The U.S. Navy's Military Sealift Command

Industry Day FE - Singapore

Jim Goodheart, Director Ship Maintenance (DSMX)

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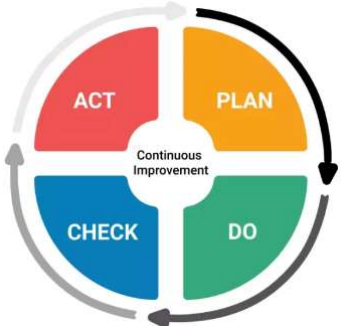
ROH Cost and Duration

- Using the System of Record - SAMM, Engineering has been collecting data for MTA/ROH periods.
  - The data to the right is from a sampling of T-AO 187, T-AOE, T-AKE, T-AKR.
  - The cost and duration to complete the maintenance periods has increased over the past 20 years for all MSC GOGO/GOCO vessels.
  - Over the past four years, the NAVY and MSC has seen a sharp increase in the duration of the availabilities.
  - Cost has been a steady increase.
  - MSC has incorporated standard work items, early identification efforts, developing work packages earlier and assuring quality of the work packages, and is investigating awarding contracts at A-120 or A-180 vise A-60.
- MSC maintenance looking forward
  - 501 DAY POA&M – already instituted on T-AO187/205, ESBs, Command vessel, Sub tenders, and Tug & Salvage Boats
  - 80/20 Contract Split in accordance with the 501 Day POA&M
  - Classification and Regulatory Body Pre-Availability Inspections
  - Underway Maintenance and Repairs
  - Anticipated growth pot at a pre-determined price (Approximately 30% of the contract. This is a common practice for CONUS Availabilities
  - Annual technical submittals

Avail Years (lumped)	Avg. Actual Cost	Avg. Dur..
ROH 2002 - 2010	$5,183,261.44	53.3
ROH 2011 - 2015	$8,966,577.91	58.5
ROH 2016 - 2020	$14,745,215.25	69.5
ROH 2021 - 2025	$20,008,060.28	109.6

Why Library Work Items

- Standardization of Work Items for SY availabilities enables continuous improvement:
  - Plan – Establishes Baseline
  - Do – Implement Plan
  - Check – Evaluate the Plan
  - Act – Apply Lessons Learned
  - Results



Benefits

1. Work is done according to the current best practice
2. Simplifies and speeds up training and onboarding
3. Improves quality and increases customer satisfaction
4. Reduces defects and waste
5. Makes results predictable and measurable
6. Helps finance teams estimate and price accurately
7. Allows organizations to scale rapidly
8. Puts the focus on the process, not the person
9. Makes the improvement easier, faster, and scalable - It's hard to improve a process that is not well understood or consistently applied.
10. Streamlines problem-solving by understanding the current process
11. Frees managers and leaders to focus on strategic objectives and culture

Technical Requirement Submittal Plan

- Technical Factors
  - Factor 1 – Understanding the WI Package
  - Subfactor 1.1 – Time Phased Sequencing Network (TPSN) (Schedule)
  - Subfactor 1.2 – Problem Areas
  - Subfactor 1.3 – Engineering
  - Subfactor 1.4 – Material Availability
  - Subfactor 1.5 – Material Control and Storage***
  - Subfactor 1.6 – Heavy Weather Plans***
  - Subfactor 1.7 – Cold Weather Plans***
  - Subfactor 1.8 – Fire and Flooding Protection Plans
  - Factor 2 – Ability To Perform the WI Package
  - Subfactor 2.1 – Man-hour Chart
  - Subfactor 2.2 – Growth Absorption
  - Subfactor 2.3 – Facilities***
  - Factor 3 – Management Control and Quality Assurance
  - Subfactor 3.1 – Organization and Key Personnel
  - Subfactor 3.2 – Subcontractor Participation
  - Subfactor 3.3 – Quality Control Plan***
  - Subfactor 3.4 – Hazardous Waste Management Plan***

Technical Requirement Submittal Plan

- **Common Shipyard Deficiencies in Proposal Submittals**
  - Subfactor 1.1 TPSN – Required by Standard Work Item 0013
    - GANTT chart not submitted with milestones required by work item 0013.
    - Not providing a clear critical and secondary path
  - Subfactor 1.2 Problem Areas - Required by Standard Work Item 0013
    - Providing problem areas identified without a solution.
  - Subfactor 1.3 Engineering - Required by Standard Work Item 002 & 004
    - Offeror not identifying work items that will require additional Engineering requirements.
    - Offeror not including regulatory approvals required and how they will be obtained.
  - Subfactor 1.4 Material Availability - Required by Standard Work Item 0015
    - Not including a list of what material should be included in this requirement – material cost greater than 25% of total work item cost and cost of CFM greater than $10K for that work item.
  - Subfactor 1.5 Material Control and Storage - Required by Standard Work Item 0015
    - Not identifying the requirements of WI 015.
  - Subfactor 1.6 Heavy Weather Plan - Required by Standard Work Item 006
    - Not providing a legitimate heavy weather plan that meets the requirements of WI 006 even though the area does not experience detrimental weather.

Technical Requirement Submittal Plan

- **Shipyard Deficiencies in Proposal Submittals**
  - Subfactor 1.7 Cold Weather Plan - Required by Standard Work Item 007
    - Not providing a cold weather plan the meets the requirements of WI 007 even though the area is not in a cold weather area
  - Subfactor 1.8 Fire and Flooding Protection Plans - Required by Standard Work Item 0016
    - Firefighting – All required information is not provide with the proposal as stated in WI 0016 or what they are providing for firemain pressure in not adequate
    - Improper drawing – shows a different ship or doesn't match the ship in proposal. I.E. ESB3-5 are slightly different than ESB6-8.
    - Missing Fire Plan per work item that requires a drawing with Egress Routes, Fire Trees (1 for every 200-feet), Location of temp Fire Extinguishers
  - Subfactor 2.1 Man-Hour Chart - Required by Standard Work Item 0013
    - Providing Man-Hour charts with hours that don't reflect the scope of work in the work item.
  - Subfactor 2.2 Growth Absorption
    - Not providing an honest assessment of how much growth can be absorbed by the shipyard without extending the period of performance.
  - Subfactor 2.3 - Required by Standard Work Item 901
    - Docking plan is unsatisfactory – the yard cannot provide the information of the floating dock to support the block plan.. block pressures are too high. Generally, CONUS do not have problems but OCONUS always an issue

Technical Requirement Submittal Plan

- **Shipyard Deficiencies in Proposal Submittals**
  - Subfactor 2.3 Facilities - Required by Standard Work Item 0011, 0015 and 901
    - Providing crane certifications that expire prior to the period of performance of the ship being evaluated and not providing an explanation of whether those cranes will be re-certified prior to the ship arriving.
    - Forms not signed and dated
    - Docking plan is unsatisfactory – the yard cannot provide the information of the floating dock to support the block plan. Block pressures are too high. Generally, CONUS do not have problems but OCONUS does.
    - Mooring Plan is unsatisfactory – All required information is not provide to support the mooring plan in accordance with work item
    - Approach Charts not annotated with the approach route. In most cases there is no approach route and the chart is not dated within 365-days of the solicitation as stated in the work item
  - Subfactor 3.1 Organization and Key Personnel - Required by Standard Work Item 0013
    - Not providing/identifying supervisors for 1st and 2nd shifts
  - Subfactor 3.2 Subcontractor Participation - Required by Standard Work Item 002 and 004
    - Not identifying contractors for each work item that are considered legitimate sources for that work.

Technical Requirement Submittal Plan

- **Shipyard Deficiencies in Proposal Submittals**
  - Subfactor 3.3 Quality Control Plan - Required by Standard Work Item 004
    - Not providing the Quality Control Plan as required by WI 004.
    - Not providing an accurate list of key inspection events
  - Subfactor 3.4 Hazardous Waste Management Plan - Required by Standard Work Item 0023
    - Providing a hazardous waste management plan with a cost different than dictated in the solicitation.

Lessons learn from previous availabilities

- SHORE POWER FOR T-AKEs
  - Requirement for shore power is 8000 AMPs, 500 volts, across 20 400 AMP Cables. Shore power is required to be installed upon ship's arrival.
- OEM Support
  - Understanding MSC policies for OEM Support on critical and life saving appliances
  - VISA requirements
- Growth work absorption
  - From ship's force prior to shipyard arrival
  - From Regulatory and Classification bodies upon arrival at the shipyard
  - Capacity (pier and services) for extensions past the agreed upon PoP
- Ability to work 2nd and 3rd shift and weekend work.
- Clear understanding of the contract and specifications

Back up Slides

Annual Submittals Program

- Technical Proposal Annual Submittal Program: Allows shipyards to submit technical documentation for approval on a Once per Year basis.
  - Contractors with approved Annual Submittal letters will only need to reference the approval letter for applicable technical factors and subfactors for any solicitations they are bidding on. This avoids contractor need to resubmit all technical information with each proposal and also reduces MSC technical evaluation team time to review proposals.
- Call for Annual Submittals will come via a FLC Request for Information (RFI)
  - RFI will provide details on annual submittal requirements and due date
  - Expected date for RFI is TBD, but likely in the Feb/Mar 2026 timeframe.
- Once approved, FLC will issue an Annual Submittal approval letter good for 1-year.
  - For all subsequent proposals, Contractor only has to include the statement “Refer to our annual submittal approval dated xx/xx/xxxx” for each applicable subfactor.
- Annual Submittal Program participation is voluntary, and proposals will be accepted regardless of participation.
- Contractors participating in the program must notify FLC concerning any changes that affect the technical evaluation factors.
- The submittal of the documentation on an annual basis does not forfeit the US Government’s right to select or change factors or subfactors, enter discussions, or request clarification.

Annual Submittal Program

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Annual Submittal Program

- **Technical Factors/Subfactors Covered under the Annual Submittals Program**
  - **Subfactor 1.5: Material Control and Storage**
  - **Subfactor 1.6: Heavy Weather Plans**
  - **Subfactor 1.7: Cold Weather Plans**
  - **Subfactor 1.8: Fire and Flooding Protection Plan**
    - **Note that portions of the Subfactor are ship specific and would not be covered under the Annual Submittal Program. The RFI calling for Annual Submittals will specify which parts of this Subfactor are covered.**
  - **Subfactor 2.3: Facilities**
    - **Note that portions of the Subfactor are ship specific and would not be covered under the Annual Submittal Program. The RFI calling for Annual Submittals will specify which parts of this Subfactor are covered.**
  - **Subfactor 3.3: Quality Control Plan**
  - **Subfactor 3.4: Hazardous Waste Management Plan**

Technical Requirement Submittal Plan

- **Subfactor 1.2 – Problem Areas**
  - **Identify any foreseen potential problem areas in accomplishing the work requirements (e.g., LLTM, open and inspect items, potential labor disputes, dry dock availability, exercising contract options) within the allotted contract period and propose solutions to those problems. If no problems are foreseen, state, "No problems are foreseen."**
    - ***Intent of this subfactor is for the Offeror to state any additional problem areas not already covered in the subfactor above that could impact the ability to complete all work in the PoP. Examples might be that some required Contractor Furnished Material (CFM) cannot be ordered & received in time to accomplish a particular work item. The Offeror should include proposed solutions if those are available.***
    - ***It is possible that a highlighted Problem Area in this subfactor without a proposed solution may result in a technically unacceptable rating. The Offeror is advised to provide reasonable solutions for any problem areas listed.***

Technical Requirement Submittal Plan

- **Subfactor 1.3 – Engineering**
  - **The Offeror shall demonstrate his understanding of the engineering support requirements (e.g., working drawings, tech/system manuals, selected record plans, inclining requirements, Trim and Stability booklet, and docking and undocking calculation, if required) of the work package.**
    - ***Intent here is for Offeror to review the entire work package and list here any requirements from the work items that require the development or update of engineering products like drawings, technical manuals, calculations, etc. This listing should include the WI #, a brief title of the engineering product, and more in depth description of the product and how the Offeror intends to accomplish.***
  - **Identify completely the extent of engineering services that you plan to provide for this work package.**
    - ***Intent here is for the Offeror to list out the engineering services required to support the work package requirements. As an example, this might include a Naval Architect, Dock Master, a Structural Engineer, a Designer for drawing updates or development, an Electrical Engineer, etc.***
  - **Describe the methodology to be used for resolving technical engineering problems, including engineering/production interfaces.**
    - ***Intent is for Offeror to describe their normal processes for resolving technical issues. Communication flow for issues and resolutions, approvals required, incorporation into production plan.***
-

Technical Requirement Submittal Plan

- **Subfactor 1.3 – Engineering Cont**
  - **Describe the liaison between production and any engineering or design subcontractors (e.g., whether or not specifically dedicated in-house individuals will be assigned liaison).**
    - ***Offeror to explain the coordination between the technical teams (engineers and designers) with the production groups. Include how those interactions work for both prime contractor teams and subcontractor teams.***
  - **Describe how regulatory approvals will be obtained for applicable engineering drawings (i.e. use of Professional Engineer review, use of ABS review for ABS approval).**
    - ***Offeror to explain how regulatory approvals (ABS and USCG) will be obtained for any technical products or production-related items. An example of a production-related item would be ABS approval for a temporary hull access cut or for the replacement of structural members.***
  - **Submit brief but concise resumes of engineering personnel (in-house and subcontractor) assigned to this project.**
    - **The requirement for the resumes of engineering personnel will be removed from the Technical Requirement Submittal.**

Technical Requirement Submittal Plan

- **Subfactor 1.4 – Material Availability**
  - **Identify materials/sources of materials for any item whose material cost exceeds 25% of the total estimated work item cost.**
    - ***Intent here is for the Offeror to identify all Contractor Furnished Material (CFM) requirements, and list all of those with an estimated material cost that is greater than 25% of the total work item cost. You should identify the work item that the requirement comes from and the intended source of supply for that material too. An example might be steel for a structural or hull repair, where the cost of that steel is more that 25% of the total cost of the work item.***
  - **Identify materials and sources for material costs that exceed $10,000.00 for any single item. Do not list normal stock materials (e.g., fasteners, gaskets, weld rod).**
    - ***As an extension of the above requirement, Offeror should list any CFM requirements where the cost of that item is estimated to be greater than $10,000. Examples might be ABS Grade A steel, LSTSGU-400 electrical cable, a replacement pump, etc. The listing should include the intended source of supply and the work item that the requirement comes from.***
  - **Provide a separate listing of all brand name or equal items pursuant to the Brand Name or Equal provision of this solicitation (FAR 52.211-6). List should identify the product or material by work item number.**
    - ***Intent is for the Offeror to identify any CFM requirements in the work package that state that the material shall be Brand Name or equal. An example might be where a work item requires the Offeror to provide a replacement air compressor with a specific manufacturer and model number, and specifies that the replacement unit shall be brand name or equal.***
    - ***In addition to identifying anything in the work package that specifies the replacement item can be brand name or equal, the Offeror must state whether they intend to supply the brand name item or an equivalent unit, and if it is an equivalent unit, the Offeror must provide a detailed comparison of the salient characteristics of the brand name and equivalent items.***

Technical Requirement Submittal Plan

- **Subfactor 1.5 – Material Control and Storage**
  - **Provide information on the location and size of all storage areas including those available for the receipt and inspection of material. Provide supporting data to demonstrate capability for compliance with the storage requirements identified in the statement of work.**
    - ***Intent is for Offeror to describe his material storage capabilities, location, and how you will satisfy the storage area and types of storage as noted in the requirements of WI 0015.***
  - **Describe the system to be used for Material Control, providing data for the following areas:**
    - **Advanced CFM material ordering.**
    - **Receipt, inspection, and identification of GFM and CFM, including rotatable pool items.**
    - **Control of pilferable and sensitive material.**
    - **Control of damage and reporting system.**
    - **Turn-in material, including equipment shipped to subcontractors for work.**
    - **Scrap material and relative accounting system.**
    - **Ripout material which is to be reinstalled**
    - **Procedure for critical material decisions such as substitutions.**
    - **Temporary issue of storeroom repair parts to support overhaul/availability.**
  - **Show how the proposed system satisfies Production and QA Material Control requirements. Describe how material is distributed to the crafts.**
    - ***Offeror to provide his material control procedures that address the items listed and satisfy the requirements of WI 0015.***

Technical Requirement Submittal Plan

- **Subfactor 1.6 – Heavy Weather Plans**
  - **A Heavy Weather Plan shall be submitted IAW WI 0006. The heavy weather plan shall include a description of the protection arrangements available and the preventive measures that will be taken to ensure the safety of the ship from potential heavy weather conditions.**
    - ***The heavy weather plan meeting the requirements of WI 0006 must be submitted as part of the technical proposal.***

- **Subfactor 1.7 Cold Weather Plan*****
  - **A Cold Weather Plan shall be submitted IAW WI 0007. The Cold Weather Plan shall include a description of the protection arrangements available and the preventive measures that will be taken to ensure the safety of the ship from potential cold weather conditions.**
    - ***The cold weather plan meeting the requirements of WI 0007 must be submitted as part of the technical proposal.***

Technical Requirement Submittal Plan

- **Subfactor 1.8 – Fire and Flooding Protection Plans**
  - **A Fire and Flooding Protection Plan shall be submitted IAW WI 0016. The plan shall include a description of the ship repair facility fire protection and flooding protection measures/procedures, agreements with local fire and rescue organizations, firefighting response plan, flooding response plan, rescue response plan, medical emergency response plan, dewatering equipment available, alternative firefighting provisions in the case of disabled fixed firefighting systems and preventive measures that will be taken to ensure ship's safety during fire or flooding emergencies.**
    - ***The fire and flooding plan meeting the requirements of WI 0016 must be submitted as part of the technical proposal. A WI 0016 requirements checklist is included here as an enclosure and the next two slides. MSC is particularly sensitive to assuring that all of the requirements of WI 0016 are understood and available by the Offeror. The enclosure is intended to help the Offeror make sure his submitted plan covers all of the WI 016 requirements.***
    - ***For this factor, even if the Offeror's annual submittal including general Fire and Safety Plan has been approved, there are ship specific requirements that must be examined and provided as part of the Offeror's proposal***

Technical Requirement Submittal Plan

– **Checklist example for SWI0016 Fire and Safety Requirements and Submittals and Dry Docking**

SWI 0016 – Fire and Safety Plan Requirements & Submittals	**Shipyard Submitted? (Yes/No)**
Description of the Procedures and Methods for Shipyard and Ship Fire Prevention • Description of repair facility fire protection and flooding protection measures/procedures. Including: Pier Firemain locations/availabilities, sizes of pierside firemain, temporary/installed fire pumps being utilized during ship availability. • Could also include: procedures for paint abatement, quick disconnect fittings, hot work procedures, pier cleanliness.	
Agreement with local municipal response organization • For example: Local Department will response to shipboard firefighting, medical or other emergency events. (Note: some shipyards may not have a local agreement if they have Fire Department within the shipyard facility)	
Firefighting Response Plan • Fire response plan responsibilities as detailed in 29 CFR 1915.502(a)-(b). • Written policy that complies with the local municipal response as required in 29 CFR 1915.505(b)(2)	

Technical Requirement Submittal Plan

Flooding response plan • For example: Preventive measures, alarm procedures and actions that will be taken to ensure ship's safety during flooding emergencies	
Rescue response plan • For example: Rescue response plan could include capabilities for personal removal from a confined space or list that local Fire Department is available to assist with all rescues as needed.	
Medical emergency response plan • For example: Medical emergency response plan could include the capabilities for nearby hospitals and could also list the nearest burn center and level 1 trauma center.	
Dewatering equipment available • For example: NAVSEA 8010 lists the following requirement: dewatering at 200 GPM within 2 hours of a major fire, with additional 200 GPM within 3 hours of major fire. A total of 800 GPM must be available within 4 hours of a major fire.	

Alternate Firefighting provisions provided in case of disabled fixed systems
• SWI 0016 requires following:
  ○ Temporary Portable Fire Extinguishers;
  ○ Tie-in's from shoreside to ship's firemain;
  ○ Temporary Firefighting Manifolds	

Preventative measures during fire and flooding • For example could include: emergency escape procedures, evacuation points, muster locations, measures to account for personnel, incident command locations, shipyard procedures and shipyard POCs who MSC will notify during a fire or flooding event.	OPR:

Technical Requirement Submittal Plan

Subfactor 1.8 – Fire and Flooding Protection Plans Cont.

– **Fire Response:**

- ***Employer responsibilities.*** **The employer must:**

1. **Decide what type of response will be provided and who will provide it; and**
2. **Create, maintain, and update a written policy that:**

(i) Describes the internal and outside fire response organizations that the employer will use; and

(ii) Defines what evacuation procedures employees must follow, if the employer chooses to require a total or partial evacuation of the worksite at the time of a fire.

- ***Required written policy information—***

1. ***Internal fire response.*** **If an internal fire response is to be used, the employer must include the following information in the employer's written policy:**

(i) The basic structure of the fire response organization;

(ii) The number of trained fire response employees;

(iii) The fire response functions that may need to be carried out;

(iv) The minimum number of fire response employees necessary, the number and types of apparatuses, and a description of the fire suppression operations established by written standard operating procedures for each type of fire response at the employer's facility;

Technical Requirement Submittal Plan

Subfactor 1.8 – Fire and Flooding Protection Plans Cont.

(v) The type, amount, and frequency of training that must be given to fire response employees;

(vi) The procedures for using protective clothing and equipment.

2) Outside fire response. If an outside fire response organization is used, the employer must include the following information in the written policy:

(i) The types of fire suppression incidents to which the fire response organization is expected to respond at the employer's facility or worksite;

(ii) The liaisons between the employer and the outside fire response organizations; and

(iii) A plan for fire response functions that:

(A) Addresses procedures for obtaining assistance from the outside fire response organization;

(B) Familiarizes the outside fire response organization with the layout of the employer's facility or worksite, including access routes to controlled areas, and site-specific operations, occupancies, vessels or vessel sections, and hazards; and,

(C) Sets forth how hose and coupling connection threads are to be made compatible and includes where the adapter couplings are kept; or

(D) States that the employer will not allow the use of incompatible hose connections.

Technical Requirement Submittal Plan

- **Subfactor 2.1 – Man-hour Chart**

  – **Provide the supervisor/worker ratio for each specification item. Submit man-hour estimates by Hull, Machinery, and Electrical departments, with totals for each specification item and grand totals for all specification items in the format outlined below. The man-hour estimates provided shall reflect the actual man-hours planned to accomplish the work in the specification items.**

ITEM NO.	HULL/ STRUCTURAL PRIME/SUB	MACHINERY PRIME/SUB	ELECTRICAL PRIME/SUB	ELECTRONIC PRIME/SUB	OTHER PRIME/SUB	TOTAL PRIME/SUB	GRAND TOTAL

  - ***Intent here is for Offeror to provide the man hour estimates per the above table, and to also provide a separate table that lists the supervisor to worker ratio for each work item showing that ratio for each required discipline (hull, machinery, electrical) and for each subcontractor.***

Technical Requirement Submittal Plan

- **Subfactor 2.1 – Man-hour Chart Cont.**
  - **Provide one graphic presentation indicating each of the following items (only one graph to be provided) Note: Left side of graph to indicate "man-days"; bottom of graph to indicate time from award date to redelivery of vessel in daily intervals.**

(a) Total number of personnel required to accomplish all work projected during the period of performance required by the solicitation.

(b) Total number of personnel required to accomplish all shipyard work, all other work currently scheduled, and all other work projected during the period of performance required by this solicitation.

(c) Total number of subcontractor personnel used to accomplish work projected during the period of performance required by this solicitation.

(d) Projected number of contractor and subcontractor personnel required to accomplish the additional man-hours of growth work as outlined in this solicitation

  - ***Intent is for the Offeror to provide a graphical representation (line chart, bar chart, sand chart, …) of man-days/day that the Offeror has planned to accomplish this work package, along with all other shipyard work going on during the time period from MSC work package contract award through the end of the contract PoP. The graph should show MSC specific workload, combined MSC work package plus all other awarded work in the shipyard, and how much of that work is done by subcontractors***

Technical Requirement Submittal Plan

- **Subfactor 2.2 – Growth Absorption**
  - **Provide an estimate of the amount of additional work that can be absorbed without impact on the availability completion. Assume that most of the additional work is identified during the first 50% of the availability, that the work per trade (Hull, Machinery, and Electrical) is proportional to the work in the basic specifications, and that all material for such additional work is available within a reasonable time.**
  - **Justify the estimate of the amount of additional work that can be absorbed beyond AGR and Category "B" items.**
    - ***Intent is for the Offeror to provide an honest assessment of the number of man hour growth and dollars of additional work that you can absorb without impacting the contract end date. It should further address the exercise of any of the B Items (B Items are option items in the contract that the Offeror has pre-priced, but that will only be activated as a contract modification) included in the work package.***
    - ***If the Offeror's proposal for this subfactor includes a response that indicates that they can absorb more growth and B Items and still complete the project within the contract PoP, there must be an accompanying description of how the Offeror can support all of that additional work.***

Technical Requirement Submittal Plan

- **Subfactor 2.3 Facilities**
  - Complete the enclosed MSC Ship Repair Facility Survey Form (MSC Form 4330/26). Forms must be signed and dated. (See section J for the form). Use additional sheets as necessary to give a complete description of your facilities. Note the following special instructions when completing the form.

a. On sheet 2 of 5, the "Services Available" block should include only those services which are permanently installed. Temporary service capability should be listed on sheet 5 of 5.

b. Photocopies of crane certification data shall be supplied.

c. The following instructions apply to the required submittals list located on sheet 5 of 5.

1) Submittal number 1: submit as instructed.

2) Submittal number 2: submit as instructed.

3) Submittal number 3: submit as instructed; list only capital equipment. Do not list portable hand-held tools.

4) Submittal number 4: do not submit, covered elsewhere in RFP.

5) Submittal number 5: do not submit, covered elsewhere in RFP.

6) Submittal number 6: submit as instructed, do not list subcontractor locations.

7) Submittal number 7: do not submit.

Technical Requirement Submittal Plan

- **Subfactor 2.3 Facilities – Cont.**
  - ***Intent is for the Offeror to submit the subject water depth charts as specified in WI 003.***
    - ***Waterway approach charts that show the entire route of transit from the sea buoy to the Offeror's facility. Chart must demonstrate there are adequate water depths, including tidal ranges, for the entire route. The charts must be up to date and stamped by the nationally recognized authority for the Offeror's location. Paragraph 7.2.3 of WI 003 lists those water depth requirements:***
    - ***The following minimum clearances, with respect to vessel draft, shall be maintained to minimize probability of grounding and reduce silt buildup in piping. The datum for charted depth shall be mean lower low water (MLLW) per enclosure 2.2.1. The contractor shall include official NOAA or other regulatory agency information on tidal ranges, periodicity and length of tide ranges, including a discussion on how contractor's proposed use of tide heights to satisfy transit requirements may affect the shipyard availability arrival/departure times and the complete scope of work:***

a. Underway in confined waters (harbors) – 3 feet of charted depth.

b. Underway in inland waters – 2 feet plus squat of charted depth. (Note: Squat values only apply to MSC tanker vessels like the T-AO class ships. T-AO squat tables are available for planning.)

c. Underway in open water – 2 feet plus squat of charted depth. (Note: Squat values only apply to MSC tanker vessels like the T-AO class ships. T-AO squat tables are available for planning.)

d. During dead stick maneuvering (pilot aboard and assisted by tugs) – 2 feet of charted depth.

e. For dry-docking – 12 inches over the high block, sill, or highest projection including the effects of list, trim, and hog/sag.

f. Pierside at a contractor's (or subcontractor's) facility – 3 feet of facility sounding survey depth. Tidal ranges shall be included to demonstrate adequate clearance under all conditions.

Technical Requirement Submittal Plan

- **Subfactor 2.3 Facilities – Cont.**
  - ***Facility approach chart from the main channel to the intended pier or drydock location. Follow the requirements of paragraph 7.2.6.***
    - ***Chart must current within 365 days of the issue date of the solicitation. Charts must be signed and dated by the local Government agency or a certified waterway surveyor.***
    - ***Charts must indicate depth soundings at no less than a 100 foot intervals along the length and breadth of the approach.***
  - ***Official data on tidal ranges shall be included in the submittal.***
  - ***Berthing facility following the requirements of paragraph 7.3.***
  - ***Pier information***
  - ***A drawing with the ship drawn to scale and it's exact location during the PoP superimposed over the water depth soundings chart.***
    - ***Chart shall have soundings taken at mean lower low water. Official tidal range data shall also be submitted.***
    - ***Soundings must be taken and depicted in a 10 foot grid pattern, and the berth chart shall show recorded soundings for the entire length of the pier, and extending outward from the pier at least 100 feet.***
    - ***Soundings and the berth chart must be done by a qualified waterways surveyor and the chart must be certified by that surveyor.***
    - ***The berth chart must be date stamped. The chart is considered current if the stamped date is not more than 365 days prior to the date of issue of the solicitation.***

Technical Requirement Submittal Plan

- **Subfactor 2.3 Facilities – Cont.**
  - ***The individuals/firms preparing the berthing and approach charts shall be qualified by possession of valid licenses (or certificates of competency), as issued by the state or federal or national agency tasked within the geographic locality of the contractor with this licensing responsibility, and be stamped/illustrated on the charts, and shall indicate the date prepared.***
    - ***Mooring suitability information shall be provided with the proposal in accordance with paragraph 7.4.***
    - ***Mooring calculations for the worst anticipated wind and tidal loadings on the vessel.***
    - ***Pier particulars including location, type, design and proof test loads for all mooring fittings.***
    - ***The arrangement of all mooring lines between the ship and mooring securements. Manufacturer, model, size and breaking strength of contractor provided mooring lines.***
    - ***Angle of mooring lines between the ship and mooring securements.***
    - ***Quantity, size, locations and securement of all camels and fenders.***
    - ***General construction characteristics of the pier including any surface loading restrictions.***
    - ***Location and distance to nearest fire call boxes.***
  - ***A mooring chart, prepared by a licensed professional engineer showing the exact location of the ship along the pier, mooring securement locations, mooring line arrangements, etc. The licensed professional engineer shall certify that the planned mooring arrangements are adequate to the support the ship in all wind and tidal load conditions.***

Technical Requirement Submittal Plan

- **Subfactor 2.3 Facilities – Cont.**
  - **For a dry docking and IAW WI 0901, submit the J-11 MSC Drydock Evaluation Form, provide photocopies of the dry dock certificate(s), and provide the proposed blocking arrangements, laid out in plan, profile and section views that shows the blocking arrangement and proposed dry dock.**
    - ***Submit a copy of the drydock certificates with the proposal. The certificates and accompanying information shall demonstrate that the subject vessel can be safely dry docked in that facility. The Certificate shall show Issuing Party, Docking facility name (i.e. Shipyard), specific name or number of the dock, issue date, expiration date, maximum lift capacity, maximum allowable keel line loading and any restrictions or exceptions for operation of the dock. If certificate is issued by a third party per Reference 2.1.5, the party shall be specifically identified, the document shall be signed by a Professional Engineer representing the certifying third party and that individual shall stamp or emboss the certificate with their personal stamp or seal.***
    - ***Documentation of the Dock Master's qualifications and certifications must be submitted with the Offeror's proposal.***
    - ***Contractor proposals to deviate or modify the blocking arrangements specified in the WI 901 requirements must be submitted with the Offeror's proposal as noted in paragraph 7.1.5 of WI 901.***
  - ***Dry Docking check list was developed to support the effort.***

Technical Submittal Requirement Plan

SWI 0901 – Drydocking Shipyard Eval Criteria	Shipyard Submitted? (Yes/No)
SSP Factor 1.3 - The Offeror shall demonstrate his understanding of the engineering support requirements (e.g., working drawings, tech/system manuals, selected record plans, inclining requirements, Trim and Stability booklet, and docking and undocking calculation, if required) of the work package. • Description of drawings required, use of trim and stability booklet, use of the ships CargoMax software for load cases for docking and undocking calculations, Calculations to include trim and stability calculations for floating, graving or marine railway docks. Pumping calculations for floating drydocks. Weight and Moment tracking. • Block arrangement drawings for any modified plan for floating/railway drydocks.	
SSP Factor 2.3 - Complete the enclosed MSC Ship Repair Facility Survey Form (MSC Form 4330/26) • For example: Drydocks available list with services, i.e. Fresh Water, Salt Water, Steam, Electrical Power, Air, fire Protection, Sewage. Dimensional size and capacity information. • All information needs to be verified to the ship's requirements in the work items and to the ship's physical characteristics.	
SSP Factor 2.3 – Complete the enclosed J-11 MSC Drydock Evaluation Form • Part A to be completed by MSC PPE prior to submittal. • Part B to be completed by All Shipyards. • All information required within the form, i.e. Shipyard info, Dry Dock info, NAVSEA or third-Party Certification. Dry Dock Characteristics, Block Loading Capacity, Keel and Side Block information, minimal services available, Safety response plans • Part C to be completed by All Shipyards if drydock is not certified under IACS or MIL STD 1625 C. • Part D to be completed by All Shipyards. • All information required within the form and signed at the bottom.	

Technical Submittal Requirement Plan

SSP Factor 2.3 - Provide photocopies of the dry dock certificate(s) • For example: NAVSEA certification or 3rd party vendor i.e. Heger Dry Dock LLC	
SSP Factor 2.3 - Proposed blocking arrangements • For example: Drawing should provide details of a laid out plan, profile and section views of the ship that shows the blocking arrangement per the ships docking drawing (may be modified for a dry dock or railway) and proposed dry dock from the shipyard.	
QMS N7.721.9997.8-Q • MSC Government-Owned ships that require dry-docking must be dry-docked in a facility that: Is in acceptable material condition, has effective emergency response systems and plans, Is safe and capable of dry-docking the intended ship. The ship must not exceed the dry dock's dimension rating, maximum entry draft, maximum lift capability, and maximum linear load rating, Provides the minimum clearance between the ship's keel and dry dock flooring and the minimum clearance between the ship's shell and dry dock walls as required in the work item for the ship named in the ship repair solicitation, and is operated by trained and experienced personnel. • Dry dock facilities proposed for dry-docking MSC ships must meet one of the criteria listed: Is under current certification by Naval Sea Systems Command (NAVSEA), Is under current classification by a member of the International Association of Classification Societies (IACS) (applicable to floating dry docks only), or is under current certification by an independent third party engineering firm, with • the certificate issued by a registered professional engineer. The certificate must show the maximum weight the dock can support, the maximum allowed linear loading, and the expiration date of the certificate. • In situations where none of the criteria above can be met: typically for overseas graving docks) and there is an urgent need to dry-dock an MSC ship, the MSC Engineering Director may approve the use of a dry dock. Approval will be based on a determination by MSC engineering staff having expertise in dry dock design and facility reviews. The dry dock proposed for dry-docking the ship named in the ship repair solicitation must meet the following criteria in addition to the first bullet point; State a successful historical record of dry-docking ships of similar size and weight.	

Technical Requirement Submittal Plan

- **Subfactor 3.1 – Organization and Key Personnel**

– **Provide an organization chart of the key personnel who will be assigned for this availability. Include upper management, program managers, negotiators, estimators, scheduling personnel, engineering personnel, key production personnel by trade, the shipyard safety program organization, testing organization, the quality assurance organization, and contractor personnel responsible for each subcontractor being used. Identify the 2nd and/or swing shift yard managers/supervisors.**

  - ***Include the name, title, percentage of time to be devoted to this availability, and years of experience in the ship repair industry for each key person.***

- **Subfactor 3.2 Subcontractor Participation**

– **Identify all proposed major (over $25,000.00 aggregate) subcontractors and suppliers by work item. If none, state so. For all major subcontractors identified, advise whether the use of a second-tier subcontractor is proposed. If so, identify the proposed second-tier subcontractor and the specific work that it will be tasked to perform.**

  - ***Intent is for the offeror to identify by work item any suppliers or subcontractors with estimated cost over $25,000. Include the name and address of those identified including a brief description of what responsibilities from the work item they will perform.***

Technical Requirement Submittal Plan

- **Subfactor 3.2 Subcontractor Participation**
  - ***For subcontractors identified above, indicate if those companies plan to further subcontract any of their requirements to another company. If yes, indicate the name of those 3rd tier subcontractors and the specific requirements from the work item they will be performing.***
  - **Identify all work items where work required is planned to be accomplished outside of the contractor's primary repair facility. Identify the facility/subcontractor planned to accomplish this work, the location where work will be performed, and contractor intentions for accomplishing regulatory body and MSCREP inspections at the off-site location.**
    - ***Intent is for the Offeror to identify all off-site locations where work required by this work package will be performed. That information shall be presented by work item, the off-site location, if this is the Offeror's or a subcontractor facility, and the specific work to be accomplished at that location.***
  - **Where a Technical Representative is required, identify each Technical Representative by source and by WI number. If none, state so.**
    - ***Intent is for the Offeror to identify and Technical Representatives that the work package specifies as Contractor Furnished. Include the work item that calls for the technical representative and the contact information for the technical representatives proposed by the Offeror.***

Technical Requirement Submittal Plan

- **Subfactor 3.3 Quality Control Plan**
  - **Describe in detail the Quality Control (QC) Plan to be used for this availability. The description should address the method in which you will comply with WI 0004.**
    - ***Intent is for the Offeror to provide information about their Shipyard's Quality Control Plan and how it complies with the requirements of work item 004.***
  - **Submit a Preliminary "Schedule for Key Inspection Events" for review; to show full understanding of all inspections criteria, call outs, and checkpoints specified within the WI package.**
    - ***Intent is for the Offeror to prepare a preliminary test and inspection plan that demonstrates their review and understanding of the work items and lists out those tests and inspections called out in those work items. This is expected to only be a cursory listing, to be refined after award and before PoP start.***
  - **Identify the individuals who will perform the QC function. Discuss other duties, if any, to be performed by QC personnel and the percentage of time that they are to perform other duties. Discuss the documentation of QC activity (e.g., logs, notebooks, records). Present the test failure recovery plan.**
    - ***Intent is for the Offeror to explain their QC functions and their QC team, and how the Offeror responds/recovers from QC test failures.***

Technical Requirement Submittal Plan

- **Subfactor 3.3 Quality Control Plan**
  - **Describe in detail the Quality Control (QC) Plan to be used for this availability. The description should address the method in which you will comply with WI 0004.**
    - ***Intent is for the Offeror to provide information about their Shipyard's Quality Control Plan and how it complies with the requirements of work item 004.***
  - **Submit a Preliminary "Schedule for Key Inspection Events" for review; to show full understanding of all inspections criteria, call outs, and checkpoints specified within the WI package.**
    - ***Intent is for the Offeror to prepare a preliminary test and inspection plan that demonstrates their review and understanding of the work items and lists out those tests and inspections called out in those work items. This is expected to only be a cursory listing, to be refined after award and before PoP start.***
  - **Identify the individuals who will perform the QC function. Discuss other duties, if any, to be performed by QC personnel and the percentage of time that they are to perform other duties. Discuss the documentation of QC activity (e.g., logs, notebooks, records). Present the test failure recovery plan.**
    - ***Intent is for the Offeror to explain their QC functions and their QC team, and how the Offeror responds/recovers from QC test failures.***