Upon the revision of the NTSP, the Program Office is responsible for validating the Adjusted ATIR worksheet and revise the Adjusted ATIR worksheet as necessary. The Enlisted Transfer Manual provides the tour length factor and is the average, to the whole number, for all paygrades within the Rating. The appropriate TA provides the course's attrition factor data and for new courses use similar existing course's attrition factor data.

5. ATIR Methods.

a. Method "A" ATIR Instructions. Method "A" provides computation for a single course of instruction.

Note: The examples use an enlisted 3-year sea tour, 10 percent course attrition and a 25-week course for calculating ATIR.

(1) Planning Factors. Enter the specific factors for calculations. The NTSP's Element II.B.1 provides the course length data. However, the course length data requires converting from days to weeks. The Navy Integrated Training Resources and Administration System identifies the course attrition factor and for new courses use similar existing course attrition factor data. Chief of Naval Personnel (PERS 40) provides the sea-tour length data. When calculating Backout Factor, use this formula (Course Length in weeks x 0.02).

Worksheet:

Planning Factors:

Course Length: 25 weeks
Course Attrition Factor: 10 percent (USN enlisted)
Sea Tour Length: 3 years
Backout Factor: .5

(2) Planning Years. Enter the 5 Year Planning Period listed in Element II.A.5. Record the FY before and after the 5 Year Planning Period.

Worksheet:

Planning Years (FY) 11 12 13 14 15 16 17

(3) Introduction of Billets. For the course selected, take the total requirements for each planning period FY for each Designator, NEC or MOS and Rate as applicable from Element II.A.1.c and assign by year on the introduction line of the ATIR Calculation Worksheet

Worksheet:

Planning Years (FY)	11	12	13	14	15	16	17
Introduction		61	42	45	35	8	

Note: In FY12, we will introduce 61 billets and in FY13, we will introduce 42 billets, etc.

(4) Replacement. In this example, personnel trained in FY11. FY11-17 unadjusted ATIR will be replaced in FY14 (FY11 plus 3-year sea tour length = FY14); FY12 will be replaced in FY15 (FY12 plus 3 years sea tour length = FY15); etc.

Worksheet:

Planning Years (FY)	11	12	13	14	15	16	17
Introduction		61	42	45	35	8	
Replacement			0	31	50	59	80

Note: Replacement for the first two planning years (FY12 and 13) is zero since the sea tour length is 3 years and no one was replaced in those years. Replacement in FY14 is 31. The Replacement factor is the product of FY11 adjusted ATIR (34) multiplied by (1 -attrition factor; 1 - 0.1 = 0.9). FY11 adjusted ATIR (34) is based on the FY11 backout resulting from the FY12 course input of 67, which is covered in the backout section. Therefore, replacement is 34 x 0.9 = 31 for FY14. Replacement for FY15 is the product of FY12 adjusted ATIR (56) x 0.9 = 50.4 rounded to 50; etc.

(5) Unadjusted ATIR. Enter the sum of the Introduction and Replacement lines on the Unadjusted ATIR Line.

Worksheet:

Planning Years (FY)	11	12	13	14	15	16	17
Introduction		61	42	45	35	8	
Replacement				31	50	59	80
Unadjusted ATIR		61	42	76	85	67	80

Note: Introduction plus Replacement Equals Unadjusted ATIR

(6) Attrition. Enter the product of Unadjusted ATIR and Attrition Factor on the Attrition Line.

Note: Attrition, in this example, is 10 percent of unadjusted ATIR. (In FY12, unadjusted ATIR is 61. 10 percent of 61 is six. Therefore, attrition for FY12 is six).

Worksheet:

Planning Years (FY)	11	12	13	14	15	16	17
Introduction		61	42	45	35	8	
Replacement				31	50	59	80
Unadjusted ATIR		61	42	76	85	67	80
Attrition		6	4	8	9	7	8

(7) Course Input. Enter the sum of Unadjusted ATIR and Attrition on the Course Input Line.

Worksheet:

Planning Years (FY)	11	12	13	14	15	16	17
Introduction		61	42	45	35	8	
Replacement				31	50	59	80
Unadjusted ATIR		61	42	76	85	67	80
Attrition		6	4	8	9	7	8
Course Input		67	46	84	94	74	88

(8) Backout. Enter the product of Course Input for the planning year and Backout Factor on the Backout Line for the previous year.

Worksheet:

Planning Years (FY)	11	12	13	14	15	16	17
Introduction		61	42	45	35	8	
Replacement				31	50	59	80
Unadjusted ATIR		61	42	76	85	67	80
Attrition		6	4	8	9	7	8
Course Input		67	46	84	94	74	88
Backout		34	23	42	47	37	44

Note 1: Course Input for FY12 is 67. Backout Factor is 0.5. 67 x 0.5 = 33.5 or 34 billets in Backout of FY11; Course Input for FY13 is 46. Backout Factor is 0.5. 46 x 0.5 = 23 billets in Backout of FY12; etc.

Note 2: The Backout for FY11 in subparagh 3a(8) represents the initial training requirement for Operational and Fleet Support billets.

(9) Current Year ATIR. Subtract Backout computed in the previous section from original planning year Course Input used to determine Backout for that original planning year. Enter the difference on the Current ATIR Line for the original planning year. FY12 Course Input minus FY11 Backout = Current ATIR FY12.

Worksheet:

Planning Years (FY)	11	12	13	14	15	16	17
Introduction		61	42	45	35	8	
Replacement		0	0	31	50	59	80
Unadjusted ATIR		61	42	76	85	67	80
Attrition		6	4	8	9	7	8
Course Input		67	46	84	94	74	88
Backout		34	23	42	47	37	44
Current ATIR		33	23	42	47	37	44

Note: FY12 Current ATIR = 67 - 34 for FY12 (33); FY13 Current ATIR = 46 - 23 for FY13 (23); FY14 Current ATIR = 84 - 42 for FY14 (42); etc.

(10) Adjusted ATIR. Enter the sum of Backout and Current Year ATIR on the Adjusted ATIR Line for each year.

Worksheet:

Planning Years (FY)	11	12	13	14	15	16	17
Introduction		61	42	45	35	8	
Replacement				31	50	59	80
Unadjusted ATIR		61	42	76	85	67	80
Attrition		6	4	8	9	7	8
Course Input		67	46	84	94	74	88
Backout		34	23	42	47	37	44
Current ATIR		33	23	42	47	37	44
Adjusted ATIR		67	46	84	94	74	88

Note 1: Adjusted ATIR for FY12 is 34 (Backout) plus 33 (Current ATIR) = 67; Adjusted ATIR for FY13 is 23 (Backout) plus 23 (Current ATIR) = 46; etc.

Note 2: Adjusted ATIR for the current planning year cannot be determined until Backout for the next planning year is completed.

(11) Second Planning Year and Remaining Planning Years. To determine the 2nd year and remaining planning years, repeat steps in subparagraphs 3a(1) through 3a(10).

b. Method "B" ATIR Instructions. Method "B" provides computation for a training pipeline comprised of two or more individual courses in a specific sequence leading to a new NEC or MOS, in which the output of one course is the input to the next course.

Note: The examples use a 3-year sea tour, a three-course pipeline with attrition factors of 0.1, 0.15 and 0.20 with a total pipeline length of 40 weeks.

(1) Planning Factors. Enter the specific factors to be used in the calculations. Pipeline length is determined from the training concept in Part I of the NTSP. The Chief of Naval Personnel (PERS 40) provides the sea-tour length data. Calculate Backout Factor from the formula (Pipeline Length in weeks x 0.02). Course Attrition Factors (CAF) are obtained from Navy Integrated Training Resources and Administration System or estimates based on similar existing courses. Calculate Pipeline Attrition Factor (PAF) to three decimal places from the formula: (1 - CAF1), (1 - CAF2), (1 - CAF3), (1 - CAFn).

Pipeline Length:	40 weeks
Course Attrition Factors	
CAF 1 (1- (1-.1)=	0.1
CAF 2 (1-(1-.15)=	0.15
CAF 3 (1-(1-.2)=	0.2
Pipeline Attrition Factor (PAF) (0.9)(0.85)(0.8)=	0.612
Sea Tour Length	3 years
Pipeline Backout Factor (40 weeks)(0.02)=	0.8

(2) Planning Years. Enter the 5 Year Planning Period listed in Element II.A.5. Record the FY before and after the 5 Year Planning Period.

Worksheet:

Planning Years (FY) 11 12 13 14 15 16 17

(3) Introduction. Enter the incremental Operational and Fleet Support sea and shore billets from Element II.A.5

Worksheet:

Planning Years (FY)	11	12	13	14	15	16	17
Introduction		61	42	45	35	8	

(4) Replacement. Personnel in this program, in FY11, will be replaced in FY14 (FY11 plus 3 years sea tour length = FY14); FY12 will be replaced in FY15 (FY12 plus 3 years sea tour length = FY15); etc. On replacement line for the planning year, enter the product of Adjusted ATIR from replacement year and (1 -PAF). (Adjusted ATIR in FY11 is 80; 1 - PAF is 1 - 0.612 = 0.388; Replacement for FY11 equals 80 x 0.388 = 31.04; Therefore Replacement for FY14 is 31.

Worksheet:

Planning Years (FY)	11	12	13	14	15	16	17
Introduction		61	42	45	35	8	
Replacement*		0	0	31			

*Replacement for first two planning years is zero since the tour length is 3 years and no replacement students will be trained in FY12 or FY13.

(5) Unadjusted ATIR. Enter the sum of Introduction and Replacement requirements on the Unadjusted ATIR line. (In FY12, Introduction is 61; Replacement is zero; 61 + 0 = 61. In FY13, Introduction is 42; Replacement is zero; Unadjusted ATIR for FY13 is 42 + 0 = 42.)

Worksheet:

Planning Years (FY)	11	12	13	14	15	16	17
Introduction		61	42	45	35	8	0
Replacement		0	0	31	29	44	42
Unadjusted ATIR		61	42	76	64	52	42

(6) Pipeline Input. Divide Unadjusted ATIR by PAF and enter quotient on the Pipeline Input line. (FY12: Divide 61 by 0.612 = 99.67 rounded to 100. FY13: Divide 42 by 0.612 = 68.63 rounded to 69.)

Worksheet:

Planning Years (FY)	11	12	13	14	15	16	17
Introduction		61	42	45	35	8	0
Replacement		0	0	31	29	44	42
Unadjusted ATIR		61	42	76	64	52	42
Pipeline Input		100	69	124	105	85	69

(7) Attrition. Enter the difference between pipeline Input and Unadjusted ATIR on Attrition line. (FY12: 100 - 61 = 39; FY13: 69 - 42 = 27; etc.)

Worksheet:

Planning Years (FY)	11	12	13	14	15	16	17
Introduction		61	42	45	35	8	0
Replacement		0	0	31	29	44	42
Unadjusted ATIR		61	42	76	64	52	42
Pipeline Input		100	69	124	105	85	69
Attrition		39	27	48	41	33	27

(8) Backout. Enter the product of Pipeline Input for the planning year and Backout Factor on the Backout line for the previous year. (Pipeline Input for FY12 is 100, Backout is 0.8; 100 x 0.8 = 80; therefore, Backout for FY11 is 80.) Pipeline Input for FY13 is 69, Backout is 0.8; 69 x 0.8 = 55; therefore, Backout for FY12 is 55.

Worksheet:

Planning Years (FY)	11	12	13	14	15	16	17
Introduction		61	42	45	35	8	0
Replacement		0	0	31	29	44	42
Unadjusted ATIR		61	42	76	64	52	42
Pipeline Input		100	69	124	105	85	69
Attrition		39	27	48	41	33	27
Backout	80	55	14	84	68	55	45

(9) Current Year ATIR. Subtract Backout from the Pipeline Input for the planning year. Enter difference on the Current ATIR line for the planning year. (Subtract Backout for FY11 (80) from Pipeline Input for FY12 (100); 100 - 80 = 20. Therefore, 20 is the Current ATIR for FY12.) Subtract Backout for FY12 (55) from the Pipeline Input for FY13 (69); 69 - 55 = 14; therefore 14 is the Current ATIR for FY13.

Worksheet:

Planning Years (FY)	11	12	13	14	15	16	17
Introduction		61	42	45	35	8	0
Replacement		0	0	31	29	44	42
Unadjusted ATIR		61	42	76	64	52	42
Pipeline Input		100	69	124	105	85	69
Attrition		39	27	48	41	33	27
Backout	80	55	14	84	68	55	45
Current Year ATIR	0	20	14	25	21	17	14

(10) Adjusted ATIR. For the previous year, enter the sum of Backout and Current Year ATIR on the Adjusted ATIR line. (For FY11 add Backout (80) plus Current ATIR (0) = 80 for FY11 Adjusted ATIR.) (For FY12 add Backout (55) plus Current ATIR (20) = 75 for FY12 Adjusted ATIR.

Worksheet:

Planning Years (FY)	11	12	13	14	15	16	17
Introduction		61	42	45	35	8	0
Replacement		0	0	31	29	44	42
Unadjusted ATIR		61	42	76	64	52	42
Pipeline Input		100	69	124	105	85	69
Attrition		39	27	48	41	33	27
Backout	80	55	14	84	68	55	45
Current Year ATIR	0	20	14	25	21	17	14
Adjusted ATIR	80*	75	113	109	89	72	59

*The Backout for the first planning year represents the initial training requirement for Operational and Fleet Support billets.

Note: Adjusted ATIR for the current planning year cannot be determined until Backout for the next planning year is computed.

(11) Second Planning Year and Remaining Planning Years. Repeat Replacement through Adjusted ATIR calculations for the second planning year.

(12) Extended Planning Years. Replacement through Adjusted ATIR calculations may be repeated beyond the 5 year planning period to determine steady-state ATIR.

(13) Annual Training Input Requirement for Phase-Out Courses (With AOB).

Course Title: Test Course X-XXX-XXX

Planning Factors.

Length: 12 Weeks
Backout: 0.24
Attrition: 10 percent
Begin: FY11
Tour Length: 3 Years (36 months)

Planning Years (FY)	11	12	13	14	15	16	17	18
Fleet Requirements	108	108	108	108	81	68	40	24
Replacement	36	36	36	36	27	23	13	8
Attrition	4	4	4	4	3	2	1	1
Input	40	40	40	40	30	25	14	9
Backout	10	10	10	7	6	3	2	0
Current Year ATIR	30	30	30	30	23	19	11	7

Adjusted ATIR	40	40	40	37	29	22	13	7
Output	36	36	36	33	26	20	12	6
AOB or Chargeable	8.5	8.5	8.5	7.9	6.2	4.7	2.8	1.5

Note: This methodology uses the same rationale as the ATIR methodology. In this methodology, we only train the replacements. In the example, the replacement for FY11 through 18 is computed by dividing the Fleet Requirement by the tour length in years.

(a) Fleet training requirements are determined by taking total authorized (funded) billets for a particular NEC, MOS or Designator.

(b) Replacement personnel is determined by dividing the Fleet Requirements by the tour length in years. (FY11: Replacement is 108 divided by 3 = 36; FY15: Replacement is 81 divided by 3 = 27.)

(c) Attrition is 10 percent of Replacement for enlisted USN, enlisted FTS and enlisted SELRES. Attrition is 0 percent for USN officers and all USMC.

(d) Input is Replacement plus Attrition for that year. (FY11 is 36 + 4 = 40; FY15 is 27 + 3 = 30.)

(e) The Backout Factor is .02 times the number of weeks in the course. The Backout Factor requirement is the Backout from the previous year. In this example, the Backout Factor is 0.02 x 12 = 0.24. (Backout for FY12 is (FY13 Input x 0.24; 40 x 0.24 = 9.6 = 10).)

(f) Current ATIR is input minus Backout from the previous year. (Current ATIR for FY13 is FY13 Input (40) minus FY12 Backout (10) equals 30.)

(g) Adjusted ATIR is Backout plus Current ATIR for the planning year. (Adjusted ATIR for FY14 is Backout (7) plus Current ATIR (30) equals 37.)

(h) The output is Adjusted ATIR minus Attrition of 10 percent. The output for FY13 is Adjusted ATIR (40) minus Attrition (4) equals 36.

(i) AOB or Chargeable for FY12 is Adjusted ATIR plus Output (40 + 36) divided by two equals 38; multiplied by the number of days in the course (12 weeks = 82 days) 38 x 82 = 3,116; divided by 365; equals 8.5. Therefore, the AOB or Chargeable for FY12 is 8.5.

TRAINING EFFECTIVENESS EVALUATION PLAN

1. Introduction. The TEEP identifies and describes the plan to conduct a Training Effectiveness Evaluation (TEE) of the KPP or KSA (or both), critical tasks and associated standards related to the training delivered. The TEEP provides a strategy to collect and evaluate performance data of E/S/S, training systems, curricula and sailors.

2. Purpose. To document the strategy, schedule and measures of effectiveness as determined by the TYCOMs, NETC and other stakeholders.

3. Process. The PM is responsible for the TEEP in coordination with NETC and TYCOM. At a minimum, a TEEP will be developed in alignment with the MTRP or test and evaluation master plan (TEMP) (or both) and builder's trial cards resulting from changes to a Rating Continuum. Updates will be developed based on MTRP triggers and incorporated into the next scheduled TEE. A TEE will be conducted no earlier than six months after completion of the pilot training event and when the system and fleet occupational performance data is available to collect and evaluate. The results of the TEE may drive revisions to MTRP products (FEA, RDA, etc.)

4. Procedure. The actions identified in subparagh 4a-c will be performed to create a TEEP and TEE.

a. The task analysis (system or rating) data is the authoritative source for the system and learning objectives linked to occupational standards providing the foundational starting point for planning.

b. Create an individual detailed evaluation plan for the TEEA, who will conduct the TEE. Identify the resources required to conduct the TEE. The TEEP requires TYCOM concurrence.

c. The TEEP will have the following sections: front matter, program identification, data collection strategy, evaluation strategy, TEEA selection and TEE reporting.

(1) Front Matter. Includes a cover page that identifies the training system or the training device, date prepared and activity or organization by code preparing the document and a table of contents identifying training system or training device name and number.

(2) Part 1 - Program Identification. Identify the host activity and location of the training site(s). List identification of TEEA(s) to send team members with lead activity also identified. List the number, rank, rate and rating of students to evaluate. List the number and type of instructor or support personnel.

(3) Part 2 - Data collection strategy. Identify system and individual performance data indicators associated with KPP or KSA and critical tasks to be collected. Establish how the identified data will validate the analysis outlined in the evaluation strategy (e.g., MOEs, learning

analytics, thresholds or objective, attributes, parameters, etc.) per the NETC Training Effectiveness Program. List data sources, technique(s) and procedures to use for collecting data. Incorporate a timeline for data collection activities into the TEE schedule.

(4) Part 3 - Evaluation Strategy. The goal of the evaluation is to analyze the data collected and recommend improvements to system performance, training development and training solutions. The TEE focuses to the extent practicable, on the actual performance of E/S/S and sailors. Describe the technical approach that will be used to determine if the objectives were met and identify gaps or opportunities for improvements.

(5) Part 4 - TEEA Selection. The PM, in coordination with the RSs or TYCOM, will select a TEEA to execute the TEE for a system and one for the rating(s) that would operate and maintain the system. The RS(s) must consider the extent and complexity of TEE desired in the selection of TEEA(s) and team. The TEEA(s) will possess or be provided dedicated resources and be able to report results directly to the RS(s).

(6) Part 5 - TEE Report. Results of the TEE (including analysis methodology, significant findings and recommendations) will be provided to the appropriate stakeholders. RSs will determine the need for follow-up TEEs.

5. The TEEP identifies and describes the plan to conduct a TEE of the training functions, performance levels and proficiency requirements to measure the training product's success in leading students to achieve job performance objectives. The TEE, where applicable, provides an analysis of training capability based on demonstrated trainee performance improvements directly attributable to the training received. An individual detailed evaluation plan must be developed for the TEEA, who will conduct the TEE. The TEE will include, at a minimum, a quantitative evaluation strategy that identifies Measures of Effectiveness for each program or system and will identify Reaction, Summative, Behavior and Result Evaluations. Reaction evaluations are assessments by the students receiving the training of their reactions and opinions of their learning experience. Summative evaluations are assessments of the knowledge or the skills gained during the training. Typically, summative evaluations provide a quantitative grade and make a judgment about a person's knowledge, skills and achievement based on the training. Behavior evaluations provide the measures regarding the degree to which students apply what they learned during training when they are back on the job. Result evaluations provide information regarding the degree to which targeted outcomes occur as a result of the training. A plan for result evaluations will be addressed as early as possible in the training development timeline.

a. TEEP.

Front Matter Cover Page Table of Contents
Part 1 – Program identification The host activity and location of the training site TEEA The training system or Individual(s) to evaluate Training Resources
Part 2 – Data collection strategy System and individual performance data indicators KPP or KSA and critical tasks Data sources Data validation The technique(s) and procedures Timeline
Part 3 – Evaluation strategy Overview Operation Evaluation Internal Evaluation External Evaluation

Assessment Techniques and Procedures
Part 4 – TEEA(s) selection
Part 5 – TEE reporting Executive Summary Analysis methodology Significant findings Recommendations Stakeholders distribution list

Table 31: TEEP example

b. TEE.

Cover Page Executive Summary Table of Contents
Part 1 – Training Evaluation Planning Data Purpose of the Evaluation Scope of the Evaluation Data Sources Types of Data Collected and Associated Metrics Data Analysis Methodology Schedule of Events

PART 2 – Training Evaluation Results Data Summary of Findings Training Materials Technical Training Equipment and Trainer Unique Equipment Training Facilities Instructors Training Literature, Records and Reports
PART 3 – Conclusions and Recommendations Conclusions Recommendations
Appendices as required (examples are) Course Reports Learning Objective Analysis Simulation Technology Analysis

Table 32: TEE Example

c. Example TEEP Format. Detailed evaluation plans will be developed for the TEEA, who will conduct the TEE. Each TEEP will at a minimum address and provide details on items in subparagraphs 5c(1) – 5c(8):

(1) Part I. Example Cover Page. Identify the training product or the Training Device in the center of the page, followed by the "TEEP." Mark it Draft or status blank if being submitted for approval. Include the date prepared and activity or organization by code preparing the document.

(2) Table of Contents.

(a) Program Identification.

(b) Identify the training product or TD name and number.

(c) Identify the TEEP developer and date submitted.

(3) Identify the host activity and location of the training site(s).

(4) Identify the TD Agent.

(5) List identification of TEEA (single organization or organization(s)) to send team members with lead activity also identified.

(6) Identify the planned RFT date.

(7) List the number and Rank or Rate or Rating of students to be considered.

(8) List the number and type of instructor or support personnel.

d. Part II. Planned Evaluation - each evaluation plan will address and provide specifics on items identified in subparagraphs 5d(1) through 5d(13):

(1) Data on the adequacy of the curriculum, student or instructor qualifications and training product and a TD Life-Cycle Sustainment Plan.

(2) Data on the goals to be met by the Reaction, Summative, Behavior and Result Evaluations (i.e., track, measure and evaluate performance data that links to training effectiveness. Provide specific information that is required from the TEE about a training product or its use).

(3) Description of the training product and how it supports the overall training program.

(4) Training tasks assigned to be accomplished through the use of the training product or TD.

(5) Standards to be employed to determine whether the stated objectives can be or have been met by training product or TD use. This assessment constitutes step one of the TEE; step two is an evaluation of the training product itself.

(6) The specific approach that will be used to conduct the TEE includes items identified in subparaphs 5d(6)(a) through 5d(6)(d):

(a) Evaluation strategy or strategies to be employed.

(b) Training scenarios when appropriate.

(c) Data to be collected.

(d) Techniques and procedures that will be used for collecting data.

(7) Details as to how measuring instruments will be selected, modified, developed and used during the TEE.

(8) Details as to how the collected data will be processed and reported to reflect training effectiveness.

(9) The schedule for data collection and completion of the TEE.

(10) The numbers and types of personnel required to monitor, collect and process the data.

(11) Any special training requirements for personnel who will monitor, collect and process the data.

(12) Special resources required to conduct the TEE.

(13) Specific minimum performance assessment criteria:

(a) Number of school quotas used or unused, capacity, the average number of days to train and percent attaining Navy Enlisted Classifications.

(b) The number of fleet gains or losses, number of reclassified, percent qualified and certified based on FIT or FILL.

e. Part III. Evaluation Strategy - the TEE should focus to the extent practicable, on experience with the training product or TD. The evaluation is empirical. The empirical TEE is an assessment of the given training product against the established learning objectives. The user conducts the training course with the actual students. The evaluation team observes and monitors the training. Data is collected and analyzed concerning the degree to which the training objectives are met. Examples include items in subparaphs 5e(1) through 5e(6):

(1) TD design deficiencies that limit or preclude effective training.

(2) Difficulties in establishing optimum or required learning conditions.

(3) Student progress toward achievement of learning or training objectives (or both) and includes task difficulty, duration and training efficiency.

(4) The capability of meeting established fleet TYCOM criteria and Occupational standards.

(5) Student and instructor attitudes relating to the acceptance or rejection of the training product or TD.

(6) Student proficiency at the end of training as determined using written or practical exercise tests based on task analysis.

f. Part IV. Example TEE Agent Selection - the Training Requirements Program Manager must consider the extent of TEE desired in the selection of a TEEA. The TEEA should have no organizational conflict of interest, possess or be provided dedicated resources and be able to report results directly to the RS. The TEEA could be the TA, TYCOM or a team of personnel from these organizations (with a designated lead activity). Specific skills identified in subparagraphs 5f(1) through 5f(4) should be available to the TEEA:

(1) Capability to analyze the task analysis, curriculum, analytics and instructional strategies.

(2) Capability to make a technical assessment of the training product or TD, particularly its capabilities and improvement to performance.

(3) Capability to prepare specific tests and perform subsequent analyses of the data collected.

(4) A Subject Matter Expert.

g. Part V. Example Initial or Repeat TEEs - the proposed TEEP is forwarded to the RS for approval. Distribution of the approved TEEP includes CNO N1, TA and others as appropriate.

(1) If a similar training system has already completed a TEE, a TEEP on the new training products may not be required. Only an evaluation of the differences may be necessary.

(2) When TEE results are unsatisfactory, the TEEA will track progress until adjudication of all training product deficiencies. TA will determine the need for follow-up TEEs.

h. Part VI. Example TEE Results – the results of the TEE (including significant findings and recommendations) will be provided to the TA, CNO N1, NETC N51 and others as appropriate in a letter signed by the senior member of the TEEA team. It will include the identification of action officers. An enclosure will be attached to the technical evaluation containing background and detailed information on the TEE and its results. The RS will document the resolution of the identified deficiencies.

TRAINING INSTALLATION AND TRANSFER AGREEMENT

1. Purpose. To establish guidelines for development and submission of a TITA for planning, coordinating and to deliver new or modernized acquisition training system products identified in a CNO approved NTSP and subsequently, the installation and transfer of those training products and their complete logistics outfitting. It also includes supporting technical documents and curriculum per OPNAVINST 1500.76 (series). The Table 1 checklist is Part A of the TITA and is referred to as the TITA Template. The Installation Design Plan is Part B of the TITA.

2. Background. The TITA or Installation Design Plan pairing ensures that all approved NTSP training resources and capabilities are in place to support the execution of the transfer of responsibility from the Warfare Enterprise tactical and MPT RS, Enterprise SYSCOM Acquisition PM , TSPO and the TSA to the TA. The TITA is designed for the Warfare Enterprise RS, Enterprise SYSCOM's Acquisition PM, TSPO, TSA and TA to ensure the coordinated, effective training transfer from the acquisition phase to the sustainment training phase. The TITA executes the transfer of responsibility for a complete sustainable training system from the SYSCOM's Acquisition PM, TSPO or the TSA to the TA.

3. Policy.

a. An initial TITA will be developed and approved not later than 180 days after MS C for all acquisition category programs and non-acquisition category programs. The TITA will be implemented for all new or modified Programs of Record systems. The content of the TITA template is not meant to be prescriptive. The developer, as concurred with by the Warfare Enterprise Manpower and Training RS and the Warfare Enterprise SYSCOM TSPO, can tailor the TITA. All TITA documents will be updated to reflect changes by the assigned SYSCOM Acquisition PM, TSPO and TSA and submitted to the Warfare Enterprise MPT RS for coordination and concurrence with the TA. These updates permit the Warfare Enterprise RS and CNO N1 to identify necessary resources to ensure successful delivery and sustainment of training items identified at the CNO approved RFT date as identified in the tactical system NTSP.

b. Training risk levels will be identified via stoplight ratings and mitigations prioritized before RFT, for items in the TITA that are not labeled with a "Green" status. In such cases, the appropriate Warfare Enterprise MPT RS will coordinate with NETC TA and TYCOM to develop a risk mitigation strategy for all items not in a "Green" status.

c. Training will transition at RFT provided all items listed in the TITA are in a "Green" status or have exceptions acknowledged and concurred in by principal stakeholders with the proper execution of the Phase III Final Installation Design Plan. The TITA does not apply to Naval Nuclear Propulsion or Strategic Weapons Systems training system deliveries.

d. The Installation Design Plan document development process initiates using a Trainer Change Proposal routed through the TSPO or other delegated activities for document type

(Installation Design Plan or Installation Design Plan Short Form) determination and number assignment. The TSPO and TA should consider the use of the complete Installation Design Plan for all initial training capability installations and those situations requiring documentation of significant facility impacts to ensure adequate logistics and facility planning is completed, thus limiting the potential for future support conflicts.

e. A TITA identification number will be utilized to facilitate tracking and identification. The first character identifies the TSA's command, followed by a consecutively assigned number, which is unique to each TITA. An additional four characters may be assigned for further command identification. Each Installation Design Plan will be assigned the same number as the parent TITA, with sequential letter identifiers on end to identify multiple Installation Design Plans designated under the same TITA. An example of the identification system is:

C - XXXX - #

Installation Design Plan Identifier
Optional command unique designator

Sequential Number

Command:
A - NAVAIR E - NAVWAR
F - NAVFAC N - NAVAIR TSD
U - NAVSUP M - BUMED
S - NAVSEA (Surface) SS - NAVSEA (Submarine)
X - Other

4. Process.

a. The TITA process intent is to ensure successful documentation of training systems and necessary logistics support, as identified in the approved NTSP for the subject acquisition system and transition into the sustainment training phase. This agreement validates the execution status of MPT items identified in the CNO approved NTSP and associated approved SYSCOM training system installation and logistics outfitting to achieve RFT and begin sustainment training. The TITA is intended to be the coordination and management tool to facilitate effective planning for training system delivery at the DCNO level.

b. Status indicators identified in subparagraphs 4b(1) through 4b(3) apply to the training items listed in the TITA template. The Warfare Enterprise RS, SYSCOM's Acquisition Program Manager, TSPO and TSA have the latitude to jointly tailor the status and justification of any items (e.g., funding or schedule changes), upon coordination with the TA and any other entities as necessary.

(1) Red. Training system and product lifecycle management data requirements are not programmed in the RS POM or are unfunded to meet the NTSP approved RFT date or the deadline established by TYCOM governing issuance. Risk mitigation "Objective Quality Evidence" response and corrective action from the Responsible Activity or Authority is required.

(2) Yellow. Training system requirement and product lifecycle management data requirements are programmed in the POM, funded, but behind schedule to meet NTSP approved RFT date. A risk mitigation response from the Responsible Activity or Authority is required.

(3) Green. Training system requirements are funded and on schedule to meet RFT.

c. TITA signatories could include the following: Warfare Enterprise RS (Tactical and MPT), Enterprise SYSCOM's Acquisition Program Manager, TSPO, TSA, TA, OPNAV N13 and should be defined and the attached template modified as necessary as part of initial training solutions planning.

5. Discussion.

a. The provisions of this instruction are applicable to all situations where the procurement of or modification to training systems (e.g., TTE or TD and logistics support) is required to establish or sustain formal training at naval training commands, other naval commands which conduct formal training courses and at other DoD facilities where training is conducted under U.S. Navy auspices. For all such procurements, an Installation Design Plan must be prepared to:

(1) Define facility requirements, including MILCON and special projects, for installation of the training system.

(2) Identify all associated logistics support elements.

b. The TITA or Installation Design Plan will be an integral part of the system acquisition process and will support the introduction of new training systems and equipment, which are planned following reference (i), training system changes, as well as sustaining requirements.

c. The TSA or Installing Activity will ensure that TITA or Installation Design Plan development and execution status is reported to the TA and assist in coordinating accomplishment of the schedule leading to RFT and final acceptance. TSA or Installing Activity will also chair the Pre-Installation and Post-Installation briefs using an agenda, minutes or report and checklists.

d. When submitting Phase I, all data items should be addressed, include any available Phase II data. A critical document that states the training system facility support requirements and all logistics support elements necessary to support the establishment of a training system at a Navy Learning Facility, the complete Installation Design Plan must reflect the most current information available.

e. The Installation Design Plan is intended to provide a format to consolidate the relevant data to be provided to the TA in support of a planned installation. Individual TSAs (i.e., PMs) or Systems Commands may develop Installation Design Plans, which contain additional and clarifying information. Installation Design Plan contains the typical considerations necessary to provide either a new training or updated capability to a learning facility.

f. In those cases where a change to an existing training asset does not impact the facility infrastructure, An Installation Design Plan Short Form, consisting of modified IDD, can be used as a standalone document. The Installation Design Plan Short Form can be recommended for limited facility infrastructure installations by the TSA in the CP, but only used after a training capability has been initially installed by an Installation Design Plan.

g. Representative process diagrams are provided as Exhibits 1 through 6. Exhibit 1 shows the Installation Design Plans short 16 week process. These exhibits present facility circumstances and lead times for the development of TITAs, before the RFT date:

(1) Six (6) years when associated MILCON Major Construction Project for facilities is required;

(2) One hundred and forty nine (149)+ weeks when associated UMC MILCON or Section 219(a) Funded Project for facilities is required;

(3) Ninety seven (97)+ weeks when Special Installation (Demolition paid by TSA funds up to 750K) or associated Special Project for facilities (funded by appropriations available for operations and maintenance) is required;

(4) Fifty six (56)+ weeks for Installation Only (for Equipment Installations with minimal facility impacts);

(5) Thirty two (32)+ weeks when Installation Only (Accelerated Schedule).

h. When MILCON is required, the schedule allows sufficient time for the MILCON planning, programming and budgeting process. When MILCON is not required, the TSA and TA use the time to identify all requirements (equipment and support) and the host installation Public Works Department (PWD) to plan for the installation, be it a Special Project or routine installation. Depending on the complexity, additional time may be allocated for project completion, that is, site preparation and installation of the training system.

i. After project identification, a Change Proposal (CP) Form, exhibit 1 or facsimile is filled out by the TSA and submitted to the TA for concurrence. Upon TA concurrence, the TSA will assign an Installation Design Plan number and the project will be reported on the appropriate Web sites (AVTECHTRA, NAVSEA Systems Command Training Acquisition, Human Analysis and Requirements Planning System, MNP). Following the document number assignment, an Initial Installation Design Plan (Phase I) is filled out and forwarded to the TA. The Installation

Design Plan will be released as a complete plan to include all three phases. During development and upon submission, all available data will be included. It is preferred that data submission be made electronically as well, except large or detailed drawing packages which may be in a format (i.e., AutoCAD) not readily usable by the reviewers. On revision, all phases that have not been executed (signed by the TSA and TA) will be updated. A signed Installation Design Plan and updates are considered a binding agreement and are historical data. In sections where complete and detailed information is not immediately available, a paragraph or statement of intent will be provided in place of "To Be Determined (TBD)" or leaving a section blank. If a particular section is not applicable, so state. Include any drawings and depictions that may serve to amplify the Installation Design Plan data. Each TSPO will maintain its schedule and will notify stakeholders if there are changes.

Installation Design Plan Process Nominal Timeline
Installation Design Plan Short

<table>
<tr><th>Suppliers</th><th>Inputs</th><th>Process</th><th>Outputs</th><th>Customers</th></tr>
<tr><td rowspan="3">OPNAV, NETC, SYSCOMS, PEOs</td><td rowspan="2">Funding ID
Requirements Approved
Training Requirement</td><td>Short Development POA&M, Work Plan, Work Scope, Draft IDD, FRCB Accreditation</td><td>Draft Work Plan, Draft IDP Short, 12 Weeks</td><td rowspan="3">TA</td></tr>
<tr><td>TSA Signoff</td><td>TSA Signoff Sheet, Pre-install Checklist, Signed IDP Short</td></tr>
<tr><td>Enablers
OPNAVISNT 1500.76D, OPNAVINST 11010.20H,</td><td>Phase 3
Install meetings</td><td>Test Report, 4790 CK, Signed IDP Completion Report</td></tr>
</table>

	Training Requirements Document, NTSP	Testing or SOVT	4 Weeks	TA
		Total Process Cycle Time: 16 Weeks		

Exhibit 13: 16 Weeks Process Time

FRCB – Fleet Readiness Certification Board
IDD – Installation Design Documentation

IDP – Installation Design Plan
NTSP – Navy Training System Plan
POA&M – Plan of Actions and Milestones

POM – Program Objective Memorandum
Applies to Exhibit 1 through Exhibit 6

PWD – Public Works Department
SOVT – System Operational Verification Test
TA – Training Agency
TSA – Training Support Agency
USFFC – United States Fleet Forces Command

Installation Design Plan Process Nominal Timeline
Installation Only (Rapid)

Suppliers	Inputs	Process	Outputs	Customers
OPNAV, NETC, SYSCOMS, PEOs	Funding, ID Requirements, Approved Training Requirement	Phase 1&2 Combined POA&M Work Plan, Work Scope, IDD Development, FRCB Accreditation	Draft Work Plan 23 Weeks Phase 2 Signoff Sheet, Pre-install Checklist	TA
		TSA Signoff	Test Report, 4790 CK, IDP Completion Report	TA

	Enablers, OPNAVISNT 1500.76D, OPNAVINST 11010.20H, Training Requirements Document, NTSP	Phase 3 Install meetings	10 Weeks	
Total Process Cycle Time 33 Weeks				

Exhibit 14: 33 Week Process Time

Installation Design Plan Process Nominal Timeline
Installation Only

Suppliers	Inputs	Process	Outputs	Customers
OPNAV, NETC, SYSCOMS, PEOs	Funding, ID Requirements, Approved Training Requirement Enablers, OPNAVISNT 1500.76D, OPNAVINST 11010.20H, Training Requirements Document, NTSP	Phase 1 Dev Statement of Requirements, Dev Preliminary Site Survey, POA&M, Funding Approach	Arrangement Drawing Draft Work Plan DD 1391 12 Weeks Phase 1 Signoff Description of Training, System Design Elements	TA, PWD
		TSA,TA Phase 1 Signoff		

		Phase 2 Define Training System, Engineering Site Survey, Develop Ready to Install Cert, Develop Trainer Lifecycle Support Package, Develop Train the Trainer	Draft Drawing Package 25 Weeks Phase 2 Test Report 4790 CK IDP Completion Report 19 Weeks Signed Phase 3	
		TSA,TA Phase 2 Signoff		TA, PWD
		Phase 3 Pre-Install Meeting, Site Prep, Install Training System Testing, Post-Install Meeting		TA, PWD
		TSA,TA Phase 3 Signoff		
Total Process Cycle Time 56 Weeks				

Exhibit 15: 56 Weeks Process Time

Installation Design Plan Process Nominal Timeline

Special Projects/or Facility Mods

Suppliers	Inputs	Process	Outputs	Customers
OPNAV, NETC, SYSCOMS, PEOs	Funding, ID Requirements, Approved Training Requirement	Phase 1 Dev Statement of Requirements, Dev Preliminary Site Survey, POA&M, Funding Approach	Arrangement Drawing Draft Work Plan DD 1391 12 Weeks	TA, PWD
		TSA,TA Phase 1 Signoff	Phase 1 Signoff	
		Phase 2 Define Training System, Engineering Site Survey, Develop Ready to Install Cert, Develop Trainer Lifecycle Support Package, Develop Train the Trainer	Description of Training, System Design Elements Draft IDP 29 Weeks	TA, PWD
		TSA,TA Phase 2 Signoff	Phase 2 Signoff	

	Enablers, OPNAVISNT 1500.76D, OPNAVINST 11010.20H, Training Requirements Document, NTSP	Phase 3 Pre-Install Meeting, Site Prep, Install Training System Testing, Identify Discrepancies, Post-Install Meeting	Test Report 4790 CK IDP Completion Report 56 Weeks	TA, PWD
		TSA,TA Phase 3 Signoff	Signed Phase 3	
Total Process Cycle Time 97 Weeks				

Exhibit 16: 97 Weeks Process Time

Installation Design Plan Process Nominal Timeline
UMC MILCON or Section 219(a) Funded

Suppliers	Inputs	Process	Outputs	Customers
OPNAV, NETC, SYSCOMS, PEOs	Funding, ID Requirements, Approved Training Requirement	Phase 1 Dev Statement of Requirements, Dev Preliminary Site Survey, POA&M, Funding Approach	Arrangement Drawing Draft Work Plan DD 1391 12 Weeks	TA, PWD
		TSA,TA Phase 1 Signoff	Phase 1 Signoff	

	Enablers, OPNAVISNT 1500.76D, OPNAVINST 11010.20H, Training Requirements Document, NTSP	Phase 2 Define Training System, Engineering Site Survey, Develop Ready to Install Cert, Develop Trainer Lifecycle Support Package, Develop Train the Trainer	Description of Training, System Design Elements Draft IDP 29 Weeks	TA, PWD
		TSA,TA Phase 2 Signoff	Phase 2 Signoff	
		Phase 3 Pre-Install Meeting, Site Prep, Install Training System Testing, Identify Discrepancies, Post-Install Meeting	Test Report 4790 CK IDP Completion Report 56 Weeks	TA, PWD
		TSA,TA Phase 3 Signoff	Signed Phase 3	
Total Process Cycle Time 149 Weeks				

Exhibit 17: 149 Weeks Process Time

Installation Design Plan Process Nominal Timeline
MILCON Major Construction Project

Suppliers	Inputs	Process	Outputs	Customers
OPNAV, NETC, SYSCOMS, PEOs	Funding, ID Requirements, Approved Training Requirement	Phase 1 Dev Statement of Requirements, Conduct Preliminary Site Survey, POA&M, Funding Approach, Draft POM Budget Request RFT -6	Arrangement Drawing Draft Work Plan, DD 1391,POM Submission 20 Weeks	TSA, TA, PWD
		TSA,TA Phase 1 Signoff	Phase 1 Signoff	
		Revise Phase 1 Annually RFT -5	12 Weeks	
		Phase 2 Define Training System, Refine Facility Requirements RFT -4	Description of Training, System Design Elements 60 Weeks	TSA, TA, PWD
	Enablers, OPNAVISNT 1500.76D, OPNAVINST 11010.20H, Training Requirements	Engineering Site Survey, Develop Ready to Install Cert, Develop Trainer Lifecycle, Support Package, Develop Train the Trainer RFT -3	Draft Drawing Package 24 Weeks	

	Document, NTSP	Phase 2 Signoff		TSA, TA
		Phase 2 Revision and Review Annually, RFT-2 & RFT -1 RFT -2	Phase 2 Signoff	
		Phase 3 Pre-Install Meeting, Site Prep, Install Training System Testing, Identify Discrepancies, Post-Install Meeting RFT -1	12 Weeks Test Report	TSA, TA, PWD
		TSA,TA Phase 3 Signoff	4790 CK IDP Completion Report 45 Weeks Signed Phase 3	
Total Process Cycle Time 312 Weeks				

Exhibit 18: 312 Weeks Process Time

PART A

Training Installation and Transfer Agreement Sample

(SYSTEM NAME)

1. Purpose. This agreement is provided to coordinate and ensure the successful transfer of training system products for the subject acquisition system. This agreement validates the execution status of MPT items identified in the NTSP and TITA to achieve RFT. The TITA is intended to be a coordination vice management tool to facilitate transition planning.

2. Status Indicators. The status indicators identified in subparagraphs 2a through 2c apply to the training items listed in Table 33. The Warfare Enterprise RS, SYSCOM's Acquisition Program Manager, TSPO and TSA have the latitude to jointly tailor the status and justification of any items (e.g., funding or schedule changes), upon coordination with the TA and any other entities as necessary.

a. Red. Training system and product lifecycle management data requirements are not programmed in the RS POM or are unfunded to meet the NTSP approved RFT date or the deadline established by TYCOM governing issuance. Risk mitigation "Objective Quality Evidence (OQE)" response and corrective action from the Responsible Activity or Authority is required.

b. Yellow. Training system and product lifecycle management data requirements are programmed in the POM, funded, but behind schedule to meet NTSP approved RFT date. A risk mitigation response from the Responsible Activity or Authority is required.

c. Green. Training system requirement is funded and on schedule to meet RFT.

3. Training Installation and Transfer Agreement Signatures.

_____	_____	_____	_____
Resource Sponsor	Date	Director, Total Force Manpower, Training and Education Requirements	Date
_____	_____	_____	_____
Program Manager	Date	Training Agency	Date
_____	_____		
Training Support Agency	Date		

TRAINING ITEMS, DESCRIPTION AND REFERENCES

	Training Item	Description	Reference(s)	Required Deliverable & Date	Responsible Authority	Status (R Y G)
1	Training Requirements Planning FEA Validation	Introduction: The assigned SYSCOM TSPO, TSA, Ship PM (SPM) or other identified POC can begin developing preliminary training system program products with the approval of a Preliminary Ship Design or an E/S/S program with an assigned PM. Entrance criteria: The TE or NTSP for the ship or the E/S/S based upon the approved preliminary design. BCS Analysis. The preliminary cost estimate resource requirements, which will be used later by the designated program office for the MSA and MSB (or other SECNAV or OPNAV directive if not an acquisition category program) submittal as part of the Preliminary Lifecycle Cost Estimate (PLCCE). The Facility Gap Analysis and the SYSCOM preliminary Installation Design	Approved NTSP DoDI 5000.02 of 31 Aug 2018 SECNAVINST 5000.2F OPNAVINST 1000.16L	Preliminary NTSP: FEA: Training Support Agency: TSRA: TDCP: Military Characteristics: TA Report MS B: (Initial) MS C: (Update) FRP: (Update)	Acquisition RS training support agency CNO N1	

		product to be used by NAVFAC to establish facility space square foot requirements for MILCON or Special Projects resourcing. The NAVFAC update of the existing projected facility Baseline Facility Requirements (BFR) document leading to the development of the DD-1391 and future construction or modification of facility space for the emergent training capability. A projected list of FEA and Manpower (Manpower Estimate Requirement (MER)) products consisting of Task Analysis (TA), TSRA and TDCP that will be developed from the preliminary BCS list using the BCS list ship or ESS existing Technical Documentation. These preliminary FEA products will be routed through the Warfare Enterprise RS and training community stakeholders after review sessions are conducted with selected Subject Matter Experts to receive concurrence and approval from the OPNAV RS to continue development. The Entrance criteria consist of the BCS Analysis, MER, FEA products and the associated cost and facility products generated from them. All entrance criteria				

		products require RS and training community stakeholder approval. After final ship or ESS design and upon completion (approval) of the ship or ESS technical data, the FEA products are updated and again routed through the Warfare Enterprise and training community stakeholders for final approval. At this point, the TITA and Installation Design Plan can be completed and routed for final signature and approval. The Exit criteria products consist of the final OPNAV approved NTSP, FEA products and the Installation Design Plan, all of which have been routed via the training community stakeholders for review and approval and are attached to the TITA cover document for signatures. The approval of the TITA consummate the successful delivery and transfer of the emergent training capability to the training community and enters the Lifecycle Support (LCS) phase for the training capability by the SYSCOM (TSA) and NETC (TA) per NAVSO P-1000 as resourced by OPNAV RSs.				

2a	Facilities Training Space MILCON	Identification of facilities (buildings, spaces, utilities, etc.) required or available (or both). Coordination of facility impacts with the host command and TA requesting MILCON, if required.	NAVSO P-1000 OPNAVINST 11010.20H	MILCON: Start Finish	TSA or TSPO	
2b	Facilities Training Space (requirements and funding)	The training support agency will provide facility data relative to the applicable facility trainer installation to the TA for the Installation Design Plan coordination.	NAVSO P-1000 approved NTSP	TD (install): RFT:	Training support agency	
3	Installation Design Plan (PART B of the TITA)	The Installation Design Plan, which is Part B of the TITA, is a plan prepared to define facility requirements, including MILCON and special projects, for installation of the training system; identify all associated logistics support elements and transfer training ownership responsibility from the TSA to the TA. The Installation Design Plan is an integral part of the system acquisition process and supports the introduction of new training systems and equipment, training system changes and sustaining requirements. Close liaison between the TSA and TA is key to developing Installation Design Plans to meet the established RFT date. In cases where there are multiple training sites, there will be a separate Installation Design Plan for each training site.		Phase 1: Phase 2: Phase 3: MILCON required): RFT:	Acquisition RS,N4, TSA,TA	

4	Learning Objectives	Learning objectives describe the knowledge, skills and proficiency level(s) to be, mastered. Terminal and Enabling objectives describe the job behavior, conditions, standards and test criterion. Learning objectives will be SMART: Specific, Measurable, Attainable, Results-Focused and Time-Focused.	Standards as Approved by the Training Agent	TCCD	TA	
5	Visual Training Aids (VTA) not embedded in PowerPoint.	Visual training aids include photos, videos with or without sound, models, displays, which the TSA deems necessary and that are called out in the products will be delivered through lifecycle support.	Standards as Approved by the Training Agent	RFT:	TSA	
6	Self-Directed Interactive Training (SDIT) or eLearning	SDIT content developed to be used for a schoolhouse and in the fleet concentration area will be delivered through a Learning Management System (LMS). Courseware must be developed using the most recent version of SCORM be compatible with the LMS. Additionally, a compact disk or digital video disk of the courseware must function stand-alone outside of an LMS. All applicable interactive products are delivered and maintained through configuration management by the TSA as required by the TSA	DoDI 1322.26 of 05 Oct 17 Standards as Approved by the Training Agent	RFT:	Acquisition RS or TSA	
7	TTE Training Devices Funding	The assigned SYSCOM TSA, TSPO, PM will identify in the NTSP all TTE or TD required for the development and approval of the FEA products per OPNAVINST	NAVSO P-1000	RFT:	Acquisition RS, TSA. TA	

		1500.76 Policy & Guidance. Once RFT) has been achieved and the training capability has been transitioned to the training community principals (TA, etc.) the delivering TSA,TSPO,PM, etc., will retain responsibility for all TTE or TD configuration management tasks to update training materials, operating software, hardware and technical data products which are driven by the tactical system modernization program. Configuration management requirements will be resourced by the cognizant RS to maintain the delivered training capability in synch with fleet operating systems and equipment.				
8a	TTE or Training Device Maintenance or Tech Support (Initial Training)	Government or contractor operation and maintenance support are provided for all training equipment in support of initial training. Initial training equipment and support items must take place before the program's IOC date or FRP decision. Contractor operated maintenance support or ILSP (or both) is in place. Maintenance and technical support are provided for all training equipment, whether in support of initial or follow-on training.	NAVSO P-1000	The first convening of initial training:	Acquisition RS,TSA	

8b	TTE, Training Device Maintenance, Tech Support (Follow-on Training)	Government, contractor maintenance and technical support are to be provided for all training equipment in support of follow-on training.	NAVSO P-1000	RFT:	Acquisition RS,TA	
9	Trainee Guide (TG) and Materials	Instructor facilitated interactive training (IFIT) may be offered in one of two formats, Synchronous and Asynchronous. The TG is organized with all related instructional information grouped within a topic. Each topic is grouped by learning objectives and supported with instruction sheets. TGs contain all of the content for the course and they are used as a guide for the trainees. Additional material may include textbooks or tech manuals (or both). Trainee guides and materials must be approved by the TA and delivered by the TSA 90 days before the pilot.	Standards as Approved by the Training Agent	RFT: TG	TSA,TA	
10	Course Requirements	Training course control documents, courseware, curricula and manuals transferred by acquisition program	Standards as Approved by the Training Agent	RFT: TCCD:	TSA	

		management office to the designated Learning Center or TA 90 days before the pilot.				
11a	Physical Security Certification	A facility certified for delivery, storage and use of classified information and material.	OPNAVINST C5510.93F	Date certified if applicable	TA	
11b	Information Assurance and Cybersecurity	IS or IT Authority to Operate (ATO),Interim Authority to Operate (IATO) certification status IA Maintenance requirements defined.	DON DIACAP HANDBOOK OPNAVINST 5239.1D COMNAVCYBERFORINST 5239.2A	RFT	TA,TSA	
12	Individual Training Sustainment Funding	Military or civilian (including contractor) instructor requirements (MPN or O&MN) are programmed before concurrence on a final or updated NTSP where increases or new NEC producing courses are required for operators and maintainers of new or modernized systems. Funds to support and sustain the conduct of training delivered by the TSA are programmed and budgeted.	SECNAVINST 5000.2F NAVSO P-1000	RFT date:	Acquisition RS,CNO N1,TA	
13	Individual's Account Funding	Temporary duty instruction and individual's account funds for training are programmed and budgeted for by RSs and execution by CNO N1. RSs or designated agency ensures funding is programmed	NAVSO P-1000	RFT date:	Acquisition RS, CNO N1	

	Temporary Duty Instruction O&MN Temporary Additional Duty Travel Target Funding (TADTAR)	before approval on a final or updated NTSP. OM&N funds for training are provided to units by the RSs. RSs will approve NTSPs where new, sustained OM&N increases are planned for training. (Note: Must consider the impact on training OM&N TADTAR budget when choosing a training solution. Notify RS via TYCOMs and USFF if a new training system will obligate increases in OM&N TADTAR requirements for units to attend initial and follow-on training such as "F" schools.)"				
14	Navy Enlisted or Officer Occupation Classification System Packages	Provides enlisted and officer occupational classification system changes and proposals for implementing changes.	OPNAVINST 1210.2C OPNAVINST 1223.1D	Before the RFT date	Acquisition RS,TSA, CNO N1	
15	Ready For Training	The date of a training system and its associated logistics, maintenance, syllabus and instructors are certified to be available for training at the learning facility. This date is predicated on the availability of a new, modified or rehabilitated learning facility for training purposes. All aspects		Primary: Secondary: Iterative:	Acquisition RS,TSA,TA	

		of the facility must be ready, including building completion, completed site preparation, training system installation and testing, trained instructors, furnishings, e.g., non-technical collateral equipment. This is the ultimate planning date for the new, modified and changed the training system and its readiness for use.				

Table 33. Training Items, Description and References

PART B

SAMPLE CHANGE PROPOSAL (CP)

FROM: (Code and name of Program Manager originating request)
TO: TSA (with appropriate contact information)

SUBJ: Request for Approval to Develop: IDP ☐ IDP (Short) ☐

Project Title: (Brief Title of training equipment installation)

Executive Summary: (Provide a high-level summary of what this change accomplishes, why this change is needed and provide all references that established the requirement for this installation – (NTSP, OPNAV Requirement, etc.) Identify all or any facility impacts anticipated; if none, so state.)

Applicable Ship Classes: (Identify applicable ship classes as Appropriate), i.e.:

Applicable Learning Facilities (Identify applicable learning Facilities as appropriate), i.e.:

Building and Room No.: (If known)

Related Changes: (List all related changes and specify if prerequisite or conjunctive with this change)

Program Manager: (SYSCOM Manager responsible for a tactical system)
Name:
Code:
Phone (DSN or COM):
E-mail:

Training Support Agent: (Activity responsible for training program, if different from Program Manager)
Name:
Code:
Phone (DSN or COM):
E-mail:

Installation Activity and Document Preparer*: (*If different - Please specify)
Name:
Code:
Phone (DSN or COM):
E-mail:

SAMPLE CHANGE PROPOSAL (CP)

(Complete either the Installation Design Plan or Installation Design Plan Short schedules as applicable)

Installation Design Plan Development and Installation Schedule:

(1) Preliminary Site Survey:
(2) Phase I Installation Design Plan Submittal to TSA:
(3) Engineering Site Survey:
(4) Phase II Installation Design Plan Submittal to TSA:
(5) Stage Installation and ILS:
(6) Installation Start:

Installation Design Plan Short Development and Installation Schedule:

(1) Site Survey (if Required)
(2) Start Installation Design Plan Short Development:
(3) Complete Installation Design Plan Short Development:
(4) Draft Installation Design Plan Short Submittal to TSA:
(5) Final Installation Design Plan Short Submittal to TSA:
(6) Stage Installation and ILS:
(7) Installation Start:

Remarks: Attach additional pages as desired to provide amplifying information to assist in understanding the proposed change.

Signature: _____
Date: _____

Change Review Board Approval

Change proposal is: Approved Disapproved

Number is assigned for development of this change.

Copy to:
TSA Internal Codes
Appropriate Learning Center
Learning Facility
ISEA

Exhibit 19. Change Proposal

INSTALLATION DESIGN PLAN

FOR

TRAINING SYSTEM INSTALLATION AND TRANSFER

OF

[SYSTEM/EQUIPMENT NOMENCLATURE]

AT

[NAME AND LOCATION OF LEARNING FACILITY TO RECEIVE THE INSTALLATION]

[TA COMMAND LOGO]

DATE [ORIGINATION]
REVISED [LATEST DATE OF REVISION]

TABLE OF CONTENTS

Installation Design Plan
Phase I Initial Agreement
Facility Requirements Identification
(Preliminary Site Survey)

The initial Installation Design Plan documentation (preliminary site survey) for facility requirements identification for [System or Equipment Nomenclature] is provided per OPNAVINST 1500.76D.

Facility Requirement Summary

Requirement (check appropriate requirement)	Responsible Command
Military Construction Required*	_____TSA
Special Project Required*	_____TSA
Installation Only Required	_____TSA

*See attached preliminary Site Survey

Comments, Remarks:

_____ _____
Date TSA
Name, Title, Command and Code

_____ _____
Date Resource Sponsor
Name, Title, Command and Code

The attached initial Installation Design Plan documentation (preliminary site survey) is accepted as the identification of facility requirements.

_____ _____
Date TA
Name, Title, Command and Code
If signed by direction, so state

Distribution List:
TA (Installation Design Plan Coordinator)
Learning Center (Installation Design Plan Coordinator)

PRELIMINARY SITE SURVEY DATA

1. General Information and Training System Data.

a. NTSP references or establishing authority. Cite NTSP number, date and status (initial, draft, proposed, etc.). If there is no NTSP, cite other documentation, which establishes the requirement, etc. to include the date of requirement approval.

(1) Operational Use Summary. (UNCLASSIFIED) Describe the operational use of the equipment as it applies to total force use. Note ship classes on which equipment is installed.

(2) Training Concept Summary. Describe the scope of training to be established, sustained or revised as a result of the installation (i.e., Intermediate or Organizational Level Maintenance, Operator Training, etc.). If known, identify course name, title (CIN) and length. If non-specific, so state and describe.

(3) Functional Description. Provide a brief functional description of the training equipment. Refer to sponsor approved requirements documents as appropriate.

(4) Listing of Training Equipment to be installed. Based on the best available information, list the training equipment to be provided by category: TTE and TD. Provide quantity, procuring activity and delivery status. If applicable, cite any identifying equipment tracking numbers (NTSP, etc.).

(5) Interface or Impacts on Other Training Equipment. Describe the interfaces or impacts on other training equipment that will be relocated and equipment that is presently installed or planned for installation. Consider instances of multiple, phased installations that are covered by other individual Installation Design Plans. Where applicable, reference other Installation Design Plans.

(6) Timing and Synchronization. Any issues must be addressed in the Installation Design Plan to document system requirements such as signal type (i.e., 1 PPS, 5MHz, 100kHz) number of and type of connections to new and existing equipment and impacts to existing equipment and systems. Specific details of the timing and synchronization system are a required part of the IDD. If new timing and synchronization equipment are required, it must be done in a manner that meets all known requirements and future facilities' expansion plans.

(7) Training Equipment to be Replaced. Based on the best information available, list all training equipment that will be replaced or relocated (or both) as a result of this installation. Include, if known, the intended disposition of removed equipment according to regulations outlined in this instruction.

(8) Learning Facility (Command or Location). Provide a learning facility's address as listed in the current Standard Navy Distribution List (SNDL). Include zip code and UIC.

2. Facility Data.

a. Training Equipment Location at Learning Facility.

(1) Building and Room No.

(2) Floor Plans and Elevations. Provide floor plans and elevations drawings for each room affected as an attachment-based on the best available information.

(3) Other.

b. Basic Facility Requirements of Training Equipment.

(1) Air Conditioning and Heating.

(2) Water.

(3) Power.

(4) Physical Requirements.

(5) Other.

c. Description of MILCON Requirements. Cite MILCON and any other applicable data.

d. Description of Environmental/Safety Impacts. Describe any NEPA requirements, impacts to environmental permits or other safety or environmental compliance issues.

3. Major Milestones.

a. Training System RFT Date. The CNO established RFT date as outlined in a current Navy Training System Plan or other references.

b. Beneficial Occupancy Date. Date facility will be ready to begin the installation of the necessary personal property equipment.

c. Installation Design Plan Data Scheduled Updates (Minimum). Update required (month and year) for MILCON programming. Update required (month and year) for special project programming. Phase II Engineering Site Survey Scheduled Date (Month and Year).

Installation Design Plan
Phase II Engineering And Training Support Package Elements
Agreement
For Installation And Transfer Requirements
(Engineering Site Survey And Training Support Package Elements Installation Design Plan)

Note: The Installation Design Plan Phase II installation (engineering site survey) and transfer requirements (training support package elements) required for transfer of training responsibility for the training system are provided per OPNAVINST 1500.76D.

The list of training support package elements is certified as complete unless otherwise indicated in the Comments and Remarks section.

Comments, Remarks:

Add attachments if necessary.

Date Training Agent
Name, Title, Command and Code
If signed by direction, so state

The attached Installation Design Plan Phase II engineering documentation (engineering site survey and listing of training support package elements) is accepted as the determination of installation and transfer requirements and as the basis for the transfer of training responsibility.

Date Training Agent
Name, Title, Command and Code
If signed by direction, so state

ENGINEERING SITE SURVEY AND TRAINING SUPPORT PACKAGE ELEMENTS

1. General Information.

a. Date Engineering Site Survey Conducted (Day, Month and Year).

b. Training Course(s) Identification. Identify the course name, title (CIN) and course length. If nonspecific, so state and describe.

c. Planned Date of Transfer. Planned date of transfer of responsibility for the training system from the TSA to the TA.

d. List of Equipment.

(1) TTE. In column format, state the precise nomenclature of the TTE, the quantity to be provided, the procuring activity and the delivery status. If applicable, cite any identifying equipment tracking numbers.

(2) TD. Identify in the same format as paragraph 1d (1).

e. System Interface with Other Installed or Future Training Systems or equipment. Update information previously provided in Phase I, paragraph 1g.

f. For Command, Control, Communications, Computers and Intelligence and other computer network-based Training Systems, provide system changes and operating authority documentation such as Interim Authority to Operate (IATO) and Certification Assessment and Summary Evaluation (CASE) Form for the Fleet Readiness Certification Board (FRCB), according to reference (l), 60 days in advance of the planned installation.

g. Identify the Installation Design Documentation (IDD), including the completed Drawing Package that will be submitted with phase II of the Installation Design Plan.

2. Major Milestones.

a. Installation Design Plan Schedule. The Installation Design Plan Schedule is presented only as an example. Use flexibility with regard to its content and format to meet individual TSA and TA needs.

SAMPLE INSTALLATION DESIGN PLAN MILESTONE PLAN

Installation Design Plan Number:
Training Agent: (Appropriate Learning Center or NETC)
Learning Facility:
Facility POC:
Facility Manager:

Requirement Establishment:
Installation Manager:

PM:
Installation Design Plan Originator:

CY	201X								
FY	201X								
Action Month	J	F	M	A	M	J	J	A	S
Initiate Project									
Preliminary Site Survey									
Engineering Site Survey									
Beneficial Occupancy Date									
Site Prep or Installation Prep									
TTE, TD or Simulator Delivery									
Engineering Data Submission (Phase II)									
Installation									
Certification									
Curriculum									
Software									
Spares									
Test Equipment (GEN or SPEC)									
Tools (GEN or SPEC)									
Technical Data Support Package									
Instructor or O&M Training									
OPNAV 4790 or CK Submission									
On-Site Testing									
Installation Complete									
Contractor Maintenance Support									
Ready For Use (RFU)									
RFT									

Legend 0 Current Schedule X Actual Accomplishment

Table 34: Sample Installation Design Plan Chart

3. Engineering Site Survey Data.

Note: Include summarized results of the engineering site survey to address what the existing conditions or capacities are versus the new requirements and identify who will perform and provide for the difference.

a. Security and Safety Factors:

(1) Security Classification of Equipment, Courses, etc. Include any cybersecurity requirements as outlined in the U.S. Navy cybersecurity program.

(2) Environmental Safety. (Federal, State, Local)

(3) Pressurized Equipment Safety. Identify pressurized equipment safety specifications, as required.

(4) Nuclear Safety. Identify nuclear safety requirements.

(5) Electromagnetic Radiation Safety. Include any RF hazards to personnel, fuel and ammunition.

(6) EM Security (Tempest survey). If required, a TEMPEST Vulnerability Assessment Request must be prepared according to references, before equipment use.

(7) Eye and Ear hazards. Identify eye and ear safety requirements.

(8) Fire Extinguishment Requirements:

b. Type of extinguishing agent(s) recommended:

c. Special precautions to be observed:

d. Do existing facilities meet this requirement? (If not, provide corrective action and identify the responsible party.)

(1) Airspace Clearance Criteria. (Specify clearance requirements between the equipment and the room to accommodate operation and maintenance tasks, airflow, etc.)

(2) Other. (Specify any other Security and Safety Factors not previously addressed.)

e. Utilities: Air Conditioning.

f. Temperature and heating parameters of the equipment: (List high and low temperatures of each unique parameter and summarize total.)

g. Heating requirements:

(1) Room: (List current BTU capabilities.)

(2) Equipment: (List equipment BTU requirements.)

(3) Do facilities meet this requirement? (If not, provide corrective action and identify the responsible party.)

h. Air conditioning or cooling requirements:

(1) Room: (List current BTU capabilities.)

(2) Equipment: (List equipment BTU requirements.)

(3) Do facilities meet this requirement? (If not, provide corrective action and identify the responsible party.)

i. Ventilation requirements:

(1) Room: (Specify duct and air handling or flow requirements.)

(2) Equipment: (Specify duct and air handling or flow requirements.)

(3) Do facilities meet this requirement? (If not, provide corrective action and identify the responsible party.)

j. Humidity Factors:

(1) Room: (Specify dew point or relative humidity parameters.)

(2) Equipment: (Define operating and non-operating humidity parameters.)

(3) Do facilities meet this requirement? (If not, provide corrective action and identify the responsible party.)

k. Air cleanliness requirements:

(1) Room: (Specify air particulate requirements.)

(2) Equipment: (Specify air particulate requirements.)

(3) Do facilities meet this requirement? (If not, provide corrective action and identify the responsible party.)

l. Water requirements: (Include flow rate, temperature, purity, etc.)

(1) Do facilities meet this requirement? (If not, provide corrective action and identify the responsible party.)

(2) Plumbing.

m. Sewage requirements: (Type, Volume or capacity, Pollution abatement requirements, etc.)

(1) Do facilities meet this requirement? (If not, provide corrective action and identify the responsible party.)

n. Electrical power requirements:

(1) Room: (List current capabilities; include shunt trip and emergency shutdown)

(2) Equipment: (List equipment VDC, VAC, HZ, Amps and Phase requirement)

(3) Do facilities meet this requirement? (If not, provide corrective action and identify the responsible party.)

o. Grounding requirements: (AC, DC, digital, RF, etc.)

(1) Do facilities meet this requirement? (If not, provide corrective action and identify the responsible party.)

p. Requirements for generators, transformers, converters, etc.: (Rating, capacity, etc.)

(1) Do facilities meet this requirement? (If not, provide corrective action and identify the responsible party.)

q. Lighting requirements: (Identify lumens, color, dimming controls, etc.)

(1) Do facilities meet this requirement? (If not, provide corrective action and identify the responsible party.)

r. Uninterrupted power requirements: (Identify facility and equipment requirements by quantity and rating, etc.)

(1) Do facilities meet this requirement? (If not, provide corrective action and identify the responsible party.)

s. Lightning protection requirements: (Identify facility and equipment requirements rating, etc.)

(1) Do facilities meet this requirement? (If not, provide corrective action and identify the responsible party.)

t. Hydraulics, Compressed Gases, Steam, Petroleum, Oil and Liquids (POL) and Other Fluids. (Identify facility and equipment requirements by quantity, quality, rating, etc.)

(1) Hydraulic power requirements:

(2) Compressed gas requirements:

(3) Steam requirements:

(4) POL product requirements:

(5) Do facilities meet this requirement? (If not, provide corrective action and identify the responsible party.)

u. Exhaust Requirements: (State, Federal, Local) (Identify facility and equipment requirements by quantity, quality, rating, etc.)

(1) Do facilities meet this requirement? (If not, provide corrective action and identify the responsible party.)

v. Noise Abatement Requirements: (State, Federal, Local) (Identify facility and equipment requirements by quantity, quality, rating, etc.)

(1) Do facilities meet this requirement? (If not, provide corrective action and identify the responsible party.)

w. Telecommunication Requirements: (Identify internal, external requirements, including the number of stations, etc.). Consider Communication Connectivity Requirements. Connectivity may be required in support of the installation, testing and normal operations. If existing connectivity is identified and agreed upon during the site survey, the Installation Design Plan will identify the connectivity and describe which systems or testing requirements this connectivity will support. The Installation Design Plan will specify what resources such as multiplexer or router ports, cable strands and patch panel ports are reserved for the installation. New terrestrial connectivity is usually ordered via a Feeder Telecommunication Service Request (FTSR). The Installation Design Plan will provide sufficient technical circuit data to enable the FTSR originator to prepare the request. The training site is responsible for submitting to FTSR to Defense Information Systems Agency (DISA).

(1) Do facilities meet this requirement? (If not, provide corrective action and identify the responsible party.)

x. Other: Specify any other utilities not previously addressed.

y. Physical Factors and Requirements:

(1) Limitations:

z. Space:

(1) Minimum physical cube requirements into which the equipment will fit.

(2) Space for foreseeable growth requirements. Floor loading, false flooring, false overhead and cable runs or waveguide requirements: (Identify flooring and floor loading requirements.)

(3) Do facilities meet this requirement? (If not, provide corrective action and identify the responsible party.)

(4) Windows or special access requirements (or both): (Identify window, door and any other special access requirements.)

(5) Do facilities meet this requirement? (If not, provide corrective action and identify the responsible party.)

(6) Overhead hoist requirements: (Identify facility and equipment requirements by quantity, quality, rating, etc.)

(7) Do facilities meet this requirement? (If not, provide corrective action and identify the responsible party.)

(8) Storage container and storage area requirements: (Identify trainer requirements by type, size or capacity, etc.)

(9) Do facilities meet this requirement? (If not, provide corrective action and identify the responsible party.)

(10) Security or safety limitation requirements: (Identify trainer requirements. Include any classified data in computer memory.

(11) Do facilities meet this requirement? (If not, provide corrective action and identify the responsible party.)

(12) Antennas. (Identify equipment requirements by type, quantity, rating, mounting, etc.)

(13) Do facilities meet this requirement? (If not, provide corrective action and identify the responsible party.)

(14) Other Special Considerations. (Identify trainer requirements and include any quantitative or qualitative data.)

(15) Do facilities meet this requirement? (If not, provide corrective action and identify the responsible party.)

4. Trainer Configuration Item Index.

Configuration Before Change				
Equipment Identification Code	RIC, APL, AEL	Part #	Ref Designator	Model Type & Noun Name
Configuration After Change				
Equipment Identification Code	RIC, APL, AEL	Part #	Ref Designator	Model Type & Noun Name

Table 35: Sample Configuration Item Index

5. Training Support Package.

a. Parts (Spare or Repair)

Delivery Description Identification Procuring Activity Delivery Status

b. Test Equipment

General Purpose:

Nomenclature	Model #	COG Code	FSCM	SCAT	NSN	OTY	Procuring Activity	FY Funded	Delivery Status

Special Purpose:

Description	Identification	Procuring Activity	Delivery Status

c. Tools

General Purpose Tools:

Nomenclature Quantity Procuring Activity Delivery Status

Special Purpose Tools:

Nomenclature Quantity Procuring Activity Delivery Status

d. Support Equipment

Nomenclature Quantity Procuring Activity Delivery Status

(1) List support equipment such as roll around carts, overhead hoists, workbenches, etc., which allows for training equipment operation and maintenance or otherwise supports the course of instruction but is not part of the curriculum. Distinguish between GFE and contractor provided equipment.

e. Technical Data Support Package

Procuring Activity Procuring Identifier Title Quantity Delivery Status

(1) Identify all technical manuals, PMS documentation, etc., supporting the equipment, subsystem or system.

f. Curriculum Material

Type of Material Quantity Procuring Activity Delivery Status

(1) List all curriculums to be provided to the TA, including NTSP identified course materials and any contractor-developed materials to support training devices. The identification of curriculum deliverables should include items such as Instructor Guides, Trainee Materials, handbooks, etc. Cite the curriculum standard or specification used, if applicable. List all Data Item Descriptions (DID) used. List all Training Aids to be provided. Examples include mock-ups, pre-faulted modules, fault insertion aids and unique audio-visual equipment.

g. Software (if applicable)

Nomenclature Quantity Procuring Activity Software Support Delivery Status

(1) Operational

(2) Maintenance

(3) Simulation

h. Other Equipment Documentation

(1) List all other equipment documentation to be provided, such as software, software licenses, Software Support Activity contact information and ADP security documentation, custody and inventory records, data lists, parts lists, etc.

i. Unique Identification (UID) Requirements:

(1) Provide UID according to Under Secretary of Defense for Acquisition, Technology and Logistics signed Policy for Unique Identification (UID) of Tangible Items - New Equipment, Major Modifications and Re-procurements of Equipment and Spares.

6. Initial Instructor and Support Personnel Training Requirements.

a. Describe all initial training required for assigned instructor personnel and for follow-on maintenance support before the RFT date to include the location of the training, length of the training, any special certifications, qualifications or prerequisites required. Use subheadings as required to show the various types of initial training to be provided, e.g., operation, maintenance, other. Include required training for follow-on maintenance support for training equipment through a TA sponsored contractor operation and maintenance (O&M) service or a technical assistance program.

7. Contractor Maintenance Service or Technician Assistance Program. Identify whether the installed equipment is expected to be maintained through a TA sponsored contractor O&M service or a technical assistance program.

8. Information Assurance Maintenance and Certification Continuity. Where necessary, identify plans and means for the conduct of required sustaining IA Maintenance and certification requirements.

9. Actions or Decision (Or Both) Required.

Actions or Decisions Required

Action Item	Command Action	Due Date	Status

Phase III
Transfer of Training Responsibility
For
[System or Equipment Nomenclature]
[Learning Facility Name and Location to Receive the Installation]

1. Installation Design Plan.

a. Ship's Configuration Change Form (OPNAV 4790/CK): Installing activity will initiate and complete OPNAV 4790/CKs and provide them to the Learning Facility 3M Coordinator upon completion of installation. Learning Facility 3M Coordinator will assign a job sequence number and work center to the OPNAV 4790/CKs, sign and forward to the Configuration Data Manager (CDM).

b. Installation activity will note that the IDD completion report submitted to the TSA is now required. Forwarding of signed IDD completion report signifies learning facility 3M coordinator receipt of these completed forms.

c. TSA final acceptance signifies that OPNAV 4790/CKs have been filled out and provided to the Learning Facility 3M coordinator.

d. TA final acceptance signifies that OPNAV 4790/CKs have been submitted by the Learning Facility to the CDM.

e. Validation of Training Support Package delivery will be performed by the Learning Facility in coordination with the TSA.

f. Facility and Trainer as-built Drawings:

(1) The TSA is responsible for the preparation and delivery of trainers and facility as-built drawings. Redlined drawings are to be delivered upon completion of the installation and checkout. Finished as-built drawings will be delivered within 60 days following installation and checkout and before final acceptance.

(2) Drawings or diagrams will be developed in digital format, e.g., AutoCAD (dwg), according to MIL-PRF-5480G and ASME Y14.100-2017 and will reference codes, specifications, procedures, equipment drawings and each installation as-built drawing.

(3) Drawing documentation will be maintained as a baseline for the trainers and are therefore considered mandatory for an update if impacted: Architectural and Engineering, power distribution, electronic cooling water, HVAC, cableway layouts, facility ground distribution, patch panel layouts, floor plans and elevations, antenna layouts and elevations, cable block diagrams, circuit wiring detail drawings, wiring tables (i.e., cable running sheets and cross-connect records) and distribution frame and junction box layouts.

Installation Design Plan
Phase III
Ready For Use Agreement

Signature below affirms completion of the [Equipment Nomenclature] installation at [Name and Location of Learning Facility receiving installation] with the known deficiencies or discrepancies and that the Ship's Configuration Change Forms (OPNAV 4790/CK) have been filled out and provided to the Learning Facility:

*Deficiency	Command And Code Responsible To Correct	Date Correction Will Be Accomplished

*Add attachments if necessary

Further, the named training system (including maintenance of the system/equipment), according to the Installation Design Plan Phase II Engineering Agreement for Installation and Transfer Requirements, except for those items listed, is hereby transferred and CONDITIONALLY accepted by the Training Agent. The final transfer of responsibility for the training system will be affected by the completion and signature of Part A of the respective TITA document.

TSA	TA
Name, Title, Command, Code, Date	Name, Title, Command, Code, Date
If signed by direction, so state	If signed by direction, so state

2. Installation Design Plans Deficiencies.

a. A well-written deficiency in an Installation Design Plan clearly and briefly states the problem. These descriptions must specifically identify the action and deficiency number and, where required, include specific nomenclature (i.e., Title, Part Number, Control Number and quantity). Additionally, the following items must be assigned during the equipment transfer process to identify who has responsibility for the corrective action: (1) Responsible Command or Code; (2) Estimated Completion Date; and (3) Remarks, as required, that will provide further assistance for timely completion of the action. These deficiencies should also be prioritized for completion according to the schedule identified in subparagraphs 2a(1) through 2a(5):

(1) Priority 1 – An error that prevents the accomplishment of an operational or mission essential function per official requirements or which jeopardizes personnel and equipment safety.

(2) Priority 2 – An error that adversely degrades the accomplishment of an operational or mission essential function or prevents the accomplishment of an operational or mission essential mode, per official requirements and for which no alternative workaround exists.

(3) Priority 3 – An error which adversely degrades the accomplishment of an operational or mission essential mode or prevents the accomplishment of an operational or mission essential sub-mode; or an error which adversely degrades the accomplishment of an operational or mission essential function or prevents the accomplishment of an operational or mission essential mode and for which there exists a reasonable workaround solution.

(4) Priority 4 – An error that is an operator inconvenience or annoyance and does not adversely degrade a required operational or mission essential function or mode or sub-mode.

(5) Priority 5 – All other errors, including documentation.

b. These deficiencies, when properly written, will consist of one or two sentences of description and identifiers. If specific spare part lists, etc. are available and space is limited in the Engineering documentation of the Installation Design Plan, use appendices. The lists may be merely reference materials for a specific deficiency, such as an itemization of courses and curricula or a clause guaranteeing the return of borrowed or residual equipment to the installer or provider of the equipment. An effort should be made to see if such references are available and obtainable for inclusion in the Installation Design Plan.

3. Submission of OPNAV 4790/CK forms is required at the time of the Post Installation Brief. Failure to submit these forms at the time of the Post Installation Brief will not be accepted as a deficiency. Installation Activity must now forward the signed IDD Completion Report with a deficiency list (as applicable) and Post Installation Briefing Checklist to the TSA for Installation Design Plan Final transfer to be processed. Installing Activity and Facility 3M coordinator signature on the IDD Completion Report form signifies that completed OPNAV 4790/CK forms have been received and are being processed.

POINTS OF CONTACT

Points of Contact: (Command, Code. Name, Title and Telephone (DSN or COMM))

OPNAV Sponsor: List CNO Program Sponsor or Mission Sponsor (or both).

TSA: Program PM, ILS Manager, Installation Design Plan Manager, etc.

TA: List points of contact.

Learning Facility: As a minimum, include the Facility Manager and a POC within the applicable academic department.

Installation Activity: Installation Project Engineer or Manager.

Commander Navy Installations Command or Navy Region or Facility Engineering Command or SYSCOM: List points of contact.

INSTALLATION DESIGN DOCUMENTATION

Installation Design Documentation

Title of Installation

Location (Including Building and Room No.)

Date:
Change or Revision:

INSTALLATION DESIGN DOCUMENTATION

TABLE OF CONTENTS

Items with an asterisk (*) are requirements for submission/approval of the Installation Design Plan Short for Training System Changes.
Installation Design Plan Short approval cover sheet is included on the last page of this enclosure.

Section Title

4.3 Post Installation Testing..

5. Training System Configuration Changes.

5.1 Configuration Item Index of Hardware/Software Installed.*
5.1.1 Configuration Item Index of all Tactical, Modified Hardware or Software Installed.*
5.1.2 Configuration Item Index of all Training Device, Hardware or Software Installed.*
5.2 Classified Material Installed/Removed.*
5.3 Documentation.*
5.4 Change Marking and Identification Plates.*

6. Integrated Logistics Support Requirements.

6.1 On-Board Repair Parts (OBRP).*
6.2 Tools and Test Equipment.*
6.3 Maintenance Plan and Responsibilities.*
6.3.1 Corrective and Preventative Maintenance.*
6.3.2 Overhaul Requirements.*

7. Training.

7.1 Curriculum.*
7.2 Instructor or O&M Training.*

8. Post Installation Brief.

8.1 IDD Completion Report (ICR).

9. Drawing Package Attachments. Identify necessary attachments, such as the items in subparagraphs 9.1 through 9.17, required to support this Installation Design Plan. If existing facility and trainer drawings are not impacted, so state.

9.1 Floor Plans and Elevations Drawings.
9.2. Power Distribution Drawings.
9.3. Electronic Cooling Water (ECW) Drawings.
9.4 Heating, Ventilation and Air Conditioning (HVAC) Drawings.
9.5 Cableway Layouts Drawings.
9.6 Facility Ground Distribution Drawings.
9.7 Patch Panel Layouts Drawings.
9.8 System Configuration Detail Drawings.
9.9 Antenna Layouts and Elevations Drawings.

9.10 Cable Block Diagrams.
9.11 Circuit Wiring Detail Drawings.
9.12 Wiring Tables (Cable Running Sheets and Cross Connect Records).
9.13 Distribution Frame and Junction Box Layouts Drawings.
9.14 Installation Material Lists.
9.15 Equipment Technical Data Summary Drawings.
9.16 Installation Detail Drawings (i.e., Foundations, Mechanical Assembly, Mounting).
9.17 Test Plans or Test Procedures (or both).

Provide the following as attachments as necessary to support Installation Design Plan Short Template: Installation Procedures, Test Procedures, Equipment Unique Identification Requirements

10. Planning Data.

10.1 Title of Change: Enter a complete, descriptive change title for the trainer or change being installed. The title should include the official nomenclature of the configuration item (e.g., unit, equipment, software, system or subsystem). All abbreviations and acronyms in the title will be spelled out.

10.2 Impact Summary: Enter a complete high-level executive summary description of the hardware and software changes included as part of this trainer change. This is to include information on major equipment(s) being added or deleted and their impacts to cabling requirements, foundations, electronic cooling water, heating, ventilation or air conditioning and software changes required as part of the installation. This section should also discuss any problems or deficiencies in the existing system or subsystem corrected by the installation of this change. This section should also provide information concerning any prerequisite, conjunctive or related changes and information on any temporary changes closed out by this installation.

10.3 Estimated man-hours and Items affected: The total estimated man-hours required to install or test the IDD will be provided. The total requirements will be broken out as to Pre-Installation Testing, Site Preparation Testing, Check Out and Grooming Testing and Certification and Acceptance Testing (include test of all training system elements). These summary man-hour estimates will correspond to the detailed POA&M provided in Section 2.4 of the IDD.

10.4 Site Applicability: Provide complete identification of the Learning Facility, including building number, floor, room(s), etc.

Location Building Room(s)

10.5 Security and Safety Requirements: Provide information or references (or both) to security and safety issues that apply to this installation. This includes such items as references to

the local command's Lock Out and Tag Out procedures, security access requirements or equipment security (classified parts or software or EMI handling requirements, etc.). This section should also identify any related security and safety issues that are the responsibility of the Training Command to provide in support of the installation.

11. Accomplishment Plan.

11.1 Site Preparation: Describe all site preparation work to be performed, including utility requirements such as sewage, hydraulics, compressed gasses, steam, petroleum oil or other fluids, special exhaust requirements, with particular emphasis on areas requiring special considerations or outside assistance by the installing activity. The site preparation description should identify the installation process, what will take place and who will be involved.

11.2 Installation: Provide a general description of the equipment installation work to be performed. The detailed hardware and software installation procedures to be followed are to be provided in Section 3 of the IDD. All contractors or government activities (or both) that are to be involved in the actual equipment installation and their responsibilities, as part of the installation process, should be identified.

11.3 Detailed POA&M Schedule: The Plan of Actions and Milestones will provide a detailed installation schedule reflecting start and stop dates for all major events required as part of the installation process. The POA&M will be jointly developed by the installing activity, the learning facility and testing activities (if any). The Installing Activity will coordinate the development of the POA&M with the Learning Facility. This POA&M should normally reflect the data elements shown in the sample IDD Installation Schedule. A sample is provided in Exhibit 2.

11.4 Installation Parts and Materials: Separate lists for hardware and software will be provided to identify all Government Furnished Material (GFM) and Contractor Furnished Material (CFM) required by the installation. These lists will, at a minimum, include the data elements with the providing activity and the disposition of any excess or unused materials identified. Included in this section are any 2D or 3D mockups required by the installation activity. The listing of GFM will be provided as Government Furnished Information to the installing activity and is to identify all items the installing activity is to receive as part of pre-cable kits or other installation materials required by the installation. The Contractor, Furnished Equipment list, will reflect all material being procured or supplied by the installation activity.

Item No.	Description	Cage and Part Number	Qty	Provided By	Disposition or Remarks

11.5 Special Tools and Test Equipment: These lists will, at a minimum, include the data elements with the providing activity and the disposition of any excess or unused test equipment

identified. This would include such items as automatic cable testers or other specialized tools and equipment not normally available to the installing activity.

Item No.	Nomenclature	Identification No.	Qty	Provided By	Disposition or Remarks

11.6 Documentation Required: These lists will, at a minimum, include the data elements with the providing activity and the disposition of any excess or unused documentation identified. The types of documentation to be identified may include but are not limited to the following: Technical Manuals (TM), PMS documentation, Repair Standards, Test Procedures, Drawings, Software documentation or specifications and other related documents. The change or revision level is to be provided where appropriate.

Title	Number	Qty	Provided By	Remarks

12. Installation Requirements. The section includes detailed hardware and software installation procedures to be followed. The procedures should be written to a level of detail so that any qualified technician would be able to accomplish the installation solely using the documentation and the drawings provided in the IDD package. Each section should contain all necessary references to the associated drawings provided as attachments to the IDD.

TRAINER INSTALLATION SCHEDULE

Installation Design Plan No. Learning Facility: (School Name) Trainer: Name or Device Number

Task Name	Start	Finish	FYXX Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Design Development												
Preliminary Lab Arrangement Drawings												
Trainer Change Installation Documentation												
Installation												
Pre-Installation Briefing with learning Facility												
Trainer Equipment and ILS Staged on Site (before install)												
Lab Down												
Ripout												

EAFW		
HVAC		
Foundations		
Cabling		
Equipment Installation		
Other (Specify) Raised Deck		
Test and Checkout		
Site Preparation Testing		
Equipment Groom and Test		
Certification and Acceptance Testing		
RFU		

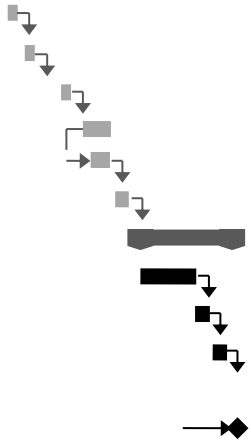


Exhibit 20. Sample Installation POA&M

12.1 Equipment Configuration

Ref Des	Nomen	Part No.	Power	Cooling	HVAC	Foundation	Cabling	Wireway	Grounding	Arrangement

a. Provide a summary sheet of all equipment being added or deleted (by nomenclature and part number) and whether its addition or removal will have an impact on power, cooling, air conditioning, cabling, wires, foundations and arrangements. This is to be a quick reference chart; with just an "X" placed under each category to signify, that particular piece of equipment will impact that installation category.

Part No.	Nomenclature	Classification	Revision or Version	Qty	Provided By	Disposition or Remarks

b. Provide a summary sheet of all software required as part of this installation (by nomenclature, part number and revision/version level). If none, so state.

Reference Designator	Nomenclature	Mfg Part No. and CAGE Code	NSN	Qty	Provided By	Disposition or Remarks

c. Provide detailed pre and post-installation hardware configuration information. Reporting will be a top-down breakdown to the Lowest Repairable Unit (LRU) and will reflect impacts on the configuration status accounting from this installation.

12.2 Power Requirements: Provide or provide as an attachment, information showing the power requirements, power panel, breaker number or size and cable designation or type for each equipment that requires an electrical connection. If no impact, so state.

12.3 Electronic Cooling Water (ECW) Requirements: List or provide an attachment, all equipment requiring cooling water. Specify cooling requirements, manifold, supply and return headers, gauges or valves, flow meters, etc., required for each piece of equipment. If no electronic cooling water requirements, so state.

12.4 Heating, Ventilation and Air Conditioning (HVAC) Requirements: Provide or provide as an attachment, information showing the ventilation changes required to ducting, diffusers, controllers, dampers, etc. If no ventilation changes are necessary, so state.

12.5 Foundation Requirements: Identify or provide as an attachment, information that shows the foundation changes required as part of this installation. If no foundation changes are required, so state.

12.6 Cable Requirements: List or provide as an attachment, complete wiring table information showing equipment, part numbers, vendor information, cable number, cable class, EMI, EMC, unit, jack number, plug type, backshell, clamp and cable type. If no cable requirements, so state.

12.7 Cable Routing or Wireway Requirements: List or provide as an attachment, information showing all necessary cable routing information, trays, penetrations, wireways and hangers and cable length required for the proper cable installation. If no cable routing requirements, so state.

12.8 Grounding Requirements: Show or provide all necessary equipment grounding information required for proper cable installation as an attachment. This should include equipment identification, terminal number, cable designation, ground termination and hardware required and quantity. If no grounding requirements, so state.

13. Testing.

13.1 Test Procedure Identification. Identify all of the Test Procedures to be conducted as part of the installation. These procedures should describe the type of testing to be accomplished and the test documents to be followed. The procedures should also include the type of tools and test equipment (both General Purpose and Special Purpose) to be used, the safety practices to be followed and identify the persons to be involved in performing and witnessing the testing.

Note: The actual Test Plans or Test Procedures (or both) are to be provided as an attachment or presented as separate documentation to the Learning Facility with appropriate lead time to permit review and comprehension before testing. A copy of the final redlined and marked-up procedures will be provided to the Learning Facility. Ensure the inclusion of any necessary IA testing required to complete (I) ATO certifications.

13.2 Pre-Installation Testing. Includes all operability testing necessary to ensure that an individual trainer or training system, including related data processing hardware, software and

interfaces are operating according to individual Trainer System Specifications or other documentation before any new equipment or modifications being installed. The Pre-Installation Testing (or baseline testing) may also include system-level operability tests to verify that an entire Training System, including subsystems and multi-trainer interfaces, operates and performs as specified in the governing Trainer System specifications. Any pre-existing discrepancies noted by this testing are the responsibility of the Learning Facility to correct and not the responsibility of the installation activity. The installation activity in consultation with the Learning Facility must determine if these problems must be corrected before the start of the Training System Change installation and what re-testing is required once the pre-existing problem has been fixed.

13.3 Post Installation Testing. Verifies that the newly installed equipment is working correctly and has not adversely impacted the operation of the trainer. Testing is generally identified by four phases:

13.3.1 Phase 1 Testing - External Hardware Inspection.

13.3.2 Phase 2 Testing - Cable Continuity and Power Testing.

13.3.3 Phase 3 Testing - Equipment Power Up and Check-Out, Grooming and Post Installation System Testing.

13.3.4 Phase 4 Testing - Certification and Acceptance Testing.

13.4 Phase 1 and Phase 2 Testing includes facility power verification (voltage and phase), power cable verification, pre equipment installation tests, hydrostatic pressure tests, cleaning tests, power or water or hydraulic interface validation tests and cable continuity and insulation resistance tests. It also includes the external examination of equipment before any power being applied to the equipment. If the external examination shows the potential for internal damage, the TSA will be notified.

13.5 Phase 3 Testing includes Equipment Check-Out, Grooming and Post-Installation Testing. It provides for power application to equipment and the performance of all operability testing necessary to ensure that an individual subsystem or standalone Trainer (or both), including related data processing hardware, software and interfaces, are operating according to individual Trainer or Trainer System specifications. This testing will also include system-level operability tests to verify that an entire Trainer System, including subsystems and multi-trainer interfaces, operates and performs as a complete and composite system within tolerances and parameters specified in the governing Trainer System specifications.

13.6 Phase 4 Certification and Acceptance Testing consists of portions of the equipment check out and groom tests that demonstrate trainer performance within the approved design and performance specifications. This testing is a prerequisite for the turnover of the trainer to the

Learning Facility. Learning Facility or TA's O&M Services personnel (or both) will observe/participate in the Certification and Acceptance Testing.

14. Training System Configuration Changes.

14.1 Configuration Item Index of Hardware and Software

14.1.1 Configuration Item Index of all Tactical, Modified Tactical Hardware or Software installed

Tactical HW or SW Configuration Before Change					Tactical HW or SW Configuration After Change				
HSC or FGC or RIC	Model Type & Noun Name	Cage or Part No.	Rev	QTY	HSC or FGC or RIC	Model Type & Noun Name	Cage or Part No.	Rev	QTY

14.1.2 Configuration Item Index of all Training Device Hardware/Software installed

HW or SW Configuration Before Change					HW or SW Configuration After Change				
HSC or FGC or RIC	Model Type & Noun Name	Cage or Part No.	Rev	QTY	HSC or FGC or RIC	Model Type & Noun Name	Cage or Part No.	Rev	QTY

Provide detailed pre and post-installation hardware and software Configuration Item Index (CII) information for all Tactical and TD. Section 13.1 will be a top-down breakdown to the Lowest Provisioned Unit and will reflect all impacts to the configuration status accounting from this installation. This information will be reported to the Configuration Data Manager (CDM) for the Learning Facility via the 4790/CK as required by reference (o).

14.2 Classified Material Installed or Removed: List only those materials that are classified and will, at a minimum, include the data elements shown in subparagraphs 14.1.1 and 14.1.2. All classified material will be handled according to DoD and Navy policies.

Classified Material to be Installed or Removed					
Model Type & Noun Name	Classification	Quantity	Installed	Removed	Remarks

Table 36: Sample Classified Materials

14.3 Documentation

Documentation							
Document Type	Title	Class	Number	Config Before	Config After	Provided By	Provided Y or N
Ship System Manual							
Technical Manual							
Maintenance Plan							
Maintenance Index Page							
Maintenance Requirement Card							
Pre-Faulted Modules							

Table 36: Sample Documentation

14.3.1 This list includes but is not limited to the data elements shown in subparagraph 14.3 with the providing activity and the disposition of any of the documentation upon completion of the installation identified. The types of documentation to be identified may include but are not limited to the following: Ship Systems Manuals (SSM), TM, PMS such as (MP, Maintenance Index Page, Maintenance Requirement Card, etc.) Repair Standards, Drawings or Sketches, Software documentation or specifications, Pre-Faulted Modules (PFM) and other related documents. The change or revision level is to be provided where appropriate.

14.3.2 Drawings or sketches are to be provided as Installation Design Plan Attachment "A." Room arrangement drawings or sketches are required whenever there are changes in the arrangement of a room or equipment rack. When a third party is installing, cabling drawings or sketches must identify the cable numbers and the jack numbers that identify how the equipment is to be connected within the trainer.

14.4 Change Marking and Identification Plates: The section will provide detailed instructions for the placing of identification markings, nameplates, information plates, etc. on the equipment. MIL-STD-130 and MIL-P-15024/10 can be used. Nameplates and information

plates will be mounted in a conspicuous place generally on the front of the item. Change label plates will be located as near as possible to the equipment nameplates. Systems or set nameplates will be mounted on the principal or most prominent item of the major assembly. Plates will be located in easily accessible places during operation. The mounting and location of the plates will be shown on the assembly drawing of the item. Plates will be positioned to not interfere with controls or obscure other required information.

15. Integrated Logistics Support Requirements.

15.1 On-Board Repair Parts (OBRP): Provide complete identification of all parts being provided to the Learning Facility as spares to support the repair and maintenance of this equipment/change.

Nomenclature	Cage Code	Part #	NICN or NIIN	Qty or Site	Estimated Delivery Date (EDD)

15.2 Tools and Test Equipment: The section should identify all new Tools and Test Equipment required to operate or maintain the equipment as a result of this change. The disposition of the test equipment after the installation must be identified. This would include such items as automatic cable testers or other specialized tools and equipment not usually available at the Learning facility.

15.3 Maintenance Plan and Responsibilities

15.3.1 Corrective and Planned Maintenance: Identify the activity responsible for corrective and planned maintenance, to include IA maintenance and certification of this equipment, e.g., Local Navy Authority (LNA), TA's O&M Services Contractor, PM, etc. If it is to be maintained by the TA's O&M Services personnel, then provide the status of the actions taken to incorporate coverage for this equipment in the TA funded contracts and the effective date of coverage. Learning Center approval must be received by the PM for inclusion into the Contractor Maintenance Service contract.

15.3.2 Overhaul Requirements: Identify all newly installed equipment that is overhaul worthy and provide suggested periodicity. If the equipment is not overhauled worthy, insert the following, "Installed equipment is not overhauled worthy."

16. Training. Provide information on all training and training materials being provided/updated as a result of this installation.

16.1 Curriculum: Identify the course name, number (CIN) and status of the training materials if not provided as part of the installation kit. If no impact on training materials, enter N/A for Not Applicable. The identification of curriculum deliverables should include items such as Instructor Guides, Trainee Materials, Interactive Multimedia Instruction (IMI), handbooks, etc.

List all Training Aids to be provided. Examples include audio/visual material, mock-ups, pre-faulted modules, fault insertion aids and unique audio-visual equipment.

CIN or Pub #	Title	Rev or Change #	Classification	Qty or Site	Estimated Delivery Date (EDD)

16.2 Instructor and O&M Training: Describe all initial training is provided at the time of installation. Use subheadings as required to show the various types of initial training to be provided, including the number of hours and days involved. Include required training for assigned instructor personnel and follow-on maintenance support for the training system.

17. Post Installation Brief. Following the installation of a Training System Change, the Installing Activity will conduct a Post Installation Brief with the Learning Facility and its O&M contractor support, if O&M contract support is to be provided. During this brief, 4790/CKs and any red-lines to the Training System Change documentation or trainer drawings (or both) will be reviewed with the TA or PWD (or both), as appropriate. Documents will be provided to the Contracting Officer or their designated representative for dissemination. During this briefing, the status of all ILS and Training materials to be provided as part of the Training System Change installation will be reviewed, (OBRPs, tools, test equipment, technical manuals, PMS documentation and training materials), will be verified as delivered or noted as an installation discrepancy. Status of all installation discrepancies, resolution responsibility and schedule for resolution will be discussed at this meeting.

17.1 Completion Reporting

17.1.1 The TSA or Installing Activity will coordinate the review and completion of the attached Post Installation Completion Report. The Learning Facility will complete the Post Installation Completion Report (CR). The completion of the CR documents the completion of the installation by the Installing Activity and the acceptance of the trainer by the Learning Facility.

17.1.2 The completion of the CR signifies that the trainer is RFU by the Learning Facility for instructor familiarization and to conduct training. Any outstanding discrepancies will be noted on the CR and tracked until they are satisfactorily resolved. The TSA or Installing Activity will provide copies of the completed CR to the Commanding Officer of the Learning Facility and the applicable Learning Center Coordinator following the Post Installation Brief.

18. Installation Design Plan Deficiencies.

18.1 A well-written deficiency in an Installation Design Plan clearly and briefly states the problem. These descriptions must specifically identify the action and deficiency number and, where required, include specific nomenclature (i.e., Title, Part Number, Control Number and quantity). Additionally, the items identified in subparagraphs 18.1.1. through 18.1.3 must be

assigned during the equipment transfer process to identify who has responsibility for the corrective action:

18.1.1 Responsible Command or Code

18.1.2 Estimated Completion Date

18.1.3 Remarks, as required, will provide further assistance for the timely completion of the action. These deficiencies should also be prioritized for completion according to the schedule:

18.1.3.1 Priority 1 - An error that prevents the accomplishment of an operational or mission essential function according to official requirements or which jeopardizes personnel and equipment safety.

18.1.3.2 Priority 2 - An error which adversely degrades the accomplishment of an operational or mission essential function or prevents the accomplishment of an operational or mission essential mode, according to official requirements and for which no alternative workaround solution exists.

18.1.3.3 Priority 3 - An error which adversely degrades the accomplishment of an operational or mission essential mode or prevents the accomplishment of an operational or mission essential sub-mode; or an error which adversely degrades the accomplishment of an operational or mission essential function or prevents the accomplishment of an operational or mission essential mode and for which there exists a reasonable workaround solution.

18.1.3.4 Priority 4 - An error that is an operator inconvenience or annoyance and does not adversely degrade a required operational or mission essential function, mode or sub-mode.

18.1.3.5 Priority 5 - All other errors, including documentation.

18.1.3.6 These deficiencies, when properly written, will consist of one or two sentences of description and identifiers, as described in subparagraphs 18.1.3.1 through 18.1.3.5. If specific spare part lists, etc. are available and space is limited in the Engineering documentation of the Installation Design Plan, use appendices. The lists may be merely reference materials for a specific deficiency, such as an itemization of courses and curricula or a clause guaranteeing the return of borrowed or residual equipment to the installer or provider of the equipment. An effort should be made to see if such references are available and obtainable for inclusion in the Installation Design Plan.

18.1.3.7 Submission of OPNAV 4790/CK forms is required at the time of the post-installation brief. Failure to submit these forms at the time of the post-installation brief will not be accepted as a deficiency. Installation activity must now forward the signed IDD

completion report with a deficiency list (as applicable) and post-installation briefing checklist to the TSA for Installation Design Plan final transfer to be processed. Installing activity and facility 3M coordinator signature on the IDD completion report form signifies that completed OPNAV 4790/CK forms have been received and are being processed.

Installation Design Plan Short

Training System Change
Cover Sheet

{Change Tracking Number}

{Title of Change}

Applicable Ship Classes

Applicable Learning Facilities

Prepared By: {Name, Address, Phone No. of Preparer}

Prepared For: {Name, Address, Phone No. of Sponsor}

Reviewed by: _____ _____
Date

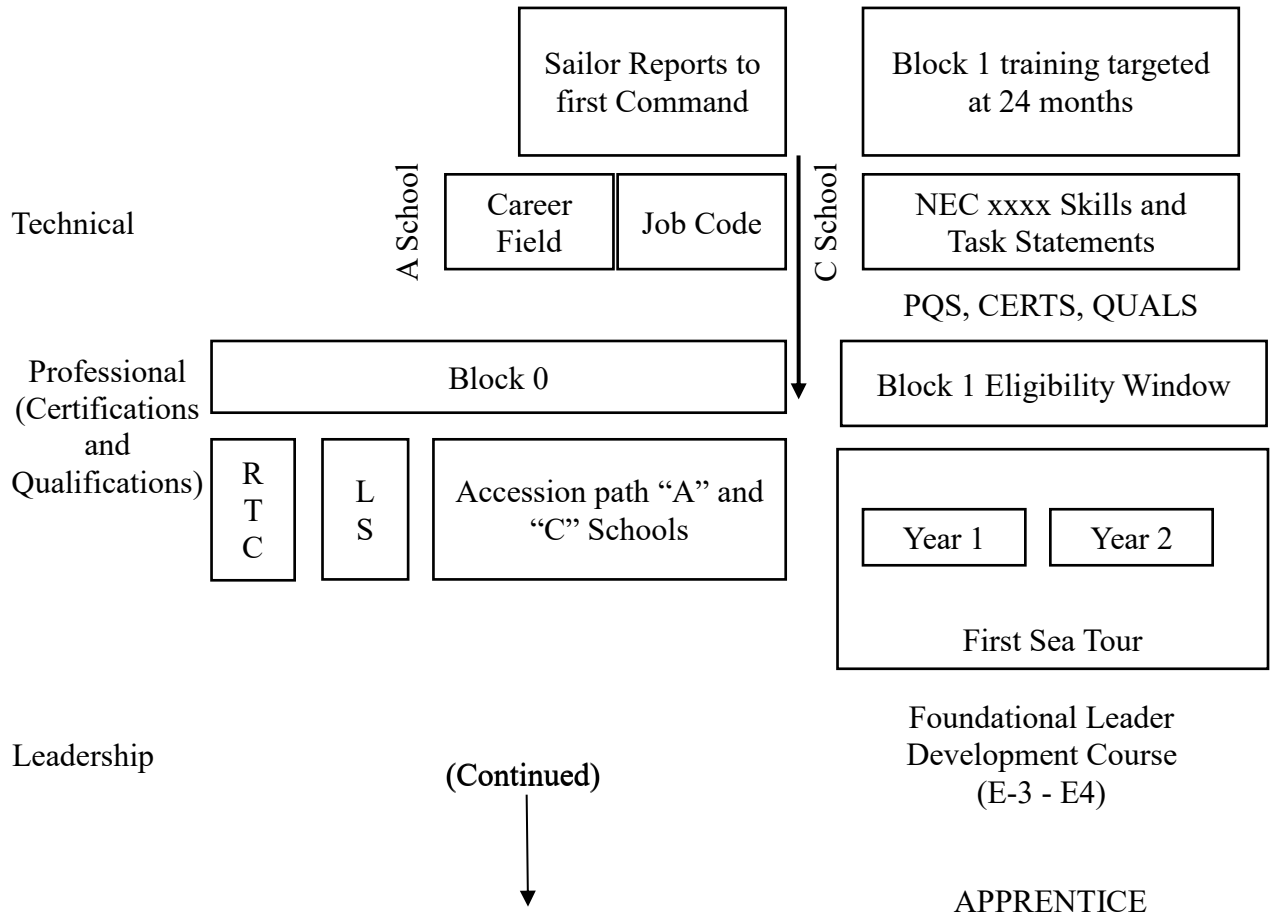
Approved by: _____ _____
Date

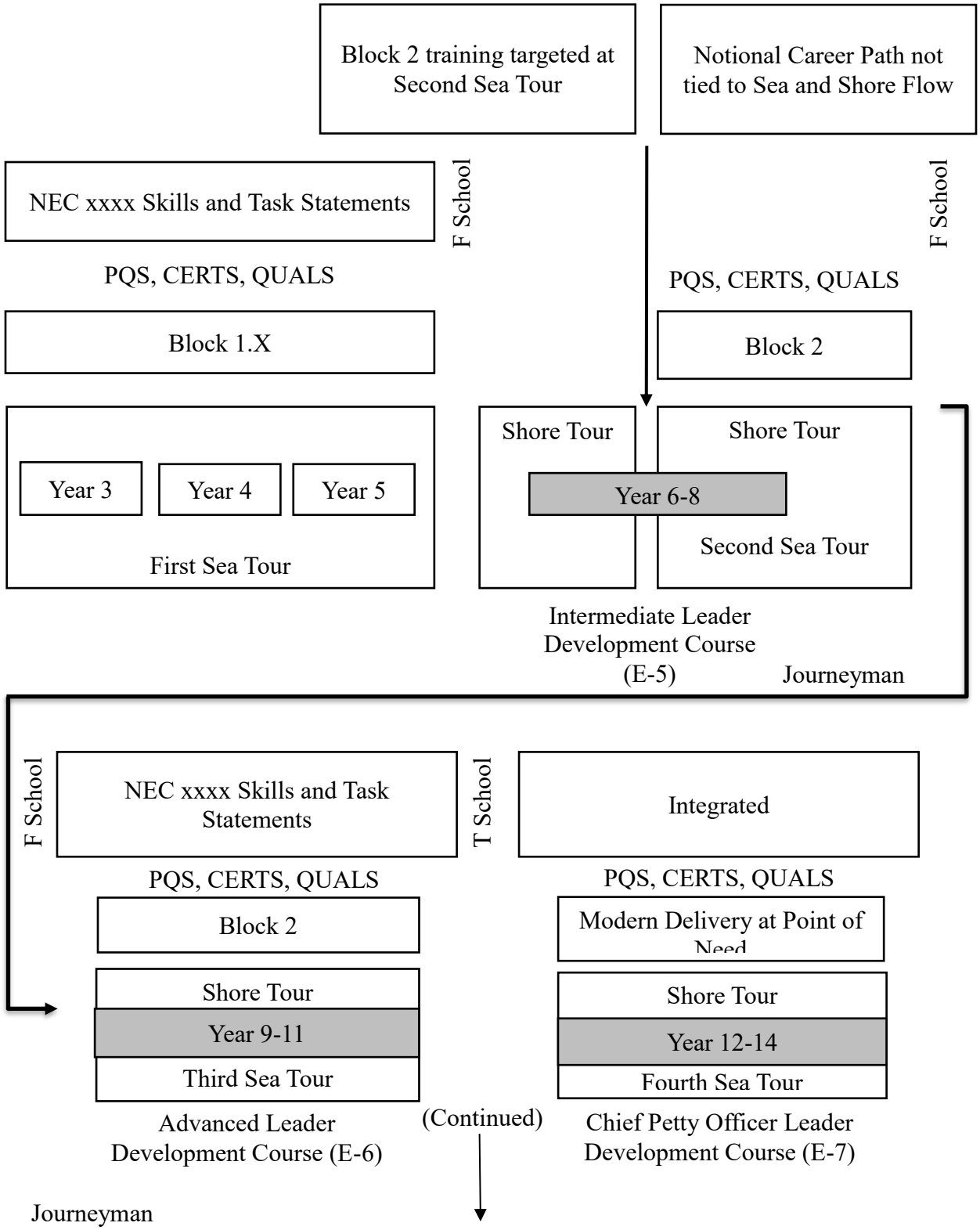
This cover sheet is used for approval of Training System Changes to existing capabilities at a Learning Facility. It is only used in conjunction with the Installation Design Plan Short, i.e., the modified IDD.

RATING CONTINUUM

1. Rating Continuum.

a. Introduction. According to NAVPERS 18068F, a rating is a broad enlisted career field that identifies occupational specialties that encompass related aptitude, training, experience, knowledge and skills for career development and advancement. A rate identifies personnel occupations by paygrades E-1 through E-9 and reflects levels of aptitude, training, experience, knowledge, skill and responsibility. Navy rates are identified in three levels (apprenticeships (E-1 through E3), petty officers (E-4 through E-6) and chief petty officers (E-7 through E-9)). Ratings are jobs categorized into communities. A Rating Continuum focuses on "what" tasks (system and rating), skills, certifications, qualifications and education outcomes are required of a Sailor during a career. Rating Continuums are multi-phased, sequenced products that align Navy ratings in career fields and broad communities providing a foundation for future development and more flexible and sustainable career paths for sailors. Rating Continuums include the technical, professional and leadership skills required of a Sailor during a career. An example of a notional Rating Continuum is provided in Exhibit 21:




Block 2 training targeted at Second Sea Tour
Notional Career Path not tied to Sea and Shore Flow
NEC xxxx Skills and Task Statements
F School
F School
PQS, CERTS, QUALS
PQS, CERTS, QUALS
Block 1.X
Block 2
Year 3
Year 4
Year 5
First Sea Tour
Shore Tour
Shore Tour
Year 6-8
Second Sea Tour
Intermediate Leader Development Course (E-5)
Journeyman
F School
NEC xxxx Skills and Task Statements
T School
Integrated
PQS, CERTS, QUALS
PQS, CERTS, QUALS
Block 2
Modern Delivery at Point of Need
Shore Tour
Year 9-11
Third Sea Tour
Shore Tour
Year 12-14
Fourth Sea Tour
Advanced Leader Development Course (E-6)
(Continued)
Chief Petty Officer Leader Development Course (E-7)
Journeyman

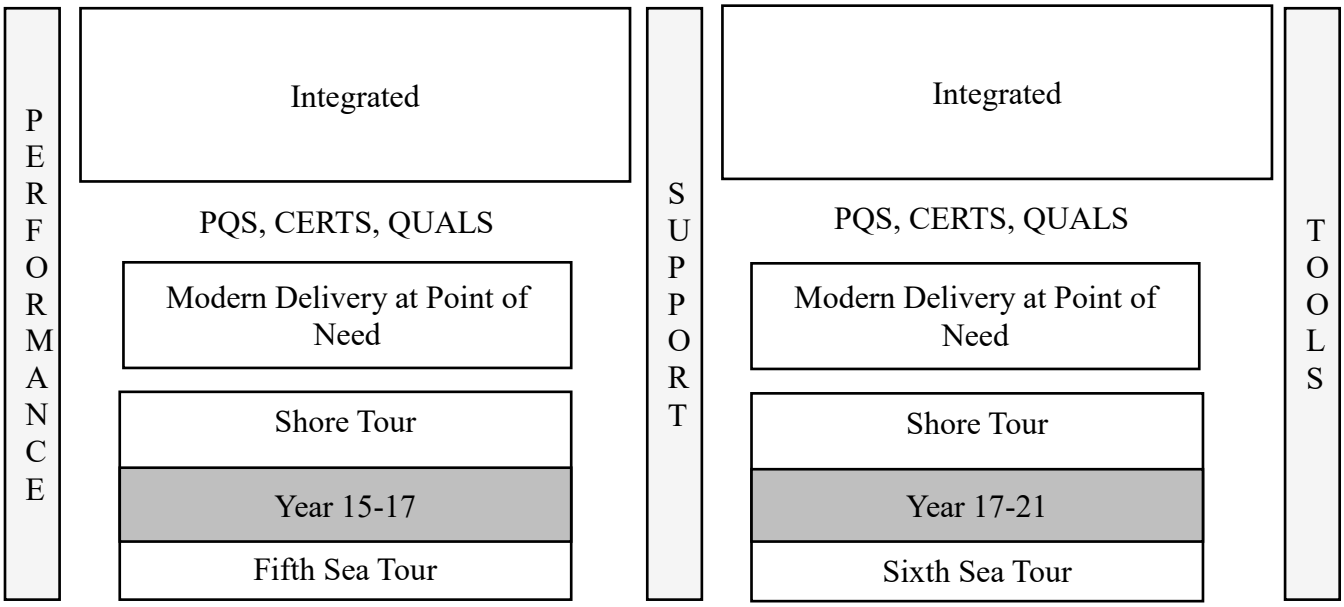


Exhibit 21. Rating Continuum

b. Purpose. A Rating Continuum is the output of a rating domain analysis (see enclosure 1). All Navy Enlisted Classifications are organized according to their career fields. The foundation for a Rating Continuum is the technical, professional and leadership training and education needed throughout a career. A Rating Continuum focuses on "what" tasks (system and rating), skills, certifications, qualifications and education outcomes are required of a Sailor during a career. Rating continuums are multi-phased, sequenced products that align Navy ratings in career fields and broad communities, providing a foundation for future development and more flexible and sustainable career paths for sailors.

2. Process.

a. The Navy's adjusted MPT processes and standards support the development of manpower and training requirements (e.g., MTRP for determining and documenting of MPT requirements to include apprentice, journeyman and supervisor level training) aligned to authoritative source data. The MTRP communicates the "who," "what," "where," "when," and "how" strategy needed to develop and integrate requirements for a system. Revised contract data requirements lists and data item descriptors must be aligned with standardized data elements enabling the completion of a system task analysis (e.g., operation or maintenance) integrated with personnel qualification standards. Linking these tasks to training commonality matrixes (with similar ratings and job codes) in the Navy Task Classification system provides the ability to analyze similarities across ratings, skill sets, curricula and other professional, technical and

leadership credentials. Since Navy Enlisted Classification (NEC) constructs are organized into 12 communities and 23 career fields, this provides a foundation for integrated rating modernization. A four alphanumeric construct is currently used to show the progress in a career. According to NAVPERS 18068F, the first digit of the new NEC code is a Sailor's community and career field.

Note: NEC codes with associated training that is not blocked ends with a letter (XXXA-XXXZ). NEC codes with associated training that is blocked ends with a number (XXX2, XXX1, XXX0); prerequisite A school training identifies the number of blocks remaining, e.g., Block 0, Block 1 and Block 2 which means there are three NEC codes established (0 = fully trained). Further modernization of NEC structures will reflect levels of proficiency and experience associated with a particular skill.

(1) The starting point is the career-long learning continuum. A career-long learning continuum is referred to as a Rating Continuum when the technical, professional and leadership skills are applied within a career construct.

(a) Block learning. The first step toward completing a larger training initiative known as Ready, Relevant Learning (RRL), revises current accession level initial training paths into blocks, which are redistributed during the first part of a Sailor's career. The process requires the return of fleet sailors to receive additional training approximately 24 months after reporting to operational units, in order to complete required training modules or earn progressive NECs (or both). Training is delivered at specific timeframes in a Sailor's career and is referred to as 'blocks.' The timeframe and composition of each block is displayed in Exhibit 22.

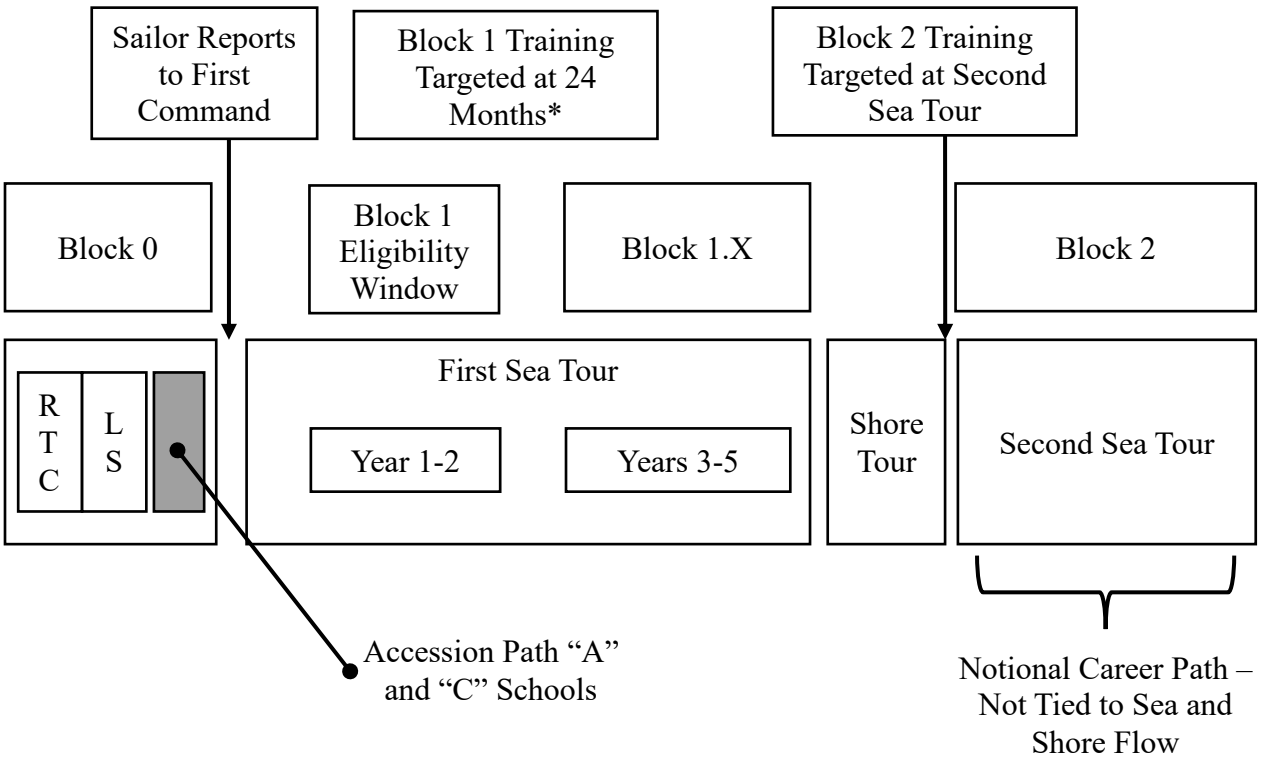


Exhibit 22. Block Learning

1. Block 0 refers to all training occurring before reporting to a first command (e.g., Recruit Training Command (RTC), Life Skills (LS), Accession paths (e.g., "A" or "C" schools).

2. Block 1 refers to formalized rating training that occurs during the first tour assignment with delivery targeted at 24 months after reporting aboard a Sailor's first command. Block 1 training may be offered as early as 12 months after reporting to the first command for high performers or when unit deployment schedules are a consideration. If additional Block 1 training is required, this would occur at other times during the first sea tour and be referred to as Block 1.2, 1.3 and so forth.

3. Block 2 refers to formalized rating training that occurs immediately before or during, a second tour assignment. This training is targeted at the 2nd Sea Tour and not tied to sea or shore flow.

b. Enhanced, Accessible Learning: Integrates disaggregated training by identifying the most effective way to deliver training based on the science of learning.

(1) Identification of "what" tasks and objectives establish the knowledge and skills that will need to be addressed in a training solution is a key step in establishing the specific products

needed to analyze “when” and “how” it would be most appropriate to train specific tasks. This process is defined in more detail in enclosure (1) and is supplemented for accession level learning.

(2) Integrated Content Development: Training development and delivery must be agile enough to adapt to the shifting needs of the fleet, while also integrating new technologies to accelerate learning. This requires shifting away from the current stove-piped approach and transitioning to processes and standards that support the ongoing development of source data, standards, content and delivery.

c. Modernized, On-demand, Fleet Responsive Learning: Expands a Rating Continuum to include technical, professional and leadership tasks, skills and knowledge to drive ongoing improvement of both content and methods for delivery. Also included are the PQS, certifications or qualifications, “F” and “T” schools necessary for sailors and supervisors.

d. The technical component in exhibit 1 represents the specialized training required for the Sailor to learn the necessary technical skills to do their job. These skills are generally taught in Navy courses but can also be taught in an On-the-Job-Training environment. The professional component in exhibit 1 depicts the qualifications and certifications that sailors earn over their careers. The PQS is the qualification system that documents the completion of the minimum level of competency required for qualifying to perform specific duties. These duties can be either watch standing or performing some type of task (e.g., 3M maintenance). Examples of certifications are NEC codes and Industry awarded certifications. The leadership component in exhibit 1 identifies when the Sailor should receive leadership in their career.

GLOSSARY AND ACRONYMS

GLOSSARY

1. Acquisition Strategy Document. A business and technical management approach designed to achieve program objectives within the resource constraints imposed. It is the framework for planning, directing, contracting for and managing a program.

2. Analysis of Alternatives. The evaluation of the performance, operational effectiveness, operational suitability and estimated costs of alternative systems to meet a mission capability. The Analysis of Alternatives assesses the advantages and disadvantages of alternatives being considered to satisfy capabilities, including the sensitivity of each alternative to possible changes in key assumptions or variables. The Analysis of Alternatives is one of the key inputs to defining the system capabilities in the JCIDS Capability Development Document (CDD).

3. BCS. A current operational system or a composite of current operational subsystems, which most closely represents the design, operational and support characteristics of the new system under development and which possesses mature manpower and training data.

4. Billet Training Profile. Documents-specific training required for each billet, including course and training description, periodicity, course number, reference and training points.

5. BCA. The BCAs takes the proposed training systems from the MTRP and assigns a cost to each. The BCA also captures any risk associated with each option. NETC will propose training systems, as a course of action for each training system, to the requirement sponsor and RS. Collectively, these entities will select one of the training systems courses of action that NETC can then use to develop or revise a course to satisfy the training requirement. It is the output of the business case analysis (decisions by the requirement sponsor and RS) that will determine the skill and knowledge outcomes that the course will be developed to achieve and tests built to assess.

6. COTS. A procurement approach for non-developmental items that is available in the commercial marketplace.

7. CONOPS. A verbal or graphic statement, in broad outline, of a commander's assumptions or intent regarding an operation or series of operations. The CONOPS is frequently embodied in campaign plans and operation plans; in the latter case, mainly when the plans cover a series of connected operations to be carried out simultaneously or in succession. CONOPS is designed to give an overall picture of the operation.

8. Configuration. A collection of an item’s descriptive and governing characteristics, which can be expressed in functional terms, (e.g., what performance the item is expected to achieve) and in physical terms (e.g., what the item should look like and consist of when it is built).

9. Curriculum Materials. Includes all materials required for the delivery of information and the development of knowledge, skills and abilities for a particular task.

10. Equipment Requirements List. Aviation, surface and subsurface TTE requirements in support of Naval training are identified by the training activities in Equipment Requirements Lists. The installation of initial training equipment and support items must take place before installation at operational units.

11. Follow-on Training. Formal training that has been developed and documented in a formal training plan or curricula, which begins at RFT. (This training is also known as lifecycle support training, pipeline training and sustainment training).

12. Formal training. Training that has been developed and documented in a formal training plan or curricula. Normally provided as factory training or at a formal land-based organic training site and is designed to train replacement personnel.

13. FEA. A structured process used to examine manpower, training requirements planning requirements and identify alternative approaches to training job tasks. The process identifies job tasks to be performed, analyzes the skills and knowledge needed to perform them, assesses the technologies available for training the skills and knowledge, performs a media analysis to recommend the best mix of delivery media and provides cost and lead-time comparisons for the alternatives.

14. Human Systems Integration. The integrated analysis, design and assessment over the lifecycle of a system and support infrastructure in the domains of manpower, personnel, training, human factors engineering, personnel survivability, habitability, safety and occupational health.

15. Individual's Account. Requirements account for personnel in student, trainee, transient or holdee status, and Midshipmen on active duty. Holdees include patients, prisoners and personnel in the process of being separated.

16. Informal Training. Training that is not based on formal written curricula. Informal training is often provided by the installation team as part of shipboard installation process.

17. IOC. The first attainment of the capability to effectively employ a weapon, item of equipment or system of approved specific characteristics and which is manned or operated by a trained, equipped and supported military unit or force.

18. Initial Training. Operator and maintenance training resulting from the planned installation of new equipment. It is normally one-time training for personnel performing or involved in developmental and operational testing, for initial cadre maintainers and organic training activity instructors (train the trainers).

19. Inter-service Training Review Organization. Activity for Services to voluntarily coordinate inter-Service training.

20. KPP. Those attributes or characteristics of a system that are considered critical or essential to the development of an effective military capability and those attributes that make a significant contribution to the characteristics of the future joint force as defined in the CONOPS. KPP must be testable to enable feedback from test and evaluation efforts to the requirements process. KPPs that are designated as Joint Performance Requirement (JPR) will be validated by the JROC and KPPs that are not designated as JPRs will be validated by the DoD component regardless of the program's Joint Staffing Designator. JCIDS and CDD and KPP are included verbatim in the acquisition program baseline.

21. KSA. An attribute or characteristic considered crucial in support of achieving a balanced solution or approach to a KPP or some other key performance attribute deemed necessary by the sponsor. KSA provides decision-makers with an additional level of capability performance characteristics below the KPP level and requires a sponsor four-star, defense agency commander or principal staff assistant to change.

22. Interim Training. Training that is funded and implemented by the PM when follow-on training is required and is not RFT before Initial Operating Capability. Interim training will continue until follow-on training is implemented and RFT is achieved.

23. Manpower Estimate. An authoritative source for out-year projections of total force requirements and workload. The estimate is prepared by the PM and approved by CNO N1.

24. MTRP. A collection of discreet requirement determination tasks resulting in the development of the technical program data, part I of the NTSP, the output of which is included in the TE. Part I states the underlying concepts that will govern the operation, maintenance, training, the quantity and quality of personnel required and the necessary training hardware. Manpower and training requirements planning is designed to provide MPT analysts with a systematic set of tasks that will determine the best possible MPT profile of an initial acquisition or allow examination of alternative system concepts early in the acquisition process. The task-based approach to manpower and training requirements determination also provides PMs with the flexibility to tailor the level of MPT analysis that will be applied to their program.

25. MS. Major decision points that separate the phases of an acquisition program.

26. MCD. Required characteristics of a training device, which define the military functions the training device must be capable of performing or simulating. Military characteristics include physical and operational characteristics, but not technical characteristics. The military characteristics document is developed after the media selection process.

27. MOS. The duty or related group of duties that a Soldier or Marine by training, skill and experience is best qualified to perform and that is a basis for the classification, assignment and advancement of enlisted personnel. MOSs are divided into PMOS and non-primary MOSs. PMOS is used to identify the primary skills and knowledge of a Marine. Changes to an Active Component Marine's PMOS without approval from CMC (MM) and changes to an RC Marine's PMOS without approval from CMC resource advocates are not authorized. There are three types of non-PMOSs: 1) Necessary (NMOS) – A non-PMOS with a prerequisite of one or more PMOSs. This MOS identifies a particular skill or training in addition to a Marine's PMOS but can only be filled by a Marine with a specific PMOS. When entered as a requirement into the TFSMS, a billet bearing a Necessary MOS must identify a single associated PMOS even if several PMOSs are acceptable prerequisites; 2) Free (FMOS) – Non-PMOS that can be filled by any Marine regardless of Primary MOS. A Free MOS requires skillsets unrelated to primary skills; and 3) Exception.

28. Modernization. See SL720-AA-MAN-030, Navy Modernization Process Management and Operational Manual (NMP-MOM), January 2010.

29. NEC. System of which NEC coding is a part. It supplements the enlisted rating structure in identifying personnel on active or inactive duty and billets in manpower authorizations. NEC codes identify a non-rating wide skill, knowledge, aptitude or qualification that must be documented to identify both people and billets for management purposes. Additionally, an NEC can be used to identify special circumstances or situations with approval via the NEOCS process.

30. NEOCS Board. A method the Navy uses to identify enlisted personnel skills and the requirements associated with these skills. The system forms the basis for actions taken concerning enlisted personnel planning, manpower management, procurement, training, advancement, promotion, distribution, assignment and mobilization. The NEOCS Board serves as the central point for changes to the NEOCS. It reviews change proposals in terms of overall system direction and makes recommendations as appropriate. The board authorizes administrative actions for NEC changes and makes recommendations to CNO N1 for enlisted rating structure changes.

31. NOBC. A classification expressed as a four-digit code, which identifies officer billet requirements and officer occupational experience, acquired through billet experience or a combination of education and experience.

32. Navy Officer Occupational Classification System Board. The Navy Officer Occupational Classification System is the Navy's method to identify skills, education, training, experience a

capabilities related to both officer personnel and manpower requirements. This system forms the basis for officer personnel planning, manpower management, procurement, training, promotion, distribution, career development and mobilization. The Navy Officer Occupational Classification System Board serves as the central point for changes to the officer occupational classification system. The board makes recommendations as appropriate and authorizes administrative actions that change the classification structure.

33. NTSP. The primary document for defining MPT requirements and resources for new systems development and modernization of existing systems. The NTSP identifies the resources required to establish and maintain an effective training program throughout the lifecycle of the acquisition system. Much like the system it addresses, the NTSP goes through periodic updates to reflect advances in technology to sustain and improve combat effectiveness. The NTSP is a lifecycle document that identifies the resources required to establish and maintain an effective training program throughout the new systems' development and modernization. It controls planning for meeting the training requirements of the system and identifies personnel required to install, operate, maintain or otherwise use the system. It is a report that communicates the PM's and Product Support Manager's plan for formulating, implementing and executing a sustainment strategy for training. It should communicate the strategy needed to develop and integrate sustainment requirements into system design, development, testing, fielding and operations or support. NTSPs are required for every Navy and integrated Navy and Marine Corps system. The approved NTSP is the official tasking document for establishing the system's MPT requirements identified within the document.

34. NTSP Conference. A conference where the RS assembles key stakeholders to validate the NTSP, address major issues and make decisions on requirements gaps and resource issues. The PM is responsible for coordinating and resolving minor issues with NTSP principals before and after the NTSPC. NTSPCs are usually scheduled following 45-calendar day draft NTSP requirement validations for NTSPs. However, the decision to convene and host an NTSPC rests with the program's RS.

35. Non-Developmental Item. Any hardware or software item that does not require development, such as commercially available items, items developed by other services or agencies or items developed by foreign governments with which the U.S. Government has a cooperation agreement. Items requiring only minor modification to meet the established requirements of the procuring agency are also considered non-developmental items.

36. Participating Acquisition Resource Manager. An independent systems integrator who develops sub-systems and equipment in parallel with ship construction to meet a defined in-yard date.

37. PEO. A military or civilian official who has primary responsibility for directing multiple Acquisition Category I programs and for assigned Acquisition Category II, III and IV programs. A PEO has no other command or staff responsibilities within the component and only reports to

and receives guidance and direction from the DoD component acquisition executive. PEOs receive program functional support (engineering, logistics, contracting, accounting, legal, etc.) from SYSCOM commanders. Under the direction of the PEO, assigned PMs may assume the duties and responsibilities of PM, TSA and PM for system development or acquisition, modernization and configuration management. For PEOs responsible for ship and aircraft acquisition, modernization, configuration management and lifecycle management, the PEO will coordinate with all PMs providing systems, subsystems and equipment to the ship and aircraft to ensure that training goals, objectives, responsibilities and schedules are defined.

38. PM. A military or civilian official who is responsible for managing acquisition, modernization and configuration management programs.

39. RDA. Aligns all required individual training tasks to the proper point in a Sailor's career continuum when they will be needed to perform their job and provides a recommendation for when training should be provided. The analysis identifies and sequences the new or revised work a Sailor is expected to perform and measures performance based on fleet operational readiness standards for a given Rating Continuum. The analysis will use a combination of TEE and fleet performance data to inform the continuum and the timing of performance checks.

40. Ready Relevant Learning. A pillar of Sailor 2025 that drives fundamental changes into our approach to Sailor training. The goal is to provide the right training at the right time in the right way. To accomplish this, the Navy will develop a career-long learning continuum for every Sailor, modernize training to maximize impact and relevance and accelerate our processes for delivering new training to the fleet.

41. RFT. The date of a training system and its associated logistics, maintenance, syllabus and instructors are certified to be available for training at the learning facility. This date is predicated on the availability of a new, modified or rehabilitated learning facility for training purposes. All aspects of the facility must be ready, including building completion, completed site preparation, training system installation and testing, trained instructors, furnishings, e.g., non-technical collateral equipment. This is the ultimate planning date for the new or modified training system and its readiness for use.

42. RS. The RS determines program objectives and time-phased support requirements and appraises programs, readiness and military worth for a given weapon system function or task in support of the goals and objectives. The RS provides day-to-day OPNAV management of the assigned programs by acting as the central POC for the hardware systems coordinators and the PM. An RS is an OPNAV principal official responsible for an identifiable aggregation of resources that constitute inputs to warfare and supporting warfare tasks.

43. Simulation. The imitation of the operation of a real-world process or system over time. The act of simulating something first requires that a model be developed; this model represents the key characteristics or behaviors of the selected physical or abstract system or process. The

model represents the system itself, whereas the simulation represents the operation of the system over time.

44. Student Profile. The term includes the individual being trained, the individual learning from the interactive courseware, including course and training description, periodicity, course number, reference and training points. Used to construct individual learning situations to acquire the knowledge and skills required for the accomplishment of specific tasks.

45. System. A grouping of functionally related subsystems and equipment operating together to support a major function or meet a tactical purpose. The term system includes subsystems, a system of systems, a family of systems and equipment.

46. Systems Command. The command responsible for implementing policy and procedures for the execution of assigned acquisition and modernization programs. They manage the logistics support plan through their functional and program management organizations.

47. Task Analysis. The systematic examination of what people do, how they do it and what results they achieve by doing it. Task analysis data defines the knowledge, skills and abilities required for a job. Task analysis data are used in several ways: selection and promotion, career planning, performance evaluation, job design, organizational redesign, human resource planning and especially training. In the training field, task analysis data helps to evaluate training needs, determine topic learning objectives and to develop course content. Task analysis data is organized into two levels. Level 1 job analysis (what work is done) used for job design, position advertising and career planning. Level 2 task analysis (how work is done) used to determine what the worker must know, identify specific equipment used and establish minimum performance standards. This information is a keystone of effective training needs analysis.

48. Technical Authority. The authority responsible for establishing, monitoring and approving technical standards, tools and processes in conformance with applicable DoD and DON policy, requirements, architectures and standards. The SYSCOM appoints the Technical Authority.

49. TTE. Investment cost end items of operational equipment, devoted to the training and instruction of naval personnel, for which PMs have responsibility for design, development, modernization, configuration management or selection for service or special use.

50. TA. An office, bureau, command or headquarters exercising command of and providing support to some major increment of the DON's formalized training effort. Depending upon the level of oversight required, the TA may be NETC, a Learning Center or other designated organizations.

51. Training Device. Hardware and software which have been designed or modified exclusively for training purposes involving, to some degree, simulation or stimulation in its construction or operation, to demonstrate or illustrate a concept or simulate an operational environment.

52. TDCP. A document used to identify and evaluate alternative approaches to the design of the training system and to recommend the best approach.

53. TEE. An analysis of training capability and potential value of a training system in enabling students to achieve program-learning objectives.

54. TEEA. The RS's selection as to who or what organization, is to conduct the TEE. The TEEA must have no organizational conflict of interest, must possess or be provided dedicated resources and must be able to report results directly to the RS. The TEEA could be the RS, TA, PEO, SYSCOM, PM, contractor or a team of personnel from these organizations (with a designated lead activity). Results of a TEE will be provided in a letter signed by the senior member of the TEEA or lead activity.

55. TEEP. A plan for evaluating the effectiveness of a training system in meeting its criteria for specific training objectives.

56. TE. An authoritative source for out-year projections of training requirements and assessments. The TE is prepared by the PM and approved by RS(s).
A milestone B product developed using MTRP data. The TE consists of enclosure (2) parts I, V, VI and VII. The TE will be aligned with the manpower estimate or preliminary manpower documents (or both). The analysis will be updated and transitioned into an NTSP at milestone C.

57. Training Materials. See curriculum materials.

58. Training Situation Document. A document used to verify the effectiveness of a training system to meet current training needs and to survey training programs and technologies for applicability to new training needs.

59. TSA. The office, bureau, command or headquarters responsible for supporting the TA by providing material and other forms of support within the cognizance of the office, bureau or command involved. The training support agency provides initial training for the E/S/S until the TA can acquire the capability for training. The training support agency is an activity with fiscal responsibility for supporting the TA by providing material and other forms of support within the cognizance of the office, command or headquarters involved. Suppose development, acquisition or modernization is required. In that case, the training support agency will be the PM who is assigned funding responsibility for all investments and expense costs required to turn over a training system end item and allow the TA to sustain the capability for training.

60. Training System. A systematically developed curriculum includes curriculum, including distributed learning, in-service training, onboard training, self-paced computer-based training, classroom aids, training devices, operational equipment, embedded training capability, and trained personnel to operate, maintain or employ a system. The training system includes all the necessary elements of logistics support.

61. TITA. Defines how the Navy coordinates the design, acquisition and incorporation of a training system and transfer to a schoolhouse. A properly developed agreement: (1) defines facility requirements, including MILCON and special project planning, for installation of the training system; (2) identifies all associated logistics support elements; and (3) transfers training ownership responsibility from the training support agency to the TA. The agreement is an integral part of the system acquisition process as it supports the introduction of new training systems and equipment, incorporates training system changes and identifies sustainment requirements. Close liaison between the training support agency and TA is key to implementing training system installation plans that meet an RFT date.

62. TSPO. Office responsible for technical and team training, which supports the existing fleet training requirements and acts as the focal point for all initial acquisition training requirements approved by the RS for their respective SYSCOM.

63. Urgent Need. An urgent need is an unusual request from a Navy or Marine Corps component commander for an additional warfighting capability critically needed by operating forces conducting combat or contingency operations. Failure to deliver the capability requested is likely to result in the inability of units to accomplish their missions or increases the probability of casualties and loss of life. The DON's urgent need process encompasses Navy urgent operational need, Marine Corps urgent universal need statement, and joint urgent operational needs assigned to the DON.

ACRONYMS

ACDU	Active Duty Navy
AD	Active Duty (Marine Corps)
AOB	Average Onboard
AR	Active Reserve (Marine Corps)
AT	Annual Training
ATIR	Annual Training Input Requirement
AVTECHTRA	Aviation Technical Training (Web site)
BCA	Business Case Analysis
CAF	Course Attrition Factors
C4I	Command, Control, Communications, Computers and Intelligence
C5I	Command, Control, Communications, Computers, Combat Systems And Intelligence
CDP	Course Description Package
CeTARS	Corporate enterprise and Training Activity Resource Systems
CFY	Current Fiscal Year
CIN	Course Identification Number
CIV	Civilian
CMC	Commandant Marine Corps
CMS	Contractor Maintenance Service
CNFEC	Commander Naval Facilities Engineering Command
CNO	Chief of Naval Operations
COA	Course of Action
CONOPS	Concept of Operations
DCNO	Deputy Chief of Naval Operations
DoD	Department of Defense
DON	Department of the Navy
DOTmLPF	Doctrine, Organization, Training, materiel, Leadership and Education, Personnel and Facilities
ENL	Enlisted
E/S/S	Equipment Systems and Sub-Systems
FMECA	Failure Modes, Effects and Criticality Analysis
FEA	Front End Analysis
FH	Flight Hour
FMS	Foreign Military Sales
FOC	Full Operational Capability
FRD	Functional Requirements Document
FRP	Full Rate Production
FTS	Full-Time Support
FY	Fiscal Year
FYDP	Future Years Defense Plan
GD	Pay Grade

GFE	Government Furnished Equipment
GOTS	Government Off-the-Shelf
HSI	Human System Integration
IOC	Initial Operating Capability
JCIDS	Joint Capabilities Integration and Development System Joint Requirements
JROC	Oversight Council
MCD	Military Characteristics Document
MFA	Media Fidelity Analysis
MILCON	Military Construction
MOS	Military Occupational Specialty
MS	Milestone
MTRP	Manpower and Training Requirements Planning
NAVFAC	Naval Facilities Engineering Systems Command
NAVMAC	Navy Manpower Analysis Center
NAVSEA	Naval Sea Systems Command
NAVSUP	Naval Supply Systems Command
NAVWAR	Naval Information Warfare Systems Command
NEC	Navy Enlisted Classification
NEOCS	Navy Enlisted Occupational Classification System
NETC	Naval Education and Training Command
NOBC	Navy Officer Billet Classification
NTSP	Navy Training Systems Plan
OCCSTD	Occupational Standards
OEM	Original Equipment Manufacturer
O&MN	Operation and Maintenance, Navy
OPNAV	Office of the Chief of Naval Operations
OPTEVFOR	Operational Test and Evaluation Force
OT	Operational Test
PAF	Pipeline Attrition Factor
PCS	Permanent Change Of Station
PEO	Program Executive Officer
PFY	Previous Fiscal Year
PLCCE	Program Lifecycle Cost Estimate
PM	Program Manager
PMS	Planned Maintenance System
PMOS	Primary Military Occupational Specialty
POA&M	Plan of Actions And Milestones
POC	Point of Contact
POE	Projected Operational Environment
POM	Program Objective Memorandum
PP	Pay Plan
PPBE	Planning, Programming, Budgeting and Execution
PQS	Personnel Qualification Standards

RDA	Rating Domain Analysis
RFT	Ready for Training
RFU	Ready for Use
ROC	Required Operational Capability
R3B	Resource Requirements Review Board
RS	Resource Sponsor
SELRES	Selected Reserves
SLEP	Service Life Extension Program
SMCR	Selected Marine Corps Reserves
SMD	Ship Manpower Document
SME	Subject Matter Expert
SMOS	Secondary Military Occupational Specialty
SPETE	Special Purpose Electronic Test Equipment
SPTE	Special Purpose Test Equipment
SQMD	Squadron Manpower Document
SRA	Shop Replaceable Assembly
SYSCOM	Systems Command
TA	Training Agency
TAD	Temporary Additional Duty
TADTAR	Temporary Additional Duty Travel Target Funding
TD	Training Device
TDCP	Training Decision Coordinating Paper
TE	Training Estimate
TEE	Training Effectiveness Evaluation
TEEA	Training Effectiveness Evaluation Agent
TEEP	Training Effectiveness Evaluation Plan
TEMP	Test and Evaluation Master Plan
TITA	Training Installation and Transfer Agreement
TSA	Training Support Agency
TSRA	Training Systems Requirements Analysis
TSPO	Training Systems Program Office
TTE	Technical Training Equipment
TYCOM	Type Commander
UIC	Unit Identification Code
UMC	Unspecified Minor Construction
USFF	United States Fleet Forces Command
USMC	United States Marine Corps
WRA	Weapon Replaceable Assembly