USCGC HARRY CLAIBORNE (WLM 561)

SPECIFICATION FOR DRYDOCK REPAIRS

FY2022

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(Rev 1, 21 September 2021)

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REVISIONS RECORD

This page is used to record specification revisions, which may have occurred subsequent to a Revision 0 (Rev-0) package. Information listed is intended to provide contractors and field unit personnel a means to ensure all the current specification revision pages are present when reviewing or utilizing this specification package.

DATE	REV#	WORK ITEM#	CHANGES MADE
9/28/2021	1	72	Added WI72 to partially execute Aux. Sea Water Piping, Modify TCTO
10/06/2021	2	71	Updated GFP table

NOTE: All work item and paragraph numbers listed above for a given revision correspond to same numbers in the previous revision. This revised specification is self-contained with all of the above listed changes incorporated.

CONSOLIDATED LIST OF REFERENCES

The below-listed documents form a part of this specification to the extent specified herein. Approval/publication dates or revision dates/numbers are also identified, to ensure that same document versions are used at the time of specification writing and during contract execution.

All Coast guard drawings, technical publications, and standard specifications will be provided to contractors by the Coast Guard at an appropriate time, or upon request, free of charge. Other Government documents may be accessed – free of charge – from links located on the SFLC website. Commercial sites provide access to their respective documents.

COAST GUARD DRAWINGS

Coast Guard Drawing 175 WLM 114-001, Rev D, Shell Appendages

Coast Guard Drawing 175 WLM 256-012, Rev A, ASW System Piping Modifications

Coast Guard Drawing 175 WLM 801-019, Rev C, Shell Expansion

Coast Guard Drawing 175 WLM 180-011, Rev F, Sheet 5 Bow Thruster Foundation

Coast Guard Drawing 175 WLM 801-015, Rev C, Scantlings, Decks & Platforms

Coast Guard Drawing 175 WLM 940-002, Rev K, Hull Block 940 Modules

Coast Guard Drawing 175 WLM 940-004, Rev J, Hull Block 940 - Transverse Frames & BHD

Coast Guard Drawing 175 WLM 184-001, Rev A, V850 Transducer Adaptor Ring

Coast Guard Drawing 175 WLM 801-006, Rev J, Docking Plan

Coast Guard Drawing 175 WLM 581-001, Rev F, Anchor Handling System Arrangement

Coast Guard Drawing 175 WLM 601-001, Rev T, General Arrangement Inboard and Outboard Profiles

Coast Guard Drawing 175-WLM-529-002 Rev G Main Drainage System Diagram

Coast Guard Drawing 175-WLM-505-002 Rev F Mechanical Remote Valve Operators Arrangement and Details

Coast Guard Drawing 175 WLM 541-001, Rev H, Fuel Oil System Diagram

Coast Guard Drawing 175 WLM 541-006, Rev C, Independent Tanks, Emergency Generator Day Tank IIP:7-1

Coast Guard Drawing 175 WLM 601-003, Rev N, Booklet of General Drawings 552-564

Coast Guard Drawing 175 WLM 601-002, Rev H, Booklet of General Drawings (IDA LEWIS)

Coast Guard Drawing 175-WLM 256-001, Rev H, Seawater Cooling System Diagram

Coast Guard Drawing 175-WLM 256-003, Rev A, Seawater Cooling System, Fr 61 Fwd Blocks 910, 920, 930

Coast Guard Drawing 175-WLM 256-004, Rev J, Seawater Cooling System A & D, Hull Blks 940-970

Coast Guard Drawing 175 WLM 256-013, Rev A, Sea Bay Thermometer Installation

Coast Guard Drawing 175 WLM 505-003, Rev A, Sea Connection Arrangements

Coast Guard Drawing 175 WLM 633-001, Rev D, Cathodic Protection

Coast Guard Drawing 175-WLM 568-001, Rev B, Bow Thruster Arrangement & Detail

Coast Guard Drawing 175-WLM 568-002, Rev N, Bow Thruster Detail

Coast Guard Drawing 175 WLM 130-001, Rev -Mods to Buoy Deck Incidental to Hawser Pipe Cover

Coast Guard Drawing 175 WLM 573-001, Rev T, Buoy Deck Arrangement

Coast Guard Drawing 175 WLM 801-001, Rev A, Hull Lines

Coast Guard Drawing 175 WLM 801-003, Rev A, Curves of Form

Coast Guard Drawing 175-WLM 556-001, Rev J, Hydraulic System Diagram

Coast Guard Drawing 175 WLM 549-001, Rev E, Onboard Lubrication Requirements

Coast Guard Drawing 175 WLM 920-001, Rev K, Hull Block 920 Panels

Coast Guard Drawing 175 WLM 170-001, Rev G; Mast Arrangement & Details

Coast Guard Drawing 175 WLM 424-003 Doppler Speed Log System Replacement Ripout, Installation, Arrangement, Wiring, and Details

Coast Guard Fleet Drawing FL-2605-029, Rev L, Chain Stopper System – Rising Sheave Assembly

Coast Guard Drawing 175 WLM 573-050, Rev A, Hydraulic Piping Installation for Chain Stopper

Coast Guard Drawing 175 WLM 573-051, Rev B, Chain Stopper Structural Modifications for Hydraulic Roller Assembly

Coast Guard Drawing FL 2605-031, Rev D, Mechanical Chain Stopper, 1-7/8" Buoy Chain

Coast Guard Drawing FL 2605-034, Rev D, Mechanical Chain Stopper Repair Kit: 1-7/8", 1-5/8" & 1-1/4"

Coast Guard Drawing 175 WLM 506-001, Rev G, Overflows, Air Escapes & Sounding Tubes Diagrams

Coast Guard Drawing 175 WLM 593-001, Rev G, Sewage & Waste Water System Diagram

Coast Guard Drawing 175 WLM-528-001, Rev E, Plumbing and Interior Deck Drains Diagram

Coast Guard Drawing 175 WLM 593-001, Rev G, Sewage & Waste Water System Diagram

Coast Guard Drawing 175 WLM 593-009, Rev E, Independent Tanks, Sewage Holding Tank

Coast Guard Drawing 175 WLM 633-001, Rev D, Cathodic Protection

Coast Guard Drawing 175 WLM 635-001, Rev F, Hull, Thermal, & Acoustic Insulation Schedule

Coast Guard Drawing 175 WLM 801-019, Rev C, Shell Expansion

Coast Guard Drawing 175 WLM 528-006, Rev G, Plumbing & Deck Drains A&D – Hull Block 910, 930, 940, & 950

Coast Guard Drawing 175 WLM 528-007, Rev E, Plumbing & Deck Drains A&D – Hull Block 960

Coast Guard Drawing 175 WLM 528-008, Rev E, Plumbing & Deck Drains A&D – Hull Block 970

Coast Guard Drawing 175 WLM 528-009, Rev H, Weather Deck Drains A&D – Hull Block 910, 920, 930, 940, 960, & 970

Coast Guard Drawing 175 WLM-582-001, Rev D, Mooring &Towing. A

Coast Guard Drawing 175 WLM 167-001, Rev L, Structural Closures

Coast Guard Drawing 175 WLM 320-001, Rev AJ, Electrical One-Line diagram

Coast Guard Drawing 175 WLM 320-007, Rev R, Power Sys. DK Plan 01 Level & Above Hull Block 906 & 970 Partial Elementary & Block Wiring Diagrams.

Coast Guard Drawing 175 WLM 432-005, Rev. E, Primary and Secondary PWR Telephone CKTS.

Coast Guard Drawing 175 WLM 432-007, Rev B, SP. Telephone List of Outlets

Coast Guard Drawing 175 WLM 436-004, Rev. F, C02 Release & H2S Alarm System

Block, ISO & Elementary Wiring Diagram

Coast Guard Drawing 175 WLM 506-003, Rev D, Vents & Sounding Tubes A & D Frame 6 Forward, Hull Block 901

Coast Guard Drawing 175 WLM 512-1, Rev E, HVAC Diagram

Coast Guard Drawing 175 WLM 512-5, Rev A, HVAC A & D FR 6-FWD Hull Block 901

Coast Guard Drawing 175 WLM 512-6, Rev D, HVAC A & D FR 24-6 Hull Block 910

Coast Guard Drawing 175 WLM 512-8, Rev C, HVAC A & D, FR 61-42, Hull Block 930

Coast Guard Drawing 175 WLM 512-11, Rev E, HVAC A & D FR 70-50 Main Deck & Above Hull Block 960

Coast Guard Drawing 175 WLM 512-13, Rev C, HVAC Standard Details and General Instructions

Coast Guard Drawing 175-WLM_516-1, Rev F, HVAC Refrigeration System Piping Diagram

Coast Guard Drawing 175-WLM_516-3, Rev D, HVAC Refrigeration System Piping A & D

Coast Guard Drawing 175-WLM_516-4, Rev A, HVAC Refrigeration Piping Arrangement & Details

Coast Guard Drawing 175 WLM 625-001, Rev K, Windows and Portlights

Coast Guard Drawing 175 WLM 256-012, Rev A, ASW System Piping Modifications

Coast Guard Fleet Drawing FL 2804-12, Rev -, U.S.C.G. Emblem

Coast Guard Fleet Drawing FL 2804-22, Rev-, Consolidated Visual ID for Cutters

NAVSEA Drawing 804-1385781, Rev E, Hangers, Pipe, for Surface Ships

NAVSEA Drawing 804-5773931, Rev A, Acoustic & Thermal Insulation For Compartments Installation Details

COAST GUARD PUBLICATIONS

CG Tech Pub 3626, 12/16/1996; Manufacturers Instruction Book-SWBS Group(s) 516-533

Coast Guard Commandant Instruction (COMDTINST) M10360.3, Jun 2006, Coatings and Colors Manual

Coast Guard Technical Publication (TP) 3446, Jun 2009, Doppler Speed Log, Model SRD-500 Dual Axis

Coast Guard Technical Publication (TP) 3498, Section A, Jul 2015, Buoy Chain Winch

Coast Guard Technical Publication (TP) 3610, Section 167-A, Nov 2005, Hydraulic Cargo Hatch - Model No. D-WK-787

Coast Guard Technical Publication (TP) 3628, Mar 2017; Vol 4 of 9, Instruction Manual, Bow Thruster

Coast Guard Technical Publication (TP) 3630, 07-JAN-97, Manufacturers Instruction Book-SWBS Group(s) 573

Coast Guard Technical Publication (TP) 3631, Section 581-A, Sep 2013, Manufacturer's Instruction Book-SWBS Groups 573-581, Anchor Windlass

Coast Guard Technical Publication (TP) 3632, March 2014, Chapter 583, Section C, Technical Manual for Slewing Arm Davit Model D6000CT

Coast Guard Technical Publication (TP) 3633, Oct 2000, Manufacturers Instruction Book-SWBS Group(s) 593

Coast Guard Technical Publication (TP) 3749, 26-APR-05, 1-7/8 Inch ATON Mechanical Chain Stopper

Coast Guard Technical Publication (TP) 3939, SWBS 573-A, Apr 2007, Rising Sheave Chain Stopper

Coast Guard Technical Publication (TP) 4609, July 2006, Wynn Installation and Operation Manual for STRAIGHT-LINE WIPER - TYPE "C"

Coast Guard Technical Publication (TP) Coast Guard Technical Publication (TP) 3622, SWBS 436, Section C, Nov. 2, 2018, H2S Alarm System

Surface Forces Logistics Center Standard Specification (SFLC Std Spec) 3041, 2020, Shipboard Electric Cable Test

Surface Forces Logistics Center Standard Specification (SFLC Std Spec) 3042, 2020, Shipboard Electrical Cable Removal, Relocation, Splice, Repair and Installation

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2020, General Requirements

Surface Forces Logistics Center Standard Specification 0740 (SFLC Std Spec 0740), 2020, Welding and Allied Processes

Surface Forces Logistics Center Standard Specification 3042 (SFLC Std Spec 3042), 2020, Shipboard Electrical Cable Removal, Relocation, Splice, Repair, and Installation

Surface Forces Logistics Center Standard Specification 5000 (SFLC Std Spec 5000), 2020, Auxiliary Machine Systems

Surface Forces Logistics Center Standard Specification 6310 (SFLC Std Spec 6310), 2020, Requirements for Preservation of Ship Structures

Surface Forces Logistics Center Standard Specification 6341 (SFLC Std Spec 6341), 2020, Install Interior Deck Covering Systems

Surface Forces Logistics Center Standard Specification 8634 (SFLC Std Spec 8634), 2020, Drydocking

Surface Forces Logistics Center Standard Specification 8635 (SFLC Std Spec 8635), 2020, Temporary Services

OTHER REFERENCES

American Bureau of Shipping (ABS) Approved Chain, Accessory and Bar Manufacturing Facilities List, Oct 2016

American National Standards Institute/American Water Works Association (ANSI/AWWA) C652, 2019, Disinfection of Water-Storage Facilities

American Society for Nondestructive Testing (ASNT) SNT-TC-1A, 2013, Recommended Practice for Personal Qualification and Certification in Nondestructive Testing

American Society of Mechanical Engineers (ASME) B16.34, 2017, Valves-Flanged, Threaded, and Welding End

ANSI/AWWA reference if work does not deal with potable water piping.

