OPERATION AND MAINTENANCE SUPPORT INFORMATION (OMSI) SCOPE OF WORK

Preface. Facility owners, operators and their maintenance organization need clear, comprehensive data to **properly operate, maintain and repair the facility** and its systems. OMSI, also referred to as "Technical Operating Manuals," provides a process and a product that captures and organizes key information produced during the design, construction and final acceptance of new facility acquisition or major rehabilitation. The OMSI Scope of Work helps ensure that virtually all as-built architectural and technical product and system information will be available in a standardized, user-friendly format for use over the life cycle of the facility.

Background. In the past, operation and maintenance manuals were most often prepared by the construction contractor and his subcontractors and suppliers. The results were almost always poor. The manuals were incomplete; the operation, maintenance and repair sections were rarely written on an integrated system basis. The OMSI innovation recognized that the project **designers** were best equipped to produce high quality manuals by virtue of their knowledge about the specific project design and its products and systems.

OMSI manuals are normally prepared for new construction by the project Architect-Engineer (AE), **during the construction period**. The AE uses the construction contractor submittals such as Manufacturer's Product Data, Shop Drawings, Field Test Reports and Operation and Maintenance (O&M) Data. Per the project's technical specifications, the construction contractor forwards the submittals to the AE within 30 days after delivery of the product or component to the site. The AE organizes the data, develops detailed system O&M, Troubleshooting and Repair procedures and delivers the pre-final (95%+) OMSI manuals 30 to 60 days before construction completion.

The objective is that information on virtually **any product** used in the construction (except basic building materials such as nails, masonry block, lumber, etc.) **will be found** in the manuals—from ceiling panels, door hardware and carpeting to fire protection, HVAC and direct digital control components and systems. The manuals may also contain information needed to quickly place the operation and maintenance under a **service contract.**

How to Use the Generic Scope of Work. The generic scope presented here is an example or template of the scope being used by the Naval Facilities Engineering Command and requires simple modifications to fit a specific project. For you convenience we have **highlighted in red** the generic Scope of Work numbers and text most frequently needing modification (or deletion). If the word "red" above does not appear in color on your computer screen, you will have to edit the generic Scope of Work more carefully when creating your own template.

When modifying the generic OMSI Scope of Work, consider the following:

1. Become familiar with the project's specifications and drawings. Using the NAVFAC Guide Specification (NFGS) will ensure that adequate operation and maintenance information is provided by the construction contractor. In particular, **NFGS 01781, Operation and Maintenance Data**. must be included. (See Fig. 1. Below.)
2. Contact the facility owner, user, and maintainer for answers to the following questions:
   a. **What systems** will require detailed operation and maintenance information in the OMSI manuals (HVAC, DDC, Fire Protection, etc.)?
   b. How many sets of manuals will be required and where will they reside? Most often, one hard copy of the manuals and a CD-ROM copy is kept at a central location available to the maintenance personnel and a second set is kept at the facility.
   c. Who will review the OMSI pre-final submittal and acceptance of the final submittal?
   d. What will be the building or structure number of the facility? Normally the building number will appear on each binder to facilitate use in a central library setup.

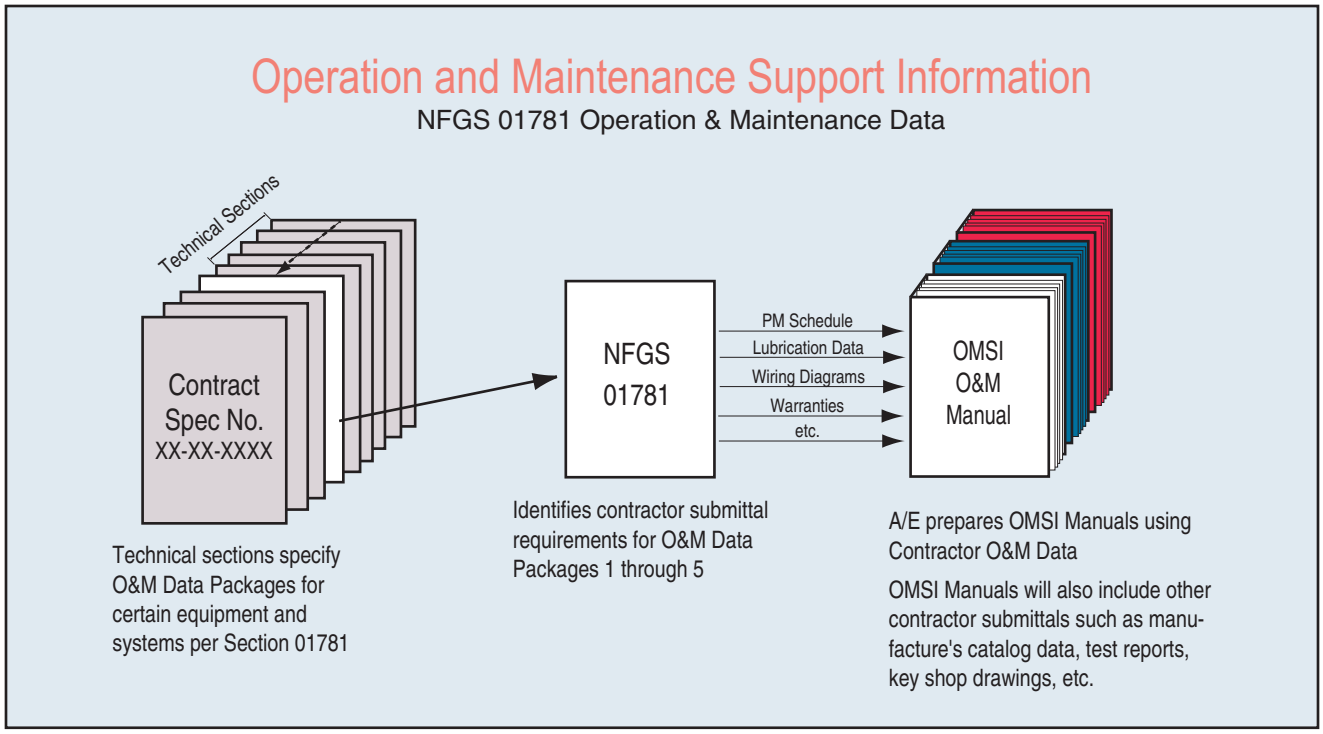

Figure 1

OPERATION AND MAINTENANCE SUPPORT INFORMATION (OMSI)
SCOPE OF WORK

Contract Title/Location: **Preparation of OMSI Manuals for Project P-999, Administrative Support Building, NAS Oceana, Virginia Beach, VA**

OMSI A/E Contract No: **N62470-99-9999**

Table of Contents

1. GENERAL REQUIREMENTS

a. DESCRIPTION OF MANUALS - The purpose of the work is to provide OMSI manuals that contain detailed, as-built information that describes the efficient, economical and safe operation, maintenance, and repair of the subject facility. The OMSI manuals are to be factual, concise, comprehensive and written to be easily used by operation and maintenance personnel. Descriptive matter and theory must include technical details that are essential for a comprehensive understanding of the operation, maintenance and repair of the system. The OMSI Architect and Engineer (A/E) shall ensure that OMSI manuals reflect changes to systems and equipment made during construction. The words *system, systems,* and *equipment*, when used in this document, refer to as-built systems and equipment.

b. ORGANIZATION OF MANUALS - Prepare the OMSI manuals in three parts: Part I - Facility Information, Part II - Primary Systems Information, and Part III - Product Data. Cross referencing within or between OMSI Parts or volumes is required and must be specific.

c. SOURCES OF DATA - The primary sources of data needed to prepare the OMSI manuals include approved construction submittals, design plans and specifications, and field visits. Construction submittals include items such as Operation and Maintenance (O&M) Data, Product Data, Shop Drawings, and Field Test Reports. These submittals are generally prepared by the manufacturer or supplier of the product, component, or system and are submitted by the construction contractor or subcontractor per the specifications. Construction Specification Section 01330 lists the submittal requirements and Specification Section 01781 lists more detailed O&M requirements. Remove extraneous design information from plans to be included in the OMSI manuals. Photocopies of design plans are not acceptable.

d. METRIC MANUALS - Projects designed with metric units of measurement require metric OMSI manuals. All measurements and units shall be in SI (System International) metric units exclusively.

2. DESCRIPTION OF WORK

a. OMSI PART I - FACILITY INFORMATION

(1) General Facility and System Description - Describe the function of the facility. Detail the overall dimensions of the facility, number of floors, foundations type, expected number of occupants, and facility category code. List and generally describe all the facility systems listed in Part II, Primary Systems Information and any special building features (for example, cranes, elevators, and generators). Include photographs, marked up and labeled to show key operating components and the overall facility appearance.

(2) Basis of Design - Include the Basis of Design that shows the basic design scope of work, assumptions and the original intentions of the A/E of design.

(3) Safety Hazards - List all residual hazards identified in the Requirements Hazard Analysis as prepared by the A/E of record. Provide recommended safeguards for each identified hazard.

(4) Floor Plans - Provide uncluttered, legible 11 by 17 inch floor plans. Exact copies of the design plans are usually not acceptable because of extraneous information. Include only room numbers, type or function of spaces, and overall facility dimensions on the floor plans. Do not include construction instructions, references, frame numbers, etc..

(5) Utility Connection and Cutoff Plans - Provide utility site and floor plans that indicate the exterior and main interior connection and cutoff points for all utilities. Include enough information to enable someone unfamiliar with the facility to quickly locate the connection and cutoff points. Do not include items such as contour lines, elevations, and subsurface information on the site plans. Indicate the room number, panel number, circuit breaker, valve number, etc., of each connection and cutoff point, and what that connection or cutoff point controls. These plans are in addition to the Floor Plans.

(6) Extended Warranty Information - List all warranties for products, equipment, components, and sub-components whose duration exceeds one year. Cross reference the list to the warranty copies included in Part II, Primary Systems Information or in Part III, Product Data. For each warranty listed, indicate the applicable specification section, duration, start date, end date, and the point of contact for warranty fulfillment. Also, list or reference all specific operation and maintenance procedures that must be performed to keep the warranty valid.

(7) Equipment Listing - Provide a table that lists the major equipment shown on the design equipment schedules. Show the item descriptions, locations, model numbers; and the names, addresses, and telephone numbers of the manufacturers, suppliers, contractors, and subcontractors.

(8) HVAC Filters - Provide a table that lists the quantity, type, size, and location of each HVAC filter.

(9) Floor Coverings - Provide a table that lists by room number (including hallways and common spaces), the type of space, type of floor covering and area of floor. The table will include a facility summary of the total area for each type of space and floor covering.

(10) Wall Surfaces - Provide a table that lists by room number (including hallways and common spaces), the type of wall surface, and area of wall surface. The table will include a facility summary of the total area for each type of wall surface.

(11) Ceiling Surfaces - Provide a table that lists by room number (including hallways and common spaces), the type of ceiling surface, and area of ceiling surface. The table will include a facility summary of the total area for each type of ceiling surface.

(12) Windows - Provide a table that lists by room number (including hallways and common spaces), the type of window, window size, number of each size and type, and special features. The table will include a facility summary of the total number for each type and size of window.

(13) Lighting Fixtures - Provide a table that lists by room number (including hallways and common spaces), the type of lighting fixture, number of lighting fixtures, type of bulbs or tubes, and number of bulbs and tubes. The table will include a facility summary of the total number of fixtures of each type and number of bulbs or tubes of each type.

(14) Plumbing Fixtures - Provide a table that lists by room number, the number and type of plumbing and bathroom plumbing fixtures (for example, sinks, water closets, urinals, showers and drinking fountains).

(15) Roofing - Provide the total area of each type of roof surface and system. Provide the name of the roofing product and system; manufacturer's, supplier's, and installer's names, addresses, and phone numbers. For each type of roof, provide a recommended inspection, maintenance and repair schedule that details checkpoints, frequencies, and prohibited practices. List roof structural load limits.

(16) Supply Inventory Requirements - Provide a list of maintenance and repair supplies (for example, spare parts, fuels, lubricants) required to ensure continued operation without unreasonable delays. Identify and list parts and supplies that have long purchase lead times. Give special consideration to facilities at remote locations.

(17) As-built Drawing List - Provide a list of the "as-built" or "record" drawings and specifications. Include drawing number and title. Identify where the drawings and specifications will be stored and filed .

(18) Training Requirements - Provide a list of recommended training related to the operation, maintenance and repair of each installed system that is available from the manufacturer or other source. Provide the name, address, and phone number of point of contact. The training requirements shall pertain only to systems listed in Part II, Primary Systems Information.

(19) Skill Matrix - Provide a matrix by system and skill that identifies productive hours required to maintain the facility's systems listed in Part II, Primary Systems Information. An example of the format is as follows:

	Hours			
Skill required	*System 1*	*System 2*	*System 3*	*Total/Skill*
Skill 1				
Skill 2				
Skill 3				
Skill 4				
Total/System				

b. OMSI PART II - PRIMARY SYSTEMS INFORMATION

Prepare the information required for Part II, Primary Systems Information using a **systems approach.** This approach requires that consideration be given to the entire system; that is, the interfaces of equipment, connections and material flow within the system. Include the following systems:

1. HVAC System
2. Fire Alarm System
3. Sprinkler System
4.

Use **Notes, Cautions and Warnings** throughout the Part II, Primary Systems Information to emphasize important and critical instructions and procedures. Place notes, cautions and warnings immediately before the applicable instructions or procedures. Notes, cautions and warnings are defined as follows:

Note: Highlights an essential operating or maintenance procedure, condition or statement.

Caution: Highlights an operating or maintenance procedure, practice, or condition, statement, etc., that, if not strictly observed, could result in damage to or destruction of equipment, loss of mission effectiveness, or health hazards to personnel.

Warning: Highlights an operating or maintenance procedure, practice, condition, or statement, etc., that, if not strictly observed, could result in injury to or death of personnel.

(1) Operation

(a) System Description - Provide a detailed discussion of the system composition and operation. Include technical details that are essential for an understanding of the system.

(b) Start-Up and Shutdown Procedures - Provide step by step instructions to bring systems from static to operational configurations and from operating to shutdown status.

(c) Normal Operating Instructions - Provide a discussion of the normal operation and control of the system. Address operating norms (for example, temperatures, pressures, and flow rates) expected at each zone or phase of the system. Supplement the discussion with control and wiring diagrams and data.

(d) Emergency Operating Instructions - Provide emergency operating procedures in the event of equipment malfunctions. Provide shutdown instructions for fires, explosions, spills, or other contingencies.

(e) System Flow Diagrams - Provide a flow diagram indicating system liquid, air (do not include ductwork) or gas flow during normal operations. Integrate all system components into the diagram. A compilation of non-integrated, flow diagrams for the individual system components are not acceptable.

(f) Diagrammatic Plans - Provide floor plans indicating the location of equipment and configuration of the system installation. Include the configuration of associated piping or wiring. Subordinate structural features to utility features.

(g) Environmental Considerations - Provide a listing of the equipment that requires special operation, reporting, testing, analysis or inspection to comply with federal, state or local environmental laws. Examples of possible list items include back flow preventer inspections, underground storage tank testing, hazardous material or waste usage and storage documentation, and air pollution control devices. Each item in the list will include requirements for environmental operation, reporting, testing, analysis and inspection as well as references to respective implementing regulations, statutes, or policies.

(h) Field Test Reports - Provide Field Test Reports (SD-12) that apply to equipment associated with the system.

(i) Operator Servicing Requirements - Provide instructions for services to be performed by the operator such as lubrication, adjustments, and inspection.

(j) Safety Instructions - Provide a list of all personnel hazards and equipment safety precautions including recommended safeguards.

(k) Valve List - Provide a list of all valves associated with the system. Show valve type, identification number, function, location and normal operating position.

(l) Operating Log - Provide forms, samples, and instructions for keeping necessary operating records.

(2) Preventive Maintenance

(a) Preventive Maintenance Plan and Schedule - Provide a Preventive Maintenance (PM) plan using manufacturer's recommendations and sound engineering practice. Include all major pieces of equipment. Provide a check sheet that details maintenance tasks and associated frequencies. Also provide an annual schedule indicating when maintenance tasks should be performed such that work is spread as evenly as possible throughout the year.

(b) Preventive Maintenance Procedures - Provide a Task Card for each individual maintenance task identified on the PM Plan and Schedule. Include detailed PM procedures, safety instructions and precautions including Lock out/tag out precautions, required skill level, number of personnel needed, frequency, special tools needed, parts needed, and estimated time required to complete the task.

(c) Lubrication Schedule - Provide a lubrication schedule indicating types, grades, and capacities of lubricants for specific temperature ranges and applications.

(d) Preventive Maintenance Log - Provide a tabular form for recording the accomplishment of PM. Log must record date PM was performed, findings, action taken, parts used, time required to complete the work, and other data necessary to provide a good historical record of PM activities.

(3) Repair

(a) Troubleshooting Guides and Diagnostic Techniques - Provide step-by-step procedures for diagnosing, isolating and correcting system malfunctions. The procedures shall clearly state indications or symptoms of trouble; the sequential instructions, including checks and tests to be performed and conditions to be sought, to determine the cause; and remedial measures to return the equipment and system to operating condition. Identify special test equipment required to perform the procedures. Start the troubleshooting guide at the system level and proceed to a level where detailed manufacturer's troubleshooting procedures for the system's components can be referenced.

(b) Repair Procedures - Provide repair instructions required to restore equipment to proper operating condition and standards. References must be specific as to location within the OMSI manuals.

(c) Removal and Replacement Instructions - Provide or refer to the manufacturer's data for the instructions for the removal and replacement of equipment components. References must be specific as to location within the OMSI manuals.

(4) Manufacturer's Data

(a) Operation and Maintenance Data - Include the O&M Data Package information provided by the construction contractor per the technical sections of the specification and Section 01781, Operation and Maintenance Data.. Incorporate this information into each system discussion under the Operation, Preventive Maintenance and Repair sections of Part II, Primary Systems Information.

(b) Manufacturer's Equipment Information - Provide drawings, illustrations and product data furnished by the manufacturer for the equipment and system components. Organize and index the information for easy reference.

c. OMSI PART III - PRODUCT DATA

(1) Record of Material and Equipment - Provide a copy of the product data and O&M manuals used in the facility construction. Include product data submittals required in Divisions 8 through 16 of the construction specification. Examples of product data include Manufacturer's Catalog Data, Field Test Reports and Warranty sheets. Include Shop Drawings relevant to the operation and maintenance of the facility or system except those already used in Part II,

Primary Systems Information. O&M manuals for equipment should be included and separately tabbed within the specification section. Do not include extraneous data, (for example, transmittal sheets, certifications, welder qualifications, contractor qualifications and certificates of compliance). Highlight or note submittals that contain information on several parts or model numbers to identify the actual installed material. Product data included in Part III, Product Data should use metric units if metric OMSI manuals are required. The A/E is not required to convert to metric units in product data that contains only English units.

(2) Warranties - Provide copies of extended warranties for systems, equipment and components.

3. FORMAT

a. HARD COPIES

(1) Binders - Bind the OMSI manuals in durable, hard cover, water and grease resistant binders, which hold 8 1/2 by 11 inch sheets. Binders shall have clear pockets located on the front and on the spine that hold printed sheets.

(a) **Facility Information binder -** Bind the Part I, Facility Information in a white, post type, loose leaf binder of appropriate size.

(b) **Primary Systems Information binders -** Bind the Part II, Primary Systems Information in blue, post type, loose leaf binders of three inch capacity. More than one system may be included in a single binder provided that all sections of each system are included in that binder.

(c) **Product Data binders -** Bind the Part III, Product Data in red, post type, loose leaf binders of three inch capacity.

(d) Identify each binder on both the cover insert sheet and the spine insert sheet with the following information.

1. OMSI Manual Part I, II or III with appropriate titles
2. Building Number
3. Project Title
4. Activity and Location
5. Construction Contract Number
6. Prepared For: [Contracting Agency]
7. Prepared By
8. Volume Number - Each binder is a single volume. Number each volume consecutively. For example, an OMSI composed of 5 binders would have the Part I, Facility Information binder labeled volume 1 of 5 and the last Part III, Product Data binder would be volume 5 of 5.

(2) Preface - Insert a Preface sheet in each volume, following a copy of the cover insert sheet. Include the information shown below in the Preface. No tab sheet is to be used with the Preface sheet.

PREFACE

.INTRODUCTION

Operation and Maintenance Support Information (OMSI) was prepared for this project to help you operate, maintain, and repair the facility over its life cycle. OMSI manuals provide a comprehensive, organized library of as-built materials, equipment and systems. **Use the OMSI manuals as the first step in solving your operation, maintenance or repair problems**. Your comments or suggestions are welcome and should be forwarded to: Commander, LANTNAVFACENGCOM, 1510 Gilbert Street, Norfolk, Virginia 23511-2699, Attn: Code 1614. Telephone (757) 322-4647, FAX (757) 322-4614.

CONTENTS

OMSI Part I, Facility Information: This portion of the OMSI manuals contains **Basic User Information** needed on a daily basis by the owner or tenant of the facility. Examples: General Facility and System Descriptions, Utility Connection and Cut-off Plans, Safety Hazards, Warranty Information. It also provides the information you need to quickly prepare **Maintenance Service Contracts and Performance Work Statements** for O&M and Custodial Service Contracts. Examples of this information: area totals for floor coverings, wall and ceiling surfaces; number, types, and sizes of lighting fixtures, bathroom fixtures, windows and HVAC filters.

OMSI Part II, Primary Systems Information: This portion of the OMSI manuals provides detailed operation, preventive maintenance, repair, and manufacturer's data for each system selected. This information includes items such as normal and emergency operating procedures, flow diagrams, PM requirements, spare parts, troubleshooting, repair procedures, and warranty provisions. You can expect **better PM**, **faster repairs,** and **reduced down time** by using information in this part of the OMSI manuals.

OMSI Part III, Product Data: This portion of the OMSI manuals consists of construction contractor submittals for as-built materials and equipment such as manufacturer's catalog data, shop drawings, test data, and Operation and Maintenance Data not included in Part II. Part III is organized by the divisions and sections of the construction specifications. For example, if you want to find information about the fluorescent lights, you would look under Division 16 "Electrical", and then in Section 16510, "Interior Lighting" This allows you to **quickly identify the exact product installed**, part number, manufacturer, etc. Part III also includes **architectural product information** for items such as ceiling tile, carpeting, plumbing, and lighting fixtures. This information will keep your facility looking sharp for many years through product-specific maintenance and replacement of its' architectural features.

UPDATING

The OMSI manuals must reflect the facility's existing components; therefore, you **must continually update** the manuals. When equipment or components are replaced, add pertinent new information to each manual set. Be sure to update all sections of the OMSI manuals that reference the replaced item. Purge all information on the replaced item to prevent confusion.

(3) Pages, Dividers and Tabs - Use high quality paper and dividers made of heavy duty paper with plastic reinforced holes and integrated tabs.

(a) Facility Information divider - Use white tabs to identify the major items.

(b) Primary Systems Information dividers - Use blue tabs with bold type to identify the system titles. Use dividers with white tabs to identify the different sections under each system and the major topics under each section.

(c) Product Data dividers - Use white tabs to show the Division 8 through 16 number and title. Use dividers with colored tabs to identify the specification section number with keywords to identify the section title. Use colored non-tab dividers to separate large equipment groupings such as valves, pumps, chillers and to separate the O&M data within each specification section.

(4) Oversized Sheets - Insert oversized sheets into the binders as single fold-out sheets. Oversized sheets are defined as submittals, instruction sheets, drawings, etc., larger than 8 1/2 by 11 inch, but not exceeding 11 by 17 inch. Oversized sheets shall be folded to expose the sheets title block. Submittals or drawings exceeding 11 by 17 inch, which cannot be reduced, may be inserted in labeled, clear plastic pockets.

(5) Table of Contents - Provide a Master Table of Contents for the entire set of OMSI manuals. Place the Master Table of Contents after the Preface sheet of each volume. Provide a specific Table of Contents for Part I, Facility Information, for each system in Part II, Primary Systems Information; and for each division and section of Part III, Product Data.

b. ELECTRONIC FORMAT - Provide narrative information in a Word for Windows™ format, unless otherwise specified by the LANTNAVFACENGCOM Technical Representative. Provide drawings and plans prepared for the OMSI manuals in a CAD format. Name and index the files for ease of identification and update. Provide all files on 3 1/2 inch high density disks.

c. CD-ROM - Provide the OMSI manuals in a Compact Disk-Read Only Memory (CD-ROM) format. CD-ROM shall work both in Windows and in DOS using any IBM compatible personal computer. Provide and install in each disc a CD-ROM reader program to install, access, retrieve and process information. The final submittal shall include written instructions for installing, accessing and retrieving information from the CD-ROM. Use the OMSI Master Table of Contents for the different systems and specification sections for the CD-ROM indexing. Accessing and retrieving of information must be provided at every level of indexing without scrolling through the entire document.

4. DOCUMENTATION SITE VISIT - Provide the services of one person having detailed technical knowledge of the OMSI manuals to be on site for one day to obtain details and documentation on field changes, to take appropriate photos and to gather missing submittal data. Timing of visit will depend on actual construction progress but will generally occur approximately 60 to 120 days prior to the OMSI manuals prefinal submittal date.

5. VALIDATION SITE VISIT - Provide the services of two people, who have detailed technical and organizational knowledge of the OMSI manuals, to be on site for one day to perform the validation of the OMSI manuals. The purpose of the validation is to present the OMSI manuals to the users and to verify the OMSI manuals' completeness and accuracy. The validation site visit will be performed at the prefinal stage. Contact the LANTNAVFACENGCOM Technical Representative for the exact date.

a. PRESENTATION - Provide a presentation of the OMSI prefinal submittal manuals to Government and other representatives at the activity site. The

presentation details how the OMSI manuals are organized, what they contain, how they are referenced and cross referenced, and how to use them in day-to-day operation, maintenance and repair.

b. VERIFICATION - Field verify the accuracy and completeness of the OMSI manuals. This includes verifying that the systems and equipment in the OMSI manuals accurately reflect the as-built conditions; verifying that O&M procedures are appropriate for the systems and equipment that they support; and verifying that equipment nomenclature and system configurations are accurate. Make corrections and recommended in-scope changes to the OMSI manuals prior to delivery of the final submittal.

6. SUBMITTALS

a. CONCEPT SUBMITTAL - Provide one hard copy. The purpose of this submittal is to present, for approval, an overall plan for preparation of the OMSI manuals. Deliver one copy to the LANTNAVFACENGCOM Technical Representative. The submittal includes, as a minimum, the following information:

(1) Identify by name all systems that will be addressed in the OMSI manual.

(2) Provide the format and table of contents of the OMSI manual and include the following:

(a) Sample post type, loose-leaf binder. Show a typical title as it will appear on the front face and also on the spine of the binder.

(b) Proposed divider format with the sample divider and completed tab.

(c) Samples showing the quality of paper and quality of reproduction proposed.

(d) Select one system of moderate complexity and partially develop the various operational and maintenance aspects of the system. This development should have sufficient depth to clearly demonstrate the arrangement and level of detail proposed for all systems that will be included.

(e) A submittal matrix, tailored from the construction submittal matrix, to identify those submittals needed for the preparation of the OMSI manuals. The A/E shall use the submittal matrix to track submittals needed for the OMSI manuals.

b. PRELIMINARY SUBMITTAL Provide two hard copies. Deliver one copy to the designated point of contact at the activity and one copy to the LANTNAVFACENGCOM Technical Representative. Include the cover sheets, spine inserts, table of contents, binders, dividers, and other materials as necessary to demonstrate the proposed physical arrangement of the OMSI manuals and the quality of the copies, dividers and tabs. Present the submittal in sufficient detail to evaluate the data collection and arrangement process. The LANTNAVFACENGCOM Technical Representative copy, with review comments, will be returned to the A/E for

preparation of the prefinal submittal. The submittal includes, as a minimum, the following information:

(1) All available Part I, Facility Information.
(2) All systems of Part II, Primary Systems Information. At least one system shall be essentially complete. The remaining systems shall be at least 50% complete.
(3) At least two specification divisions of Part III, Product Data.
(4) An updated submittal matrix, tailored from the construction submittal matrix, to identify those submittals needed for the preparation of the OMSI manuals. The A/E shall use the submittal matrix to track submittals needed for the OMSI manuals.

c. PREFINAL SUBMITTAL - Provide two hard copies. Deliver one copy to the LANTNAVFACENGCOM Technical Representative and deliver one copy to the designated point of contact at the activity. Include a copy of the preliminary submittal review comments along with the A/E's response to each item. The LANTNAVFACENGCOM Technical Representative copy with review comments will be returned to the A/E for preparation of the prefinal submittal. The activity keeps their prefinal OMSI manuals to operate and maintain the facility from Beneficial Occupancy Date (BOD) through submission of the final submittal. Therefore, the prefinal submittal should contain all the required information that is available at the time of submission.

d. FINAL SUBMITTAL - Provide two hard copies and two sets of electronically formatted information. Deliver one hard copy and one set of discs to the LANTNAVFACENGCOM Technical Representative. Deliver one hard copy and one set of discs to the activity point of contact. The final submittal must address all previous review comments. Prefinal review comments may include problems discovered during the OMSI manuals' review, site validation, and facility start up. The comments will be provided to the A/E at various times before and after facility BOD. The complete prefinal OMSI manuals and review comments will be returned to the A/E for preparation of the final submittal. If the comments require only minor corrections, the hard copies of the OMSI manuals will not be returned and the A/E shall correct the OMSI manuals by submitting correction sheets and directions on how to make the corrections. The final submittal shall include a copy of the prefinal submittal review comments along with a response to each item.

e. SUBMITTAL SCHEDULE

(The actual dates will be established during the negotiation)

SUBMITTAL	DUE DATE____	TIME FRAME_____
Concept	_____	60 - 120 days after OMSI award
Preliminary	_____	50-60 % of construction completion
Prefinal	_____	60 days prior to BOD
Final	_____	120 - 180 days after BOD