Appleton Marine Control Valve Retrofit Manual 20793

ASTM F683, if piping insulation renewal is not applicable.

ASTM F992, if valve label is not applicable.

ASTM International (ASTM) D1330, 2015, Standard Specification for Rubber Sheet Gaskets

ASTM International (ASTM) D4138, 2013, Standard Practices for Measurement of Dry Film Thickness of Protective Coating Systems by Destructive, Cross-Sectioning Means

ASTM International (ASTM) D5363, 2016, Standard Specification for Anaerobic Single-Component Adhesives (AN)

ASTM International (ASTM) F683, 2014, Standard Practice for Selection and Application of Thermal Insulation for Piping and Machinery

ASTM International (ASTM) F992, 2017, Standard Specification for Valve Label Plates

Commercial Item Description (CID) A-A-59313, Nov 2003, Thread Compound; Anti-seize, Zinc Dust-Petrolatum

Federal Specification (Fed Spec) QQ-N-281, Oct 1985, Nickel-Copper Alloy Bar, Rod, Plate, Sheet, Strip, Wire, Forgings, and Structural and Special Shaped Sections

Federal Specification (Fed Spec) RR-C-271, Rev E, Mar 2016, Chains and Attachments, Carbon and Alloy Steel

IEEE-STD-45, 11 Oct 2002, Recommended Practice for Electrical Installations on Shipboard

Manufacturers Standardization Society of the Valve and Fittings Industry (MSS) SP-61, 2013 Edition, Pressure Testing Of Steel Valves

Manufacturers Standardization Society of the Valve and Fittings Industry (MSS) SP-67, 2017 Edition, Butterfly Valves

Manufacturers Standardization Society of the Valve and Fittings Industry (MSS) SP-72, 2018 Edition, Ball Valves with Flanged or Butt-Welding Ends for General Service

Manufacturers' Standardization Society of the Valve and Fittings Industry (MSS) SP-80, 2013 Edition, Bronze Gate, Globe, Angle and Check Valves

Manufacturers Standardization Society of the Valve and Fittings Industry (MSS), SP-58, 2018, Pipe Hangers and Supports – Materials, Design, Manufacture, Selection, Application and Installation

MIL PRF-16173, Sep 2006, Corrosion Preventive Compound, Solvent Cutback, Cold-Application

MIL-A-18001, May 2005, Anodes, Sacrificial Zinc Alloy (Commercially Accepted - ASTM B418)

MIL-A-22262, Mar 1996; Abrasive Blasting Media Ship Hull Blast Cleaning

MIL-A-46106, Jun 1992, Adhesive-Sealants, Silicone, RTV, One-Component

MIL-C-24633, Oct 2014, Chain, Stud Link, Anchor, Low Alloy Steel, Flash Butt Welded

MIL-DTL-1222, Dec 2000, Studs, Bolts, Screws and Nuts for Applications Where a High Degree of Reliability Is Required

MIL-DTL-23549, Sep 2016, Grease, General Purpose

MIL-DTL-24643/15, Power and Lighting, Watertight, Circuit Integrity

MIL-I-3064, Mar 1991, Insulation, Electrical, Plastic-Sealer

MIL-PRF-1149, Jun 1998, Gasket Materials, Synthetic Rubber, 50 and 65 Durometer Hardness

MIL-PRF-16173, Sep 2006, Corrosion Preventive Compound, Solvent Cutback, Cold-Application

Mil-S-24235/9E, 1992, Stuffing Tubes, Metal, And Packing Assemblies For Electric Cables, Brass and Steel, for Decks and Bulkhead With Pipe Protection.

MIL-S-45180, 1998, Sealing Compound, Gasket, Hydrocarbon Fluid and Water Resistant

MIL-STD-2003-3A, Sep 2009, Electric Plant Installation Standard Methods for Surface Ships & Submarines (Penetrations)

Naval Ships Technical Manual (NSTM) Chapter 074 Volume 3, 01 Aug 2011, Gas Free

Society of Automotive Engineers (SAE) Aerospace Material Specification (AMS) C-6183B, 2019, Cork and Rubber Composition Sheet; for Aromatic Fuel and Oil Resistant Gaskets

SPIWG: Recommend MIL Pref be replaced with 6310 reference.

The Society for Protective Coatings (SSPC) Surface Preparation Specification No.1 (SSPC-SP 1), 2016, Solvent Cleaning

The Society for Protective Coatings (SSPC) Surface Preparation Specification No.11 (SSPC-SP 11), 2012, Power Tool Cleaning to Bare Metal

The Society for Protective Coatings (SSPC), January 2015, Paint Application Specification No. 2 (PA-2), Procedure for Determining Conformance to Dry Coating Thickness Requirements

The Society for Protective Coatings (SSPC)/NACE International (NACE) Joint Surface Preparation Standard SSPC-SP 6/NACE No. 3, 2007, Commercial Blast Cleaning

The Society for Protective Coatings (SSPC)/NACE-International (NACE) Joint Surface Preparation Standard SSPC-SP 10/NACE No. 2, 2007, Near-White Blast Cleaning

The Society for Protective Coatings (SSPC)/NACE-International (NACE) Joint Surface Preparation Standard SSPC-SP 12/NACE No. SSPC-SP 12/NACE No.5, Surface Preparation and Cleaning of Steel & Other Hard Materials by High and Ultrahigh Pressure Water Jetting Prior to Recoating

The Society for Protective Coatings SSPC-SP 10/NACE No.2, Jan 2007, Near-White Blast Cleaning

CONSOLIDATED LIST OF GOVERNMENT-FURNISHED PROPERTY

The following is a list of property, which the Government will furnish. This list supersedes any other material obligations indicated or implied by referenced drawings.

WORK ITEM	MTI	ITEM DESCRIPTION	NSN/PN	QTY	ESTIMATED COST ($/UNIT)
14	N	Seal Kit, Thruster	NSN: 2010-01-555-9048	1 ea.	4376.00
14	N	Anode, Zinc	NSN: 5365-01-495-5350	9 ea.	113.75
14	N	**Seal Spacer (B125SM44178)	NSN: 2010-01-495-6823	1 ea.	700.00
14	N	**Shaft Sleeve	NSN: 2010-01-495-2638	1 ea	5702.40
15	N	Anchor Windlass Overhaul kit	NSN: 5430-01-546-4684	1 ea.	12,474.00
15	N	Ball Valve	NSN: 4820-01-013-3430	1 ea.	87.36
15	N	Valve, Counterbalance	NSN: 4820-01-F16-4571 PN: CBEH-LKN-BCL Sun Hydraulics Corp	1 ea.	354.00
15	N	** Motor, Hydraulic	NSN: 4320-01-419-3520	1 ea.	1,811.00
15	N	** Valve, Linear, Directional Control	NSN: 4810-01-511-3173	1 ea.	983.14
15	N	Hydraulic Brake	NSN: 2530-01-F14-4033 P/N: 90B3C4G087	1 ea	2000.00
20	Y	*Transducer Cover Plate	N/A	2 ea.	50.00
24	N	Hydraulic Control Valve Assembly Parts Kit	PN: AMD-2633 ACN 4810-01-F18-5588	1	15,061.00
39	N	***Fathometer Transducer, Shallow Water, 50-200 kHz (Airmar Technology SS505)	NSN: 5845-01-470-2500	1 ea.	343.63
42	N	Repair Kit Assembly	NSN: 2040-01-496-9418	2 ea.	1,968.67
42	N	Rod Seal Repair Kit (FL-2605-29 PC#37)	NSN: 2040-01-496-9422	2 ea.	3,030.07
42	N	Repair Kit, Cable Chain (Includes Pads) (FL-2605-29 PC#36)	NSN: 3020-01-538-0684	16 ea.	257.99
42	N	Cylinder Assembly Actuating, Linear	NSN: 3040-01-496-9424	2 ea.	1,969.24
43	N	Hardware Kit, Pins	NSN: 2030-01-485-7209	2 ea.	528.47
43	N	Hardware Kit, Mechanical	NSN: 2030-01-485-7215	2 ea.	538.91
62	N	Chock, Roller Button, 16”	Part No. 89188 Nashville Bridge Co. Model No, DF-511-5	1 ea.	
67	N	Model X40-08-N4X, Gas Detection & Alarm	NSN: 6320-01-F19-5650 DETCON PN: 954-X08000-	1 ea.	1,250.00

		Control System	024		
67	N	Electraray ® rotating warning light, amber, 120VAC	NSN: 6210-01-454-4748 Federal Signal PN: 225-120A	1 ea.	176.69
67	N	SONALERT 120VAC 80 - 95dB, D Case Style, Type SC110N	NSN: 6350-01-196-0142 Newark PN: 64F276	1 ea.	48.77
69	N	Wynn Window Wiper Assemblies, Straight Line, Type C	ACN: 2090-01-LG9-1208, -1209, -1210, -1211, -1212, -1213, -1214, -1215, -1216, -1217, -1218	11 ea.	1,000.00
69	N	Controllers	#1000 Model 1001	11 ea.	2,000.00
71	Y	Condensing Unit, Heat Pump	Model HP-5 NSN: 0C 0000-XF-C03-6003	1 ea.	
71	Y	Condensing Unit, Heat Pump	Model HP-6 NSN: 0C 0000-XF-C03-6004	1 ea.	

***Government-loaned property, which shall be returned to the vessel upon completion of the availability.**
****New or refurbished equipment that the Government may provide for installation in place of existing equipment.**
*****Government-furnished property, which is to be supplied by either the vessel or the C4IT ServiceCenter**

CONSOLIDATED LIST OF CRITICAL INSPECTION ITEMS

The following is a list of work items, which contain Critical Inspection reports, which the Contractor shall complete within the first 25% of the availability contract period (see SFLC Std Spec 0000, paragraph 3.2.6.5 (Inspection report particulars)):

Work Item	Title
1	Hull Plating, U/W Body, Inspect
2	Hull Plating, U/W Body, Ultrasonic Testing
3	U/W Body, Preserve (100%)
4	Appendages, U/W, Leak Test
7	Tanks, MP Fuel Stowage and Overflow, Clean and Inspect
8	Tanks, MP Fuel Service, Clean and Inspect
9	Tanks, Ballast, Clean and Inspect
12	Sea Bay, Clean and Inspect
15	Anchor Windlass, Inspect And Service
16	Anchor Chains and Ground Tackle, Inspect and Repair
23	Fan Space, Inspect and Preserve
24	Crane Winch DCV, Replace
26	Hull Plating, Side Scan, Ultrasonic Testing
36	Voids, Accessible, Clean and Inspect
37	Hydraulically Operated Cargo Hatch, Inspect and Service
42	Hydraulic Chain Stoppers, Inspect And Service
43	Mechanical Chain Stoppers, Inspect and Service
44	Grey Water Holding Tanks, Clean and Inspect
45	Sewage Holding Tanks, Clean and Inspect
53	Small Boat Davit Console Foundation, Renew
56	Bilges, Preserve

PRINCIPAL CHARACTERISTICS - TENDER

175' WLM, BUOY TENDER	
PHYSICAL	
Length overall	174' 8"
Length between perpendiculars	155' 1"
Depth	14' 8"
Maximum beam	36' 0"
Designed draft	8' 0"
Mast height (above 8' waterline)	58' 8"
Frame spacing	20"
Full load displacement	855.15 Long Tons SW
Light load displacement	719.78 Long Tons SW
Minimum op condition displ	852.19 Long Tons SW
HULL	
Hull material	Steel
MACHINERY	
Main propulsion	Two Caterpillar 3508 DITA V-8 diesel; 999 BHP ea @ 1500 RPM Two Ulstein 360 degree steerable Z-Drives, 403 SRPM @ 1600 ERPM
Reduction gears	Two Z-Drive units, Cardan shafting; 3.973:1 gear ratio
Shaft seal	John Crane Type ND
Shaft bearings	Five pedestal mounted, Cooper split roller bearings
Number of propellers	2
Number of blades	4
Diameter	57.1"
Rudders	None; Z-drive
Ship's service generators	Three Caterpillar Model 3406 DITA Turbocharged; 285KW, 450V, 60 Hz, 1800 RPM
Emergency diesel generator	One Caterpillar Model 3406 DIT 210 KW, 24V, 60 Hz, 1800 RPM
TANK CAPACITIES	
Diesel oil capacity (100%)	16,385 gal
Fresh water capacity (100%)	7,339 gal
Lubricating oil (100%)	86 gal

General Requirements

1. SCOPE

1.1 Intent. This standard specification invokes general requirements for conducting vessel repairs performed at a commercial contractor's facility for Coast Guard vessels.

1.2 Term interchangeability. The terms 'Contractor', 'CG Yard', 'NAVSTA EVERETT', 'shipyard', 'Base', and 'Coast Guard Industrial' are used interchangeably in this specification. Where the primary service provider is Coast Guard personnel, references to contractor and other noted descriptors within this specification or within drawings, publications, SFLC Standard Specifications or other commercial and military references are deemed the same as prime service provider.

2. REFERENCES

COAST GUARD DRAWINGS

None

COAST GUARD PUBLICATIONS

Coast Guard Commandant Instruction (COMDTINST) M10360.3 (series), Coatings and Color Manual

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2020, General Requirements

Surface Forces Logistics Center Standard Specification 0740 (SFLC Std Spec 0740), 2020, Welding and Allied Processes

Surface Forces Logistics Center Standard Specification 6310 (SFLC Std Spec 6310), 2020, Requirements for Preservation of Ship Structures

OTHER REFERENCES

None

3. REQUIREMENTS

3.1 General. The Contractor shall conform to all requirements specified in SFLC Std Spec 0000 and in this item, as applicable, during the performance of this availability. The requirements of this WI applies to all work under the scope of this contract, whether explicitly stated in all following work items or not, and to all other work subsequently authorized by changes, modifications, or extensions to the contract.

3.1.1 NAVSEA drawings listed will be available FOR INSPECTION ONLY from the Coast Guard Port Engineer post-award. SFLC will not redistribute NAVSEA documents. Contractors can apply to NAVSEA headquarters directly for copies.

3.2 Fire watch requirements. The Contractor shall refer to 3.3.1.3 (Fire watch requirements) of SFLC Std Spec 0000, in accomplishing the following task:

- Provide portable fire extinguishers for Coast Guard fire watch personnel. Coast Guard fire watch is in lieu of contractor personnel during the hours of 0800-1600, Monday through Friday, and limited to two Coast Guard fire watch personnel.
- Provide fire watch personnel and fire extinguishers for the duration of the availability period, during and beyond noted Coast Guard fire watch support.

3.3 Preservation requirements. The Contractor shall accomplish all preservation tasks, including touch-ups, in accordance with SFLC Std Spec 6310.

3.3.1 Brand name approval. Ensure that all contractor-furnished coatings are in accordance with SFLC Std Spec 6310, Appendix C (Authorized Coatings for Use on Cutters and Boats).

3.3.2 Coating colors and system color schemes. The Contractor shall obtain a written KO authorization to deviate from any coatings required in SFLC Std Spec 6310 Appendix C before work.

3.4 Welding and brazing requirements. The Contractor shall perform all welding and allied processes, and NDE in accordance with SFLC Std Spec 0740.

3.5 Environmental protection requirements. The Contractor shall adhere to the following environmental protection requirements in accordance with the SFLC Stand Spec 0000:

3.5.1 Contractor operated (non USCG) facilities. The Contractor shall provide and maintain environmental protection as defined in SFLC Std Spec 0000 Appendix A, Requirements for Environmental Protection at Contractor Operated (Non USCG) Facilities, as applicable, during the performance of this availability. Contractor shall plan for and provide environmental protective measures to control pollution that develops during normal practice, as well as plan for and provide environmental protective measures required to correct conditions that develop during the project. Contractor shall comply with applicable Federal, state, and local laws, codes, ordinances, and regulations in their entirety. Any reference to a specific portion of a Federal, state, or local law, code, ordinance, or regulation in this or any other item shall not be construed to mean that relief is provided from any other sections of the law, code, ordinance, or regulation.

3.5.2 Test and procedures. The Contractor shall be required to promptly conduct tests and procedures for the purpose of assessing whether operations are in compliance with applicable Environmental Laws. Analytical work shall be done by qualified laboratories; and where required by law, the laboratories shall be certified.

3.5.3 Regulatory notifications. The Contractor shall be responsible for all regulatory notification requirements in accordance with Federal, State and local regulations. In cases where the Coast Guard shall also provide public notification, such as storm water permitting, the Contractor shall coordinate with the Contracting Officer or COR, and if work is being performed at a USCG Facility, the local Facility Engineer or Engineering Officer. The Contractor shall submit copies of all regulatory notifications to the Contracting Officer and the local Facility Engineer or Engineering Officer prior to commencement of work activities. Regulatory notifications shall be provided for including but not limited to demolition, renovation, National Pollutant Discharge Elimination System (NPDES) defined site work, and remediation of controlled substances such as asbestos, hazardous waste, and lead paint.

3.5.4 Environmental manager. The Contractor shall appoint in writing an Environmental Manager for the project, and shall be responsible for coordinating Contractor compliance with Federal, State, local, and station environmental requirements. The Environmental Manager shall ensure compliance with Hazardous Waste Program requirements, including hazardous waste handling, storage, manifesting, and disposal; implement the Contractors' Environmental Management Plan; ensure that all environmental permits are obtained, maintained, and closed out; ensure compliance with Storm Water Program Management requirements; ensure compliance with Hazardous Materials including storage, handling, and reporting requirements; as well as coordinate any remediation of regulated substances such as lead, asbestos, and polychlorinated biphenyl (PCB). This may be a collateral position; however the individual shall be trained to accomplish the following duties; ensure waste segregation and storage compatibility requirements are met; inspect and manage Satellite Accumulation areas; ensure only authorized personnel add wastes to containers; ensure all Contractor personnel are trained in 40 CFR requirements and individual position requirements; coordinate removal of waste containers; and maintain the Environmental Records binder and required documentation, including environmental permits compliance and close-out.

3.5.5 HW disposal. Contractor shall comply with SFLC Std Spec 0000 Appendix A, Requirements For Environmental Protection At Contractor Operated (Non USCG) Facilities for HW disposal.

3.6 Local Policy. The Contractor shall refer to site (e.g. Base) Regulations and Instructions for details regarding local policies (e.g. crane services, parking, or facility usage).

3.7 SFLC Standard Specification approved changes. The Contractor shall be aware that the following are approved changes to published SFLC 2020 Edition Standard Specifications and supersede published content:

3.7.1 SFLC Standard Specification 8636. Add missing paragraphs between 3.2 and 3.5 of Std Spec 8636 as follows:

"3.3 Access cut boundaries. The Contractor shall ensure that access cuts comply with the requirements and restrictions detailed in the following and in SFLC Std Spec 0740, and referenced codes.

3.3.1 Location of boundaries. Boundaries of access cuts and closure plates shall, in general, be located between principal ship framing, bulkheads, and other structural members and shall be at least three inches from any of these members or from the toes of other welds. A reduction in this three inch minimum may be approved by the KO on a case by case basis provided sufficient clearance is maintained for welding and inspection requirements. The boundaries of access cuts and closure plates should land on existing butts or seams, wherever practicable. The boundaries of prior access cuts should be utilized wherever possible. Boundaries may extend across one or more frames as required for the size of the opening.

3.3.2 Access hole dimensions and arrangements. Holes or access cuts shall be the minimum size necessary and shall be in accordance with the following:

- Rectangular access cuts and closure plates welded into primary hull structure shall be at least 12 inches wide in the lesser dimension.
- For circular access cuts, the minimum diameter shall be 4T, where T = thickness of the involved structural member, but not less than three inches.
- Circular closure plates for access cuts less than two feet in diameter shall be dished 1/16 to 1/8 inch to allow for shrinkage when welded.
- Corners of rectangular access cuts and closure plates shall have a minimum radius of 6 inches except when a boundary lands on an existing hull longitudinal seam or transverse butt weld.
- Corners at an existing seam or butt shall intersect at a 90 degree angle.
- Cuts that are to cross existing butts or seams shall do so at an angle of 90 degrees plus or minus 15 degrees.

- In primary hull structure, existing welds forming the boundary of a cut shall be cut back 3 inches beyond the toe of the access cut, except that the cut back shall not intersect or cross an existing weld, frame, or structural member. In which case, the cut back may be reduced to a minimum of two inches in length.
- Existing welds crossed by the cut shall not be cut back.

3.3.3 Primary hull structure. Primary Hull Structure includes the shell, main strength decks, principal longitudinal bulkheads, vertical keel, deep web girders and stiffeners designed to withstand the ship bending stress.

3.3.4 Mechanically fastened joints. Welding closer than six inches to a mechanically fastened joint should be avoided. When access cuts cross or come within six inches of a mechanically fastened joint, the fasteners shall be checked for tightness and if necessary, loose fasteners shall be seal welded or removed, and replaced for a distance of 6 inches beyond the edge of the cut. When a cut crosses a mechanically fastened seam the cut plates shall be repaired using single V welds backed with glass tape (MIL-C-20079) to prevent fusion between the mechanically fastened plates.

3.4 Ship integrity maintenance. The Contractor shall maintain safety and ship integrity by installing temporary guarding and coaming, in addition to weathertight and watertight closures. Remove these temporary fabrications after closing the hull access, and grind surfaces flush in way of removals. For shell plating cuts made at or below the waterline where temporary closures are impractical, the Contractor shall secure each vulnerable compartment and subdivision to minimize potential damage to the extent permitted by the scope and urgency of the work.

3.4.1 Guarding. Install temporary guards in accordance with 29 CFR 1915.73.

3.4.2 Coaming. Ensure that in areas where flammable liquids may be stored, a 4 inch high metal coaming shall be installed on the surface of the deck with tack welds and fully sealed with caulking compound. The coaming shall encircle the access cut in the deck.

3.4.3 Weathertight and contamination closures. Fabricate temporary closures, using fire retardant material, before cutting access openings and install closures whenever access is not in use. Closures shall be:

- Constructed to protect the access from inclement weather and entry of contaminants (shall include a coaming or dam on the deck to redirect rain runoff away from the opening).
- Fitted with fasteners that permit rapid installation and removal.
- Able to support a minimum of 150 pounds per square foot for horizontal deck closures.
- Where the access opening is in way of a removed hatch, scuttle or door, the closure shall be configured to allow normal passage of ship's personnel and equipment.

3.4.4 Watertight closures. Ensure that access openings created four feet or less above the maximum anticipated waterline shall include temporary watertight closures when the vessel is waterborne.

NOTE

NAVSEA S0600-AA-PRO-160/CH16 provides requirements for design, fabrication, and installation of temporary watertight closures."

4. NOTES

4.1 QA inspection forms. QA inspection forms (QA-1 thru QA-5), required in SFLC Std Spec 6310 to be completed and submitted during preservation of "critical-coated surfaces", are provided at the end of this document.

QA-1 - QUALITY ASSURANCE INSPECTION FORM
(PRESERVATION CHECKLIST)

VESSEL NAME	HULL #	WORK ITEM #	WORK ITEM TITLE
LOCATION OF WORK (INCL. FRAME #'S)			**AREA (SQFT)**

CHECKPOINT 1 – COATING SYSTEM COMPLIANCE	
	Ensure all coatings are in compliance with SFLC Std Spec 6310, Appendix C.
CHECKPOINT 2 - PAINT STORAGE	
	Ensure all coatings are kept at a temperature of 65 to 85°F at all times, unless otherwise specified by the coating mfg.
CHECKPOINT 3 - AMBIENT CONDITIONS	
	Ensure surface and surrounding temperatures are each between 50 and 90°F for water-containing coatings, and 35 and 95°F for other coatings, unless otherwise specified by the coating manufacturer(s).
	Ensure maximum relative humidity (RH) is as follows, from surface preparations through final curing of topcoat: 50% for tanks, voids, and vent plenum; and 85% for all other areas, unless otherwise specified by manufacturer(s).
	Ensure surface temperature is at least 5°F above the dew point, unless otherwise specified by the coating mfg.
CHECKPOINT 4 - PRE-SURFACE PREPARATION	
	Remove surface contaminants (soluble salts, loose rust, mud, and marine growth) with low pressure fresh water wash down (maximum 5,000 psi). If oil and grease are present, perform solvent cleaning, as per SSPC SP-1.
	Verify equipment setup, blast media, and surface preparation methods match designated test coupon.
CHECKPOINT 5 - SURFACE PREPARATION	
	Verify environmental conditions (see CHECKPOINT 3).
	Ensure cleanliness of prepared surface is as per specification (i.e.: SSPC SP-11, SP-10, SP WJ-2…).
	Verify surface anchor profile using ASTM D4417-Methods B or C against SFLC Std Spec 6310. Conduct profile readings at a minimum of 5 locations for the first 1000-sqft area, and 2 locations for each succeeding 1000-sqft area.
	Measure soluble salt conductivity in accordance with SSPC-Guide 15. Conduct 5 measurements per each 1000-sqft area (max. threshold: 70 microsiemens/cm for non-submerged surfaces, 30 microsiemens/cm for submerged surfaces).
CHECKPOINT 6 - PRIMER COAT APPLICATION	
	Verify environmental conditions (see CHECKPOINT 3).
	Verify proper mixing and stand-in (induction) times.
	Ensure no paint is applied when the temperature is expected to drop to freezing before the paint has dried.
	Ensure surfaces are completely dry, unless otherwise allowed by the coating manufacturer(s).
	Verify wet film thickness (WFT) at random, to prevent under or over application. Verify final DFT.
	Brush out all runs, sags, drips, and puddles.
	Perform visual inspection for holidays and other defects.
CHECKPOINT 7 – STRIPE COAT APPLICATION	
	Verify environmental conditions (see CHECKPOINT 3).
	Ensure overcoating window is as per manufacturer's instructions.
	After primer coat (mist coat after inorganic zinc), brush-apply un-thinned coat of same primer paint over edges, weld seams, cut-outs, and areas of complex geometries @ 3-4 mils wet film thickness (WFT).
CHECKPOINT 8 – TOP COAT APPLICATION	
	Verify environmental conditions (see CHECKPOINT 3).
	Ensure overcoating window is as per manufacturer's instructions.
	Verify proper mixing and stand-in (induction) times, as applicable.
	Verify wet film thickness at random, to prevent under or over application.
	Brush out all runs, sags, drips, and puddles.
CHECKPOINT 9 – FINAL INSPECTION	
	Verify final system dry film thickness. Conduct 5 sets of 3 readings for each of the first 3 100-sqft areas, followed by 5 sets of 3 readings for each succeeding 1000-sqft area.
	Ensure that system cure is in accordance with manufacturer's recommendation for intended service.
	Ensure potable water tank exhaust ventilation is maintained continuously from and during coating application through final system cure, to exhaust all solvent to the atmosphere and to prevent solvent entrapment.
	For immersion coatings (including tank U/W body), record date and time of the following events: Final coat application: _____/_____ ; Return to service or removal from environment controls: _____/_____
CHECKPOINT 10 – RECORD KEEPING	
	Complete, sign, and submit all provided QA Inspection Forms.

NAME OF QP-1/NACE INSPECTOR	SIGNATURE	CERT. #	DATE / TIME

QA-2 - QUALITY ASSURANCE INSPECTION FORM
(ENVIRONMENTAL READINGS)

VESSEL NAME	HULL #	WORK ITEM #	WORK ITEM TITLE

Use one sheet for each activity. Record conditions every four hours from before surface preparation to application of final coating system coat.							
DATE & TIME	ACTIVITY (SURFACE PREPARATION, PRIMER COAT, BARRIER COAT, TOP COAT, ETC…)	LOCATION (FRAME & DECK, RELATION TO EQUIPMENT, ETC.)	TEMPERATURE				% REL. HUMID-ITY
			DEW PT.	SURFACE	AMBIENT	ΔT | DP - SURFACE |	

NAME OF QP-1/NACE INSPECTOR	SIGNATURE	CERT. #	DATE / TIME

QA-3A - QUALITY ASSURANCE INSPECTION FORM
(SURFACE PROFILE LOG FOR PROFILE MEASUREMENTS IAW ASTM D4417-METHOD-C)

VESSEL NAME	HULL #	WORK ITEM #	WORK ITEM TITLE
LOCATION OF WORK (INCL. FRAME #'S)			**AREA (SQFT)**

SURFACE PREPARATION METHOD		PROFILE ACHIEVED (MILS)		
		MIN	**MAX**	**MEAN**
SSPC-SP-10/NACE No. 2	☐			
SSPC-SP WJ-1/NACE WJ-1	☐			
SSPC-SP WJ-2/NACE WJ-2	☐			
SSPC-SP WJ-3/NACE WJ-3	☐			
SSPC-SP WJ-4/NACE WJ-4	☐			
SSPC-SP-3	☐			
SSPC-SP-11	☐			
SSPC-SP-11 (inaccessible area)	☐			
Brush-blasting (non-metallic substrate)	☐			
ABRASIVE MANUFACTURER:		**ABRASIVE SIEVE SIZE:**		

PLACE SURFACE PROFILE REPLICA TAPES IN THE SPACES PROVIDED BELOW, TO SERVE AS PERMANENT QA RECORD. MAINTAIN A SEPARATE LOG FOR EACH LOCATION. WHEN AN AREA IS DIVIDED INTO SEPARATE SECTIONS, MAINTAIN A SEPARATE LOG FOR EACH SECTION.

Place Surface Profile Replica Tape Here		Place Surface Profile Replica Tape Here		Place Surface Profile Replica Tape Here	
Reading (mils):		Reading (mils):		Reading (mils):	
Place Surface Profile Replica Tape Here		Place Surface Profile Replica Tape Here		Place Surface Profile Replica Tape Here	
Reading (mils):		Reading (mils):		Reading (mils):	
Place Surface Profile Replica Tape Here		Place Surface Profile Replica Tape Here		Place Surface Profile Replica Tape Here	
Reading (mils):		Reading (mils):		Reading (mils):	
Place Surface Profile Replica Tape Here		Place Surface Profile Replica Tape Here		Place Surface Profile Replica Tape Here	
Reading (mils):		Reading (mils):		Reading (mils):	
Place Surface Profile Replica Tape Here		Place Surface Profile Replica Tape Here		Place Surface Profile Replica Tape Here	
Reading (mils):		Reading (mils):		Reading (mils):	
MEAN MIL READING (IAW ASTM D4417-METHOD C) FOR ABOVE 15 READINGS:					

NAME OF QP-1/NACE INSPECTOR	SIGNATURE	CERT. #	DATE / TIME

QA-3B - QUALITY ASSURANCE INSPECTION FORM
(SURFACE PROFILE LOG FOR PROFILE MEASUREMENTS IAW ASTM D4417-METHOD-B)

VESSEL NAME	HULL #	WORK ITEM #	WORK ITEM TITLE
LOCATION OF WORK (INCL. FRAME #'S)			**AREA (SQFT)**

SURFACE PREPARATION METHOD		PROFILE ACHIEVED (MILS)		
		MIN	MAX	MEAN
SSPC-SP-10/NACE No. 2	☐			
SSPC-SP WJ-1/NACE WJ-1	☐			
SSPC-SP WJ-2/NACE WJ-2	☐			
SSPC-SP WJ-3/NACE WJ-3	☐			
SSPC-SP WJ-4/NACE WJ-4	☐			
SSPC-SP-3	☐			
SSPC-SP-11	☐			
SSPC-SP-11 (inaccessible area)	☐			
Brush-blasting (non-metallic substrate)	☐			
ABRASIVE MANUFACTURER:		**ABRASIVE SIEVE SIZE:**		

RECORD MEASUREMENTS TAKEN IN THE SPACES PROVIDED BELOW, TO SERVE AS PERMANENT QA RECORD. MAINTAIN SEPARATE LOG FOR EACH LOCATION. WHEN AN AREA IS DIVIDED INTO SEPARATE SECTIONS, MAINTAIN A SEPARATE LOG FOR EACH SECTION.					
Reading (mils):					
Reading (mils):					
Reading (mils):					
Reading (mils):					
Reading (mils):					
Reading (mils):					
Reading (mils):					
Reading (mils):					
Reading (mils):					
Reading (mils):					
Mean Reading (mils)					
Mean Reading (mils) IAW ASTM DD4417).					

NAME OF QP-1/NACE INSPECTOR	SIGNATURE	CERT. #	DATE / TIME

QA-4 - QUALITY ASSURANCE INSPECTION FORM
(SURFACE SOLUBLE SALT CONDUCTIVITY LOG)

VESSEL NAME	HULL #	WORK ITEM #	WORK ITEM TITLE
LOCATION OF WORK (INCL. FRAME #'S)			AREA (SQFT)

SOLUBLE SALT CONDUCTIVITY MEASUREMENTS IAW SSPC-GUIDE 15.		
DATE	TEST LOCATIONS	CONDUCTIVITY (MICROSIEMENS/CM)

NAME OF QP-1/NACE INSPECTOR	SIGNATURE	CERT. #	DATE / TIME

QA-5 - QUALITY ASSURANCE DATA FORM
(COATING THICKNESS)

(Use one sheet for each sequence)

VESSEL NAME	HULL #	WORK ITEM #	WORK ITEM TITLE

COATING MFG	PRODUCT NAME	BATCH #	INDUCTION TIME	COATING SYSTEM SEQUENCE (PRIMER/TOUCHUP/3RD COAT, ETC.)

DRY FILM THICKNESS (DFT) MEASUREMENTS IAW SSPC-PA 2.						
SPOT	1	2	3	4	5	AVERAGE VALUE
*BASE METAL READING (BMR) Required, If Magnetic Pull-Off (Type I/Banana) Gauge Is Used.						

LOCATION (FRAME REFERENCE):								
SPOT	1	2	3	4	5	OVERALL AVG. DFT	ADJUSTMENTS	
1							AVG. BMR	DEVIATION
2								
3						BEFORE ADJUSTMENTS	AFTER ADJUSTMENTS	
AVG.								

LOCATION (FRAME REFERENCE):								
SPOT	1	2	3	4	5	OVERALL AVG. DFT	ADJUSTMENTS	
1							AVG. BMR	DEVIATION
2								
3						BEFORE ADJUSTMENTS	AFTER ADJUSTMENTS	
AVG.								

LOCATION (FRAME REFERENCE):								
SPOT	1	2	3	4	5	OVERALL AVG. DFT	ADJUSTMENTS	
1							AVG. BMR	DEVIATION
2								
3						BEFORE ADJUSTMENTS	AFTER ADJUSTMENTS	
AVG.								

APPLICATION METHOD (AIRLESS, CONVENTIONAL SPRAY, ROLLED)	AVERAGE DFT

NAME OF QP-1/NACE INSPECTOR	SIGNATURE	CERT. #	DATE / TIME

WORK ITEM 1: Hull Plating, U/W Body, Inspect

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to inspect/survey the vessel's Under Water (U/W) hull plating, including U/W appendages and coating system.

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 175 WLM 114-001, Rev D, Shell Appendages

Coast Guard Drawing 175 WLM 801-006, Rev J, Docking Plan

Coast Guard Drawing 175 WLM 801-019, Rev C, Shell Expansion

COAST GUARD PUBLICATIONS

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2020, General Requirements

OTHER REFERENCES

ASTM International (ASTM) D4138, 2013, Standard Practices for Measurement of Dry Film Thickness of Protective Coating Systems by Destructive, Cross-Sectioning Means

The Society for Protective Coatings (SSPC), January 2015, Paint Application Specification No. 2 (PA-2), Procedure for Determining Conformance to Dry Coating Thickness Requirements

3. REQUIREMENTS

3.1 General.

3.1.1 CIR. The Contractor shall submit a CIR for the inspections listed in the following paragraph:

- 3.2.1 Hull plating.
- 3.2.2 Sea chests and all other cooling system intake components
- 3.2.3 Rudders.
- 3.2.4 Propeller and shaft associated components

3.1.2 Tech Rep.

Not applicable.

3.1.3 Protective measures. The Contractor shall furnish and install all protective measures in accordance with SFLC Std Spec 0000, paragraph 3.3.3 (Vessel component, space, and equipment protection).

3.1.4 Interferences. The Contractor shall handle all interferences in accordance with SFLC Std Spec 0000, paragraph 3.3.5 (Interferences).

3.2 Inspection. The Contractor shall accompany the Underwater Hull Inspection Board (UWHIB) in the performance of the below inspection tasks, as applicable, using the drawings listed in Section 2 (References) as guidance. The Contractor shall provide the following, to facilitate the UWHIB in assessing the condition of the designated U/W hull components and systems:

- A hull repair supervisor and a marker.
- Temporary staging and other necessary equipment, as applicable, for ensuring safe access to all areas of the U/W hull.

NOTES

1. The COR will convene the UWHIB as soon as possible after the vessel has been dry-docked and before any work (except U/W hull cleaning/wash down) is performed on the U/W hull and appendages.

2. Some of the components and/or systems addressed in this work item may not be applicable to all vessel classes.

3.2.1 Hull plating.

3.2.1.1 The Contractor shall inspect the condition of the hull plating (including thruster tunnel plating, as applicable), for the presence of marine growth, deformation, and any evidence of major corrosion or electrolytic action.

3.2.1.2 The Contractor shall inspect the hull and keel areas, report on the condition of butt-welded seams, doubler plates, lap seams, and for any signs of damaged plating or unusual waviness in the plating.

3.2.2 Sea chests and all other cooling system intake components. The Contractor shall inspect all sea chests, sea beam arrays, tunnels, hull openings, and grates for general appearance, loose, damaged, or missing grates, loose or missing fasteners, condition of sea strainers and lockwire on bolts, marine growth on grating slots, and any obstructions in the openings that might prevent proper suction and discharge of water.

3.2.3 Rudders. The Contractor shall check general condition, condition around the drain plugs, and check for pitting, if any, on the leading and trailing edges.

3.2.4 Propeller and shaft associated components. The Contractor shall inspect the condition of propellers for signs of corrosion, pitting, erosion, fouling, cracks, dings, and nicks by side and blade; inspect fairwaters, rope guards, shafts, and mechanical seals - look for missing screws, physical damage to the blades, pitting, condition of dunce caps, and condition of securing devices.

3.2.5 Transducers. The Contractor shall check general condition for cuts, cracks, corrosion, and surface

defects around the openings. Check transducer securing nuts for tightness, and inspect cables for chafing and other damage. Submit CFR

3.2.6 Zinc anodes. Submit CFR

3.2.6.1 The Contractor shall remove all marine growth and oxide coating from rudder, shaft strut, sea chest, sea beam array, z-drive, and thruster tunnel zinc anodes, or water jet drives anodes, as applicable, using a light-wire brush.

3.2.6.2 The Contractor shall visually inspect all zinc anodes; check the soundness of mounting strap and stud welds, missing fasteners, and percentage of remaining material.

4. NOTES

4.1 Definitions.

4.1.1 "Partial – Condition A": The condition that exists where the substrate is exposed in up to 33% of the entire U/W body.

4.1.2 "Partial - Condition B": The condition that exists where the anticorrosive (AC) undercoating system has incurred damage, but, the u/w body hull substrate is not exposed in any location.

4.1.3 "Partial - Condition C": The condition that exists where damage is confined to the antifoulant (AF) topcoating; the epoxy undercoating system is not exposed in any location.

4.1.4 "100%": The condition that exists where more than 33% of the U/W body hull substrate is exposed.

4.2 UWHIB convention. The COR will convene the UWHIB as soon as possible after the vessel has been dry-docked and before any work (except U/W hull cleaning/wash down) is performed on the U/W hull and appendages.

WORK ITEM 2: Hull Plating, U/W Body, Ultrasonic Testing

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to conduct ultrasonic testing (UT) of U/W hull plating.

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 175 WLM 180-011, Rev F, Sheet 5 Bow Thruster Foundation

Coast Guard Drawing 175 WLM 801-006, Rev J, Docking Plan

Coast Guard Drawing 175 WLM 801-015, Rev C, Scantlings, Decks & Platforms

Coast Guard Drawing 175 WLM 801-019, Rev C, Shell Expansion

Coast Guard Drawing 175 WLM 940-002, Rev K, Hull Block 940 Modules

Coast Guard Drawing 175 WLM 940-004, Rev J, Hull Block 940 - Transverse Frames & BHD

COAST GUARD PUBLICATIONS

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2020, General Requirements

Surface Forces Logistics Center Standard Specification 0740 (SFLC Std Spec 0740), 2020, Welding and Allied Processes

OTHER REFERENCES

None.

3. REQUIREMENTS

3.1 General.

3.1.1 CIR. The Contractor shall submit a CIR for the inspections listed in the following paragraph:

- 3.2 (UT measurements).

3.1.2 Tech Rep.

Not applicable.

3.1.3 Protective measures. The Contractor shall furnish and install all protective measures in accordance with SFLC Std Spec 0000, paragraph 3.3.3 (Vessel component, space, and equipment protection).

3.1.4 Interferences. The Contractor shall handle all interferences in accordance with SFLC Std Spec 0000, paragraph 3.3.5 (Interferences).

3.2 UT measurements. The Contractor shall perform a total of 500 UT measurements of U/W hull surfaces, in locations designated by the Coast Guard Inspector, using Coast Guard Drawings 175 WLM 801-006 and 175 WLM 801-019 for guidance, in accordance with SFLC Std Spec 0740, Appendix C. Mark up a copy of Coast Guard Drawing 175 WLM 801-019 to show all locations selected for measurement and record all measurements in Table I (UT Measurements Summary Sheet - Port/Stbd Shell) provided at the end of this item. Submit A CIR, to also include the marked up drawing and completed Table I.

4. NOTES

4.1 UT Table. Table 1 provided below is for the recording of all UT measurements.

TABLE 1 - UT MEASUREMENTS SUMMARY SHEET PORT/STBD SHELL

SHOT #	STRAKE # PLATE #	FWD/MID/AFT TOP/MID/BOT	ORIG PL THICKNESS	MEASURED PL THICKNESS	PERCENT WASTAGE

WORK ITEM 3: U/W Body, Preserve (100%)

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to preserve U/W body surfaces.

NOTES

1. The purpose of the preservation tasks covered by this item is to completely remove all existing coatings and recoat the U/W body surfaces with a new coating system.

2. U/W body surfaces are as defined in 4.1 (Definitions) and exclude areas covered by docking blocks, unless the vessel is fleeted for the express purpose of preserving blocked areas.

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 175 WLM 601-001, Rev T, Arrangement, Inboard and Outboard Profiles

COAST GUARD PUBLICATIONS

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2020, General Requirements

Surface Forces Logistics Center Standard Specification 6310 (SFLC Std Spec 6310), 2020, Requirements for Preservation of Ship Structures

OTHER REFERENCES

The Society for Protective Coatings (SSPC) Surface Preparation Specification No.1 (SSPC-SP 1), 2016, Solvent Cleaning

3. REQUIREMENTS

3.1 General.

3.1.1 CIR. The Contractor shall submit a CIR for the inspections listed in the following paragraph(s):

- 3.2.3 Post-surface preparation cleaning and inspection

3.1.2 Tech Rep. The Contractor shall refer to SFLC Std Spec 0000, paragraphs 3.2.4.2.1 (Painting contractor certification program requirement) and 3.2.4.2.2 (Coating Tech Rep), for applicable requirements.

3.1.3 Protective measures. The Contractor shall furnish and install all protective measures in accordance with SFLC Std Spec 0000, paragraph 3.3.3 (Vessel component, space, and equipment protection) to the following components, spaces and equipment:

- All scuppers and overboard discharges.
- Waterline area where U/W body coating system interfaces with freeboard coating system (unless freeboard surfaces are also being preserved).
- Fathometer transducer surfaces.
- Sea valve openings.
- Propeller shaft bearings and seals.
- Rudder bearings.
- Z-drive seals.
- Propellers.
- Bow and stern thruster propellers and thruster bearings.
- Zinc anodes (unless anodes are being renewed).

3.1.4 Interferences. The Contractor shall handle all interferences in accordance with SFLC Std Spec 0000, paragraph 3.3.5 (Interferences). Known interferences include, but are not limited to the following:

- Sea chest grating.

3.1.5 Initial inspection. Prior to removing the existing coating system, the Contractor shall inspect and verify whether all draft marks have permanent markings (weld beads or impressions), showing their location on the hull. Submit a CFR.

3.1.6 Water used in preparation and washing procedures. The Contractor shall ensure that water used in all surface preparation tasks, including pre-surface preparation wash and water jetting, is of sufficient purity and quality that it does not prevent the surface being cleaned from achieving the required degree of surface cleanliness or non-visible contamination criteria.

3.1.6.1 Ensure that surface preparation water does not contain sediments or other impurities that are destructive to the proper functioning of the cleaning equipment.

3.1.6.2 Ensure that all water used in any surface preparation or cleaning procedures is captured, contained, and all spent water disposed of in accordance with all Federal, state and local regulations.

3.1.7 Surface preparation optional methods. The Contractor has the option of using either high/ultrahigh pressure water jetting or abrasive blasting to achieve the required surface preparation, prior to application of the coating system specified in 3.2 (Preservation requirements). The Contractor may add abrasives to the water jet stream, for one or both of the following reasons:

- Achieving greater productivity.
- Achieving the required surface profile.

NOTES

1. Existing coating system on the U/W body surfaces may have a nominal thickness in excess of that which was originally installed, because of "patch-coats" applied during past drydock availabilities.

2. Water jetting without abrasive addition does not provide any additional anchor profile to the surface, beyond what was present after the previous surface preparation.

3.2 Preservation requirements. The Contractor shall accomplish the following tasks:

3.2.1 Pre-surface preparation wash. Accomplish low-pressure (less than 5,000 psi) fresh water wash of all affected surfaces, to remove soluble chlorides and other surface contaminants. Refer to SSPC-SP 1, for guidance.

3.2.2 Surface preparation and coating application.

The Contractor shall accomplish the following tasks:

3.2.2.1 The Contractor shall prepare and coat the U/W hull surfaces with the system specified for "Underwater (U/W) Body and Boot-Top (U/W Body and Boot-Top, Icebreaker <235', in Salt Water)", in SFLC Std Spec 6310, Appendix A (Cutter and Boat Exterior Painting Systems).

3.2.2.2 The Contractor shall coordinate U/W Body preservation with side scan/ultrasonic testing if side scan work item is included in availability. If included, the following paragraphs shall be applicable:

3.2.2.2.1 The contractor may elect to apply the anti-abrasion icebreaking coating in two coats rather than one to facilitate side scan procedure if approved by the COR. If selecting this option, the contractor shall provide a written statement from the coating manufacturer approving the application of the icebreaking coating in two coats to the COR for approval during the Arrival Conference. Include details of incorporation of side scan procedure in the "Preservation Plan," required by SFLC Std Spec 6310, paragraph 3.2.

3.2.2.2.2 If the two-coat option is approved by the COR, the side scan shall be performed over first coat. Second coat application shall follow completion of side scan. Total DFT of both coats shall meet listed DFT of single coat anti-abrasion icebreaker DFT in SFLC Std Spec 6310, Appendix A. Application of coats shall be in accordance with manufacturer's overcoating intervals.

3.2.2.3 Ensure that the first AF coat is applied over the AC undercoating, while it is still tacky.

3.2.3 Post-surface preparation cleaning and inspection. After completion of surface preparation and prior to coating application, accomplish the following tasks and submit a CIR.

3.2.3.1 Perform a visual inspection of the prepared U/W body steel substrate.

3.2.3.2 Perform solvent cleaning of all prepared surfaces, in accordance with SSPC-SP 1. Capture, contain, and dispose of all wastes from solvent cleaning, in accordance with all Federal, state and local regulations.

NOTE

Lists of all authorized coating materials and suppliers are listed in SFLC Std Spec 6310, Appendix C (Cutter and Boat Authorized Coatings).

3.3 Draft mark painting. The Contractor shall paint all draft marks with two coats of a "Polysiloxane" or "Silicone Alkyd Enamel" coating, at 2.0-3.0 mils DFT, white (17925).

3.4 In-process quality control. The Contractor shall abide by all the safety, preservation, and quality control requirements specified in SFLC Std Spec 0000, paragraph 3.2.4.2 (In-process QC measures for "critical-coated surfaces). Surfaces being preserved are considered "critical-coated surfaces".

3.5 AF system protective measures – in the event of prolong atmospheric exposure. If the vessel will not be refloated within the immersion time as recommended by the coating system manufacturer, the Contractor shall employ suitable measures - including but not limited to keeping the coating system wet and away from direct sun light, to avoid film damage that may reduce or impact the final performance of the AF coating system when placed into service.

4. NOTES

4.1 Definitions.

4.1.1 U/W Body. The underwater body is defined as the areas from the bottom of the keel to the upper edge of the boot-topping, as shown on Coast Guard Drawing 175 WLM 601-1, including z-drive structural wells, z-drive nozzles, z-drive lower units, thruster tunnels and associated gratings, sea chests (including the sea chest inlet up to the final connection with the flange face at the sea chest isolation valve(s)) and sea chest-to-sea bay piping, skegs, and gratings.

WORK ITEM 4: Appendages, U/W, Leak Test

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to perform leak test of the U/W appendages.

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 175 WLM 114-001, Rev D, Shell Appendages

Coast Guard Drawing 175 WLM 184-001, Rev A, V850 Transducer Adaptor Ring

Coast Guard Drawing 175 WLM 801-006, Rev J, Docking Plan

Coast Guard Drawing 175 WLM 801-019, Rev C, Shell Expansion

COAST GUARD PUBLICATIONS

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2020, General Requirements

Surface Forces Logistics Center Standard Specification 0740 (SFLC Std Spec 0740), 2020, Welding and Allied Processes

OTHER REFERENCES

ASTM International (ASTM) D5363, 2016, Standard Specification for Anaerobic Single-Component Adhesives (AN)

MIL-S-45180, 1998, Sealing Compound, Gasket, Hydrocarbon Fluid and Water Resistant

3. REQUIREMENTS

3.1 General.

3.1.1 CIR. The Contractor shall submit a CIR for the inspections listed in the following paragraph(s):

- 3.2 Leak test.

- 3.4 Appendage air test.

3.1.2 Tech Rep.

Not applicable.

3.1.3 Protective measures. The Contractor shall furnish and install all protective measures in accordance with SFLC Std Spec 0000, paragraph 3.3.3 (Vessel component, space, and equipment protection).

3.1.4 Interferences. The Contractor shall handle all interferences in accordance with SFLC Std Spec 0000, paragraph 3.3.5 (Interferences).

3.2 Leak test. In the presence of the Coast Guard Inspector, the Contractor shall accomplish the following tasks for all appendages as designated in Table 1 below, using the Coast Guard drawings listed in Section 2 (References) as guidance:

- Remove and dispose of all existing plugs (e.g. drain plugs, fill/vent plugs), as applicable.
- Submit a CIR noting any liquids draining from any of the appendages – indicating the presence of a leak.
- Dispose of any drained liquids in accordance with all Federal, state, and local laws and regulations.

CAUTION

Some liquids that are drained may be classified as hazardous materials or hazardous waste depending on state and local regulations. The vessel environmental coordinator may assist with determination of waste category.

3.3 Plug renewal. Upon completion of all work on appendages, the Contractor shall accomplish the following tasks:

- Chase the hull insert threads of all plugs.
- Renew all stainless steel, Type 316 and Monel plugs (as applicable) in place of those removed.
- Coat new plugs prior to installation with a sealing and locking compound conforming to ASTM D5363-AN0123 or a flexible joint compound conforming to MIL-S-45180, Type II.

TABLE 1 – PLUGS FOR U/W APPENDAGES

APPENDAGE	FRAME	SIDE
Skeg	79 ½ to 92	CL
Kort Nozzle (part of Z-drive)	95	P/S

3.4 Appendage air test. The Contractor shall accomplish the following tasks for any appendage from the above list designated by the Coast Guard Inspector, with an approved Change Request resulting from the CIR from paragraph 3.2:

- Perform an air test of the appendage, in accordance with SFLC Std Spec 0740, Appendix C.
- Submit a CIR.

4. NOTES

This section is not applicable.

WORK ITEM 5: Appendages, U/W, Internal, Preserve

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to preserve internal surfaces of designated U/W appendage(s) (see Table 1).

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 175 WLM 114-001, Rev D, Shell Appendages

Coast Guard Drawing 175 WLM 184-001, V850 Transducer Adaptor Ring

Coast Guard Drawing 175 WLM 801-006, Rev J, Docking Plan

Coast Guard Drawing 175 WLM 801-019, Rev C, Shell Expansion

COAST GUARD PUBLICATIONS

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2020, General Requirements

OTHER REFERENCES

MIL-PRF-16173, Sep 2006, Corrosion Preventive Compound, Solvent Cutback, Cold-Application

3. REQUIREMENTS

3.1 General.

3.1.1 CIR. The Contractor shall submit a CIR for the inspections listed in the following paragraph(s):

None.

3.1.2 Tech Rep.

Not applicable.

3.1.3 Protective measures. The Contractor shall furnish and install all protective measures in accordance with SFLC Std Spec 0000, paragraph 3.3.3 (Vessel component, space, and equipment protection).

3.1.4 Interferences. The Contractor shall handle all interferences in accordance with SFLC Std Spec 0000, paragraph 3.3.5 (Interferences).

3.2 Preservation of void internal surfaces. The Contractor shall accomplish the following tasks for each appendage listed in Table 1, using the Coast Guard Drawings listed in Section 2 (References) herein as guidance:

- Fill all appendage interior surfaces with a rust preventive compound conforming to MIL-PRF-16173, Class II, Grade 3, to coat all surfaces.
- Drain, collect, and dispose of remaining compound in accordance with all applicable Federal, state, and local regulations.
- Ensure that the coated surfaces are left exposed to the atmosphere for 24 hours to allow for adequate drying.

TABLE 1 - DRAIN PLUGS FOR U/W APPENDAGES

APPENDAGE	FRAME	SIDE
Skeg	79 ½ to 92	CL
Kort Nozzle (part of Z-drive)	95	P/S

4. NOTES

This section is not applicable to this work item.

WORK ITEM 6: Chain Lockers, Clean and Inspect

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to clean and inspect the Chain Locker(s).

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 175 WLM 581-001, Rev F, Anchor Handling System Arrangement

Coast Guard Drawing 175 WLM 601-001, Rev T, General Arrangement Inboard and Outboard Profiles

Coast Guard Drawing 175-WLM-529-002 Rev G Main Drainage System Diagram

Coast Guard Drawing 175-WLM-505-002 Rev F Mechanical Remote Valve Operators Arrangement and Details

COAST GUARD PUBLICATIONS

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2020, General Requirements

OTHER REFERENCES

None

3. REQUIREMENTS

3.1 General. The Contractor shall refer to Coast Guard Drawing for guidance in accomplishing this work item.

3.1.1 CIR. The Contractor shall submit a CIR for the inspections listed in the following paragraph(s):

None.

3.1.2 Tech Rep.

Not applicable.

3.1.3 Protective measures. The Contractor shall furnish and install all protective measures in accordance with SFLC Std Spec 0000, paragraph 3.3.3 (Vessel component, space, and equipment protection).

3.1.4 Interferences. The Contractor shall handle all interferences in accordance with SFLC Std Spec 0000, paragraph 3.3.5 (Interferences). Known interferences include, but are not limited to the below-listed:

- Anchors and chains.
- Fluid contents of chain locker(s).
- Deck grating.

NOTE

Coast Guard personnel will operate all shipboard machinery and equipment.

Recommend inspecting the condition of the reach rod and cycle/operate the drainage system valve.

3.2 Operational test, initial. Prior to commencement of work, the Contractor shall witness Coast Guard Personnel perform an initial operational test of the bilge sensor(s)/alarm(s), as applicable, to demonstrate existing operational condition. Submit a CFR.

3.3 Cleaning tasks. The Contractor shall refer to Coast Guard Drawing 175 WLM 581-001

175 WLM 601-001 for guidance and clean all interior surfaces free of all foreign materials, such as sediment or sludge. Remove all persistent residues, taking care not to damage the coating system. Remove cleaning media and residues continuously during the washing process. Remove any residual wash media and wipe up residual moisture with clean lint-free cloths. Collect, contain, and dispose of all wash media, residues, and cleaning materials in accordance with all Federal, state, and local regulations.

3.4 Inspection. The Contractor shall visually inspect sounding tubes and chain locker surfaces, including associated structural members. Submit a CFR including the following, as applicable:

- Structural condition
- Inaccessible areas
- Condition of coating system, including measurements taken, percentage, location, and type of coating failure.

NOTE

Coast Guard personnel will operate all shipboard machinery and equipment.

3.5 Operational test, post repairs. After completion of work, the Contractor shall thoroughly test, in the presence of the Coast Guard Inspector and demonstrate the bilge sensor(s)/alarm(s) to be in satisfactory operating condition. Submit a CFR.

4. NOTES

This section is not applicable to this work item.

WORK ITEM 7: Tanks, MP Fuel Stowage and Overflow, Clean and Inspect

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to clean and inspect the following tank(s):

TYPE OF TANK	LOCATION	CAPACITY - 95% (GALLONS)	LOW SUCTION (GALLONS)
Diesel Storage	3-24-1-F	6,247	200
Diesel Storage	3-24-2-F	6,247	200
Diesel Overflow	3-35-2-F	696	50

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 175 WLM 541-001, Rev H, Fuel Oil System Diagram

Coast Guard Drawing 175 WLM 541-006, Rev C, Independent Tanks, Emergency Generator Day Tank IIP:7-1

Coast Guard Drawing 175 WLM 601-003, Rev N, Booklet of General Drawings 552-564

COAST GUARD PUBLICATIONS

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2020, General Requirements

Surface Forces Logistics Center Standard Specification 0740 (SFLC Std Spec 0740), 2020, Welding and Allied Processes

OTHER REFERENCES

Federal Specification (Fed Spec) QQ-N-281, Oct 1985, Nickel-Copper Alloy Bar, Rod, Plate, Sheet, Strip, Wire, Forgings, and Structural and Special Shaped Sections

3. REQUIREMENTS

3.1 General.

3.1.1 CIR. The Contractor shall submit a CIR for the inspections listed in the following paragraph(s):

- 3.7 (Ultrasonic thickness (UT) measurement).

3.1.2 Tech Rep.

Not applicable.

3.1.3 Protective measures. The Contractor shall furnish and install all protective measures in accordance with SFLC Std Spec 0000, paragraph 3.3.3 (Vessel component, space, and equipment protection).

3.1.4 Interferences. The Contractor shall handle all interferences in accordance with SFLC Std Spec 0000, paragraph 3.3.5 (Interferences). Known interferences include, but are not limited to the below-listed:

- Fuel
- Piping
- Tank access cover

3.1.4.1 Remove up to a total of 5,000 gallons of diesel fuel. Document a complete chain of custody record of the removed tank contents from the vessel to the point of final destination or delivery. Submit document to the COR upon completion of work.

3.1.4.2 Dispose of removed fluids in accordance with all applicable Federal, state, and local regulations.

3.1.4.3 Provide the following to support Coast Guard personnel to refuel equipment:

- boom around cutter
- tagout crane way equipment
- Oil transfer supervisor.

NOTE
Vessel may come in with less tank fluid contents than specified above.
Initial and post repair operational tests apply only to tanks that possess TLIs.
Coast Guard personnel will operate all shipboard machinery and equipment.

3.2 Operational test, initial. Prior to commencement of work, the Contractor shall witness Coast Guard personnel perform an initial operational test of the equipment listed below to demonstrate existing operational condition. Submit a CFR.

- TLI for tanks

3.3 Plug log. The Contractor shall keep a written record of all plugs put in any tank vents. A separate list shall be kept for each tank being entered.

3.3.1 Ensure that all plugs are removed from each tank upon completion of work in the tank.

3.3.2 The plug log shall be available to the Coast Guard Inspector when the inspector is performing his close-out inspection on each tank.

3.4 Cleaning requirements. The Contractor shall refer to Coast Guard Drawings 175 WLM 541-001, 175 WLM 541-006 and 175 WLM 601-003 for guidance. The Contractor shall remove tank cover(s) and clean tank interior surfaces free of all foreign materials, such as residual fuel or water, sediment, sludge, rust, or biological growth, taking care not to damage the coating system (if applicable). Remove cleaning media and residues continuously during the washing process. Remove any residual wash media; and wipe up residual moisture with clean lint-free cloths.

3.5 Tank content and waste disposal. The Contractor shall dispose of residual tank contents and any cleaning fluids in compliance with all applicable Federal, state, and local laws, ordinances and regulations. Document a complete chain of custody record of the removed tank contents and generated wastes, from the vessel to the point of final destination or delivery. Submit document to the COR upon completion of work.

3.6 Inspection. The Contractor shall visually inspect all tank interior surfaces, including, but not limited to bulkheads, floor and overhead plating, structural members, manhole cover surfaces, fasteners and gasket seating surfaces. Submit a CFR including the following, as applicable:

- Tank structural condition.
- Inaccessible areas.
- Condition of tank coating, including; measurements taken, percentage, location, and type of coating failure (if tank interior surfaces are coated).
- Tank level indicator (TLI) and/or float switch condition, as applicable.
- Sounding/vent tube and striker plate condition (including vent check valve and waster piece).
- Suction and discharge piping condition.
- Fastener material and condition (correct fastener material is stainless steel).

3.7 Tank closing. The Contractor shall ensure that the tank(s) remain open for at least 24 hours after completion of any KO-authorized repair and preservation procedures. Notify the COR at least 24 hours prior to closing the tank(s). After satisfactory inspection by the Coast Guard Inspector and completion of all authorized repairs, close tank manhole cover(s) with new gasket material conforming to AMS-C-6183. Chase threads on studs to ensure even installation of the access covers. Renew any damaged nuts.

3.7.1 The Contractor shall renew 100% of nuts and washers.

3.8 Operational test, post repairs. After completion of work and in the presence of the Coast Guard Inspector, the Contractor shall thoroughly test and demonstrate the equipment listed below to be in satisfactory operating condition. Submit a CFR.

- Designated tank TLIs
- Vent check valves

NOTE

Coast Guard personnel will operate all shipboard machinery and equipment.

3.9 Ultrasonic thickness (UT) measurement. The Contractor shall take a total of 50 UT measurements of tank plating in each tank in accordance with SFLC Std Spec 0740, Appendix C in locations designated by the Coast Guard Inspector. Submit a CFR.

3.9.1 In addition to the UT measurements, take up to 10 pit-depth measurements within each tank, using a suitable pit depth gauge.

4. NOTES

4.1 Tank content removal. The Ship's force will pump down the tanks to the maximum extent possible with the installed pumping system.

4.2 Tank inspection. The Coast Guard Inspector will visually inspect the tank interior immediately prior to closing.

4.3 Tank content restoration. The Ship's force will procure new fluids and refill all tanks at the appropriate time.

WORK ITEM 8: Tanks, MP Fuel Service, Clean and Inspect

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to clean and inspect the following tank(s):

TABLE 1 - FUEL SERVICE TANKS

TYPE OF TANK	LOCATION	CAPACITY - 95% (GALLONS)	LOW SUCTION (GALLONS)
Diesel Service	3-79-1-F	1,475	100
Diesel Service	3-79-2-F	1,475	100
EDG Service	02-77-1-F	245	10

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 175 WLM 541-001, Rev H, Fuel Oil System Diagram

Coast Guard Drawing 175 WLM 541-006, Rev C, Independent Tanks, Emergency Generator Day Tank IIP:7-1

Coast Guard Drawing 175 WLM 601-003, Rev N, Booklet of General Drawings 552-564

COAST GUARD PUBLICATIONS

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2020, General Requirements

Surface Forces Logistics Center Standard Specification 0740 (SFLC Std Spec 0740), 2020, Welding and Allied Processes

OTHER REFERENCES

Society of Automotive Engineers (SAE) Aerospace Material Specification (AMS) C6183, 2019, Cork and Rubber Composition Sheet; for Aromatic Fuel and Oil Resistant Gaskets

MIL-DTL-1222, Dec 2000, Studs, Bolts, Screws and Nuts for Applications Where a High Degree of Reliability Is Required

3. REQUIREMENTS

3.1 General.

3.1.1 CIR. The Contractor shall submit a Critical Inspection Report as required by the following paragraphs:

- 3.9 Ultrasonic thickness (UT) measurement

3.1.2 Tech Rep.

Not applicable.

3.1.3 Protective measures. The Contractor shall furnish and install all protective measures in accordance with SFLC Std Spec 0000, paragraph 3.3.3 (Vessel component, space, and equipment protection).

3.1.4 Interferences. The Contractor shall handle all interferences in accordance with SFLC Std Spec 0000, paragraph 3.3.5 (Interferences). Known interferences include, but are not limited to the below-listed:

- Fuel
- Piping
- Tank access cover

3.1.4.1 The Contractor shall remove up to a total of 5,000 gallons of diesel fuel. Document a complete chain of custody record of the removed tank contents from the vessel to the point of final destination or delivery. Submit document to the COR upon completion of work.

3.1.4.2 Dispose of removed fluids in accordance with all applicable Federal, state, and local regulations (see 4.2 (Tank content restoration)).

NOTE
Vessel may come in with less tank fluid contents than specified above.
Coast Guard personnel will operate all shipboard machinery and equipment.

3.2 Operational test, initial. Prior to commencement of work, the Contractor shall witness Coast Guard Personnel perform an initial operational test of the equipment listed below to demonstrate existing operational condition. Submit a CFR.

- Designated tank TLIs

3.3 Plug log. The Contractor shall keep a written record of all plugs put in any tanks vents. A separate list shall be kept for each tank being entered.

3.3.1 Ensure that all plugs are removed from each tank upon completion of work in the tank.

3.3.2 Ensure the plug log is available to the Coast Guard inspector when the inspector is performing his

close-out inspection on each tank.

NOTE

Initial and post repair operational tests apply only to tanks that possess TLIs.

3.4 Cleaning requirements. The Contractor shall remove tank cover(s) and clean tank interior surfaces free of all foreign materials, such as residual fuel or water, sediment, sludge, rust, or biological growth, taking care not to damage the coating system (if applicable). Remove cleaning media and residues continuously during the washing process. Remove any residual wash media; and wipe up residual moisture with clean lint-free cloths. The Contractor shall refer to Coast Guard Drawings 175 WLM 541-001, 175 WLM 541-006 and 175 WLM 601-003 for guidance.

3.5 Tank content and waste disposal. The Contractor shall dispose of residual tank contents and any cleaning fluids in compliance with all applicable Federal, state, and local laws, ordinances and regulations. Document a complete chain of custody record of the removed tank contents and generated wastes, from the vessel to the point of final destination or delivery. Submit document to the COR upon completion of work.

3.6 Inspection. The Contractor shall accomplish the following tasks:

3.6.1 Visually inspect all tank interior surfaces, including, but not limited to bulkheads, floor and overhead plating, structural members, manhole cover surfaces, fasteners and gasket seating surfaces. Submit a CFR including the following, as applicable:

- Tank structural condition.
- Inaccessible areas.
- Condition of tank coating, including measurements taken, percentage, location, and type of coating failure (if tank interior surfaces are coated).
- Tank level indicator (TLI) and/or float switch condition, as applicable.
- Sounding/vent tube and striker plate condition.
- Suction and discharge piping condition.
- Fastener material and condition (correct fastener material is stainless steel).

3.7 Tank closing. The Contractor shall accomplish the following after completion of all KO-authorized repairs and/or preservation procedures:

3.7.1 For unpainted fuel tank(s) that are not ballasted, apply a heavy coat of lube oil to the entire tank interior(s).

3.7.2 Ensure that the tank(s) remain open for at least 24 hours. Notify the COR at least 24 hours prior to closing the tank(s). After satisfactory inspection by the Coast Guard Inspector and completion of all authorized repairs, close tank manhole cover(s) with new gasket material conforming to AMS-C-6183. Chase threads on studs to ensure even installation of the access covers. Renew any damaged or missing fasteners. Use MIL-DTL-1222 as guidance. Existing undamaged fasteners may be reused. For purpose of bid, assume 10% of existing fasteners will require renewal. Renew all Nylock hex nuts.

NOTES

For cutters with unpainted fuel tanks, the 24 hour tank opening period begins after completing the lube oil coating.

Coast Guard personnel will operate all shipboard machinery and equipment.

3.8 Operational test, post repairs. After completion of work and in the presence of the Coast Guard Inspector, the Contractor shall thoroughly test and demonstrate the equipment listed below to be in satisfactory operating condition. Submit a CFR.

- Designated tank TLIs
- Vent check valves

3.9 Ultrasonic thickness (UT) measurement. The Contractor shall take a total of 50 UT measurements of tank plating, in locations designated by the Coast Guard Inspector, in accordance with SFLC Std Spec 0740, Appendix C. Use Coast Guard Drawing as guidance. Submit a CFR.

3.9.1 In addition to the UT measurements, take up to 10 pit-depth measurements within each tank, using a suitable pit depth gauge.

4. NOTES

4.1 Tank content removal. The Ship's force will pump down the tanks to the maximum extent possible with the installed pumping system.

4.2 Tank content restoration. The Ship's force will procure new fluids and refill all tanks at the appropriate time.

WORK ITEM 9: Tanks, Ballast, Clean and Inspect

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to clean and inspect the following tank(s):

TABLE 1 - TANKS

TYPE OF STRUCTURE	LOCATION	CAPACITY - 95% (GALLONS)	LOW SUCTION (GALLONS)
Forepeak Ballast Tank	3-0-0-V	3,309	99
Ballast Tank	3-35-6-V	7,922	238
Ballast Tank	3-35-1-V	7,922	238

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 175 WLM 601-003, Rev N, Booklet of General Drawings (552-564)

Coast Guard Drawing 175 WLM 601-002, Rev H, Booklet of General Drawings (IDA LEWIS)

COAST GUARD PUBLICATIONS

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2020, General Requirements

Surface Forces Logistics Center Standard Specification 0740 (SFLC Std Spec 0740), 2020, Welding and Allied Processes

OTHER REFERENCES

ASTM International (ASTM) D1330, 2004, Standard Specification for Rubber Sheet Gaskets

3. REQUIREMENTS

3.1 General.

3.1.1 CIR. The Contractor shall submit a CIR for the inspections listed in the following paragraph(s):

- 3.8 Ultrasonic thickness (UT) measurement

3.1.2 Tech Rep.

Not applicable.

3.1.3 Protective measures. The Contractor shall furnish and install all protective measures in accordance with SFLC Std Spec 0000, paragraph 3.3.3 (Vessel component, space, and equipment protection).

3.1.4 Interferences. The Contractor shall handle all interferences in accordance with SFLC Std Spec 0000, paragraph 3.3.5 (Interferences).

NOTE

Coast Guard personnel will operate all shipboard machinery and equipment.

3.2 Operational test, initial. Prior to commencement of work, the Contractor shall witness Coast Guard personnel perform an initial operational test of the equipment listed below to demonstrate existing operational condition. Submit a CFR.

- TLI's for tanks listed in paragraph 1.1

3.3 Plug log. The Contractor shall keep a written record of all plugs put in any tanks vents. A separate list shall be kept for each tank being entered.

3.3.1 Ensure that all plugs are removed from each tank upon completion of work in the tank.

3.3.2 The plug log shall be available to the Coast Guard inspector when the inspector is performing his close-out inspection on each tank.

3.3 Content removal. The Contractor shall remove access cover(s); remove and dispose of all fluids and/or residues in accordance with all applicable Federal, state, and local regulations. Plug all inlet and outlet piping in the tank to prevent contaminants from entering the tank. Use plugs with an attached lanyard, ring or other system that will ensure plugs are not lost in the pipe openings. Maintain a plug accountability log outside the tank(s) to prevent any of the installed temporary plugs from being lost inside the tank or forgotten inside at tank closure.

3.4 Cleaning. The Contractor shall clean the designated structure's (see paragraph 1.1 (Intent)) interior surfaces free of all foreign materials, such as sediment, sludge and fungal growth. Remove all persistent residues, taking care not to damage the tank coating system. Remove cleaning media and residues continuously from the compartment during the washing process. Remove any residual wash media and wipe up residual moisture with clean lint-free cloths. Collect, contain, and dispose of all wash media, residues, and cleaning materials in accordance with all Federal, state, and local regulations. The Contractor shall refer to Coast Guard Drawing 175 WLM 601-003 for guidance.

3.5 Inspection. The Contractor shall visually inspect all interior surfaces, including, but not limited to bulkheads, floor and overhead plating, structural members, manhole cover surfaces, fasteners and gasket seating surfaces. Submit a CFR including the following, as applicable:

- Structural condition.
- Inaccessible areas, if any.

- Condition of coating, including measurements taken, percentage, location, and type of coating failure.
- Tank level indicator (TLI) and/or float switch condition.
- Sounding tube and striker plate condition.
- Suction and discharge piping condition.
- Fastener material (stainless steel) and condition.
- Anodes (as applicable).

3.6 Closing. The Contractor shall ensure that the compartment(s) remain open for at least 24 hours after completion of any KO-authorized tank repairs and preservation. Notify the COR at least 24 hours prior to closing the compartment(s). After satisfactory inspection by the Coast Guard Inspector, and completion of all authorized repairs, close the manhole cover(s) with new gasket material conforming to ASTM D1330 and new cotton grommets on each stud (as applicable).

3.6.1 The Contractor shall renew 100% of nylon insert/nylock nuts and washers.

NOTE

Coast Guard personnel will operate all shipboard machinery and equipment.

3.7 Operational test, post repairs. After completion of work and in the presence of the Coast Guard Inspector, the Contractor shall thoroughly test and demonstrate the equipment listed below to be in satisfactory operating condition. Submit a CFR.

- TLIs

3.8 Ultrasonic thickness (UT) measurement. The Contractor shall take a total of 50 UT measurements of tank plating, in locations designated by the Coast Guard Inspector, in accordance with SFLC Std Spec 0740, Appendix C. Use Coast Guard Drawing as guidance. Submit a CFR.

4. NOTES

This section is not applicable to this work item.

WORK ITEM 10: Tanks, Dirty Oil and Waste, Clean and Inspect

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to clean and inspect the following tank(s):

TABLE 1 – TANKS

TYPE OF TANK	LOCATION	CAPACITY - 95% (GALLONS)	LOW SUCTION (GALLONS)
Oily Water	3-74-0-F	937	28
Waste Oil	3-77-0-F	586	18

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 175 WLM 601-003, Rev N, Booklet of General Plans

COAST GUARD PUBLICATIONS

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2020, General Requirements

OTHER REFERENCES

Society of Automotive Engineers (SAE) Aerospace Material Specification (AMS) C6183, 2019, Cork and Rubber Composition Sheet; For Aromatic Fuel and Oil Resistant Gaskets

3. REQUIREMENTS

3.1 General.

3.1.1 CIR. The Contractor shall submit a CIR for the inspections listed in the following paragraph(s):

None.

3.1.2 Tech Rep.

Not applicable.

3.1.3 Protective measures. The Contractor shall furnish and install all protective measures in accordance with SFLC Std Spec 0000, paragraph 3.3.3 (Vessel component, space, and equipment protection).

3.1.4 Interferences. The Contractor shall handle all interferences in accordance with SFLC Std Spec 0000, paragraph 3.3.5 (Interferences).

3.2 The Contractor shall remove up to a total of 300 gallons of waste oil and oily water, to facilitate gas-freeing. Dispose of removed fluids in accordance with all applicable Federal, state, and local regulations.

NOTE

Coast Guard personnel will operate all shipboard machinery and equipment.

3.3 Operational test, initial. Prior to commencement of work, the Contractor shall witness Coast Guard Personnel perform an initial operational test of the equipment listed below to demonstrate existing operational condition. Submit a CFR.

- TLI's for tank(s) listed in paragraph 1.1 (Intent)

3.4 Plug log. The Contractor shall keep a written record of all plugs put in any tanks vents. A separate list shall be kept for each tank being entered.

3.4.1 Ensure that all plugs are removed from each tank upon completion of work in the tank.

3.4.2 Ensure the plug log is available to the Coast Guard inspector when the inspector is performing his close-out inspection on each tank.

NOTE

Vessel may come in with less tank fluid contents than specified above.

3.5 Cleaning requirements. The Contractor shall remove tank cover(s) and clean tank interior surfaces free of all foreign materials, such as sediment or sludge, taking care not to damage the coating system (if applicable). Use Coast Guard Drawing 175 WLM 601-003 for guidance. Remove cleaning media and residues continuously during the washing process. Remove any residual wash media; and wipe up residual moisture with clean lint-free cloths.

3.6 Tank content and waste disposal. The Contractor shall dispose of tank contents and all cleaning fluids in compliance with all applicable Federal, state, and local laws, ordinances and regulations. Document a complete chain of custody record of the removed tank contents and generated wastes, from the vessel to the point of final destination or delivery. Submit document to the COR upon completion of work.

3.7 Inspection. The Contractor shall visually inspect all tank interior surfaces, including, but not limited to bulkheads, floor and overhead plating, structural members, manhole cover surfaces, fasteners and gasket seating surfaces. Submit a CFR including the following, as applicable:

- Tank structural condition.

- Inaccessible areas.
- Condition of tank coating, including measurements taken, percentage, location, and type of coating failure.
- Tank level indicator (TLI) and/or float switch condition.
- Sounding tube and striker plate condition.
- Suction and discharge piping condition.
- Fastener material and condition (correct fastener material is stainless steel).

3.8 Tank closing. The Contractor shall ensure that the tank(s) remain open for at least 24 hours after completion of all authorized repair and preservation procedures. Notify the COR at least 24 hours prior to closing the tank(s). After satisfactory inspection by the Coast Guard Inspector and completion of all authorized repairs, close tank manhole cover(s) with new gasket material conforming to AMS-C-6183.

NOTE

Coast Guard personnel will operate all shipboard machinery and equipment.

3.9 Operational test, post repairs. After completion of work and in the presence of the Coast Guard Inspector, the Contractor shall thoroughly test and demonstrate the equipment listed below to be in satisfactory operating condition. Submit a CFR.

- TLI's for tank listed in paragraph 1.1 (Intent)

4. NOTES

4.1 The Coast Guard Inspector will visually inspect the tank interior immediately prior to closing.

WORK ITEM 11: Sea Valves and Waster Pieces, Overhaul Or Renew

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to overhaul or renew sea water (hull) valves and Waster Pieces.

1.1.1 Valves designated for overhaul.

TYPE	SIZE (inches)	DESCRIPTION	FRAME NO. VALVE NO.	PRESSURE (psig)
Gate	8"	Stbd Strainer In	MSW-V-3-69-1	50
Gate	8"	Port Strainer In	MSW-V-3-69-2	50
Gate	8"	Stbd Strainer Out	MSW-V-3-69-3	50
Gate	8"	Port Strainer Out	MSW-V-3-69-4	50
Globe	6"	Port Sea Chest Rn	ASW-V-2-70-2	50
Globe	6"	Stbd Sea Chest Rn	ASW-V-2-70-1	50
Gate	8"	Doppler Cut-out Valve	Frame 17	50

1.1.2 Valves designated for renewal

TYPE	SIZE (inches)	DESCRIPTION	FRAME NO. VALVE NO.	PRESSURE (psig)
Gate	3"	#1 MDE Suction	V127-3	50
Gate	3"	#2 MDE Suction	V127-1	50
Butterfly	3"	ASW Suction	V659-1	50
Gate	2.5	#1 SSDG Suction	V126-2	50
Gate	2.5	#2 SSDG Suction	V126-1	50
Gate	2.5	#3 SSDG Suction	V126-3	50

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 175-WLM 256-001, Rev H, Seawater Cooling System Diagram

Coast Guard Drawing 175-WLM 256-003, Rev A, Seawater Cooling System, Fr 61 Fwd Blocks 910, 920, 930

Coast Guard Drawing 175-WLM 256-004, Rev J, Seawater Cooling System A & D, Hull Blks 940-970

COAST GUARD PUBLICATIONS

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2020, General Requirements

Surface Forces Logistics Center Standard Specification 0740 (SFLC Std Spec 0740), 2020, Welding and Allied Processes

OTHER REFERENCES

American Society of Mechanical Engineers (ASME) B16.34, 2017, Valves-Flanged, Threaded, and Welding End

ASTM International (ASTM) F992, 2017, Standard Specification for Valve Label Plates

Manufacturers Standardization Society of the Valve and Fittings Industry (MSS) SP-61, 2013 Edition, Pressure Testing Of Steel Valves

Manufacturers Standardization Society of the Valve and Fittings Industry (MSS) SP-67, 2017 Edition, Butterfly Valves

Manufacturers Standardization Society of the Valve and Fittings Industry (MSS) SP-72, 2018 Edition, Ball Valves with Flanged or Butt-Welding Ends for General Service

Manufacturers' Standardization Society of the Valve and Fittings Industry (MSS) SP-80, 2013 Edition, Bronze Gate, Globe, Angle and Check Valves

3. REQUIREMENTS

3.1 General.

3.1.1 CIR. The Contractor shall submit a CIR for the inspections listed in the following paragraph(s):

None.

3.1.2 Tech Rep.

Not applicable.

3.1.3 Protective measures. The Contractor shall furnish and install all protective measures in accordance with SFLC Std Spec 0000, paragraph 3.3.3 (Vessel component, space, and equipment protection).

NOTE

A cofferdam is defined as any device required to prevent seawater intrusion while conducting maintenance and/or repairs; including a plug, patch or containment structure.

3.1.4 Interferences. The Contractor shall handle all interferences in accordance with SFLC Std Spec 0000, paragraph 3.3.5 (Interferences). Known interferences include, but are not limited to the below-listed:

- Deck plates
- Piping
- Insulation
- Pipe contents

- Associated system tanks and filters
- Valve flanges.

3.2 Valve material. The Contractor shall assume all above-listed valves (paragraphs 1.1.1 and 1.1.2) have a bronze housing and flanged connections for the purposes of bidding. The Contractor shall verify required valve list against referenced drawings and by ship-check prior to purchasing any materials. If the actual required valve list differs from what is listed in this work item, submit a CFR.

3.3 Fluid handling. The Contractor shall drain and dispose of all residual fluids in the piping system in accordance with all Federal, state, and local rules and regulations.

3.4 Remove. The Contractor shall remove all designated valves in Section 1.1 (Intent). Immediately after valve removal, install blank flanges and gaskets over all openings and secure each flange with at least two bolts, 180 degrees apart. Visually inspect associated flanges and piping; submit a CFR.

3.5 Contractor's option for valve renewal. The Contractor may, at no additional cost to the Government, opt to renew valves designated for overhaul if preferable for the Contractor. If the Contractor elects to renew valves designated for overhaul, ensure all new valves are commercial-standard type valves, conforming to the applicable standard listed in Table 1 (Valve Standards). New valves shall be equivalent (including identical material) to the valve being renewed. Visually inspect the piping, flange and mounting arrangements; and submit a CFR detailing any required modifications to accommodate the new valve(s). If the Contractor elects to renew a valve after attempting overhaul, if will be at no additional cost to the Government.

NOTE

This work item requires the Contractor to provide to the Government installed valves meeting the designated test requirements. This work item includes the cost of EITHER overhaul OR renewal of each designated valve.

3.6 Overhaul. The Contractor shall accomplish the following as required for each valve designated for overhaul (not including valves the Contractor has opted to renew) to meet the specified valve testing standard:

3.6.1 Disassemble. The Contractor shall disassemble the valve to the extent necessary to perform the required work.

NOTE

Complete disassembly of some valves may not be necessary to accomplish overhaul.

3.6.2 Clean. The Contractor shall clean all internal surfaces and visually inspect for defects in body and structural material. Inspect the surface finish and condition of seats, disks, parting faces, plugs, and sealing surfaces.

3.6.3 Machine. The Contractor shall conduct all machining necessary, including but not limited to grind, lap and spot-in seat-to-disk, in order to obtain an acceptable leakage rate at or below valve testing standards (see Table I below).

3.6.4 Reassemble. The Contractor shall reassemble the valve using new hardware and software (packing, O-rings, gaskets, seal rings, non-metallic seats, pins, washers, inserts, etc.).

3.6.5 Test. The Contractor shall test the overhauled valves in accordance with the applicable standards listed in Table 1 (Valve Standards). Submit a CFR.

TABLE 1 - VALVE STANDARDS

VALVE TYPE	INDUSTRY STANDARD
Steel Valves	MSS SP-61
Butterfly Valve	MSS SP-67
Ball Valves, Flanged or Butt-Welded Ends	MSS SP-72
Bronze Gate, Globe, Angle and Check Valves	MSS SP-80
All others	ASME B16.34

3.7 Renewal.

3.7.1 Valve renewal. The Contractor shall renew all designated with commercial-standard type valves, conforming to the applicable standard listed in Table 1 (Valve Standards). The Contractor shall replace any Mil-Std valves listed for renewal with equivalent commercial standard valves. The Contractor shall be aware substitution of body material or trim set is not authorized.

3.7.2 Waster piece inspection. The Contractor shall visually inspect all waster pieces associated with the valves specified for overhaul and/or renewal listed in paragraph 1.1 (Intent), as applicable. Evaluate the percentage of remaining material for each waster piece and submit a CFR. Renewal of waster pieces may be the subject of a CR.

3.8 Valve reinstallation/installation. Upon completion of all authorized work, the Contractor shall accomplish the following:

- Remove and dispose of all blank flanges and associated gaskets.
- Reinstall/install all overhauled and new valves with new gaskets.
- Renew all missing or damaged valve label plates.
- Renew all bolting hardware.
- Prepare and coat all new and disturbed surfaces to match existing adjacent surfaces in accordance with SFLC Std Spec 6310, paragraph 3.1.13 (Touch-ups and minor coating repairs).

3.9 Valve labeling. The Contractor shall install valve label plates on all new valves in accordance with ASTM F992.

3.10 Leak test. After completing all authorized mechanical (i.e. threaded, bolted, etc.) joint repairs, the Contractor shall test the effected seawater system's operation using the system fluid at normal operating pressure. Ensure zero visible leakage from or deformation of mechanical parts by repairing all leaks and discrepancies. Submit a CFR.

3.11 Hydrostatic test. After all authorized repairs, the Contractor shall hydrostatically test all new and disturbed piping and components of the effected seawater system in accordance with SFLC Std Spec 0740, Appendix C, Hydrostatic Test. Ensure zero leakage from or permanent deformation of pressure-containing parts by repairing all leaks, deformations, and discrepancies. Submit a CFR.

4. NOTES

This section is not applicable to this work item.

WORK ITEM 12: Sea Bay, Clean and Inspect

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to clean and inspect the Sea Bay System.

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 175 WLM 256-004, Rev J, Sheets 5 and 13, Seawater Cooling System A & D, Hull Blocks 940-970

Coast Guard Drawing 175 WLM 256-013, Rev A, Sea Bay Thermometer Installation

Coast Guard Drawing 175 WLM 505-003, Rev A, Sea Connection Arrangements

Coast Guard Drawing 175 WLM 633-001, Rev D, Cathodic Protection

COAST GUARD PUBLICATIONS

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2020, General Requirements

Surface Forces Logistics Center Standard Specification 0740 (SFLC Std Spec 0740), 2020, Welding and Allied Processes

OTHER REFERENCES

ASTM International (ASTM) D1330, 2004, Standard Specification for Rubber Sheet Gaskets

3. REQUIREMENTS

3.1 General.

3.1.1 CIR. The Contractor shall submit a CIR for the inspections listed in the following paragraph:

- Paragraph 3.2.3 "Inspections".

3.1.2 Tech Rep.

Not applicable.

3.1.3 Protective measures - general. The Contractor shall furnish and install all protective coverings to seal off and protect all non-affected vessel's components, equipment, and spaces in the vicinity of the work area against contamination during the performance of work. Upon completion of work, the Contractor shall remove all installed protective measures, inspect for the presence of contamination, and return all contaminated equipment, components, and spaces to original condition of cleanliness.

3.1.4 Interferences. The Contractor shall handle all interferences in accordance with SFLC Std Spec 0000, paragraph 3.3.5 (Interferences). Known interferences include, but are not limited to the below-listed:

- Seawater piping.
- Chlorinator unit.
- Temperature sensor.

3.1.5 Piping isolation. If this item is scheduled to be accomplished while the cutter is pier side, the Contractor shall submit a piping isolation plan to the COTR, within 24 hours before work is begun, Upon approval of isolation plan, then proceed with isolating the piping system.

NOTE

Piping isolation is required to prevent compartment flooding. Additionally, due to space limitations, it may be necessary to remove/reinstall piping to facilitate access.

3.2 Requirements. The Contractor shall accomplish the following tasks:

3.2.1 Content removal. Remove the manhole cover and drain all fluids within the sea bay and the associated piping. Dispose of all removed fluids in accordance with all applicable Federal, state, and local regulations.

3.2.2 Cleaning.

3.2.2.1 Clean all interior surfaces of the sea bay (including all accessible interior and exterior piping surfaces) to completely remove all visible marine growth, loose rust, loose mill scale, loose coatings, and other foreign materials such as sediment or sludge. Remove all persistent residues, taking care not to damage the coating system.

3.2.2.2 Remove cleaning media and residues continuously from the sea bay during the washing process. Remove all residual wash media and wipe up residual moisture with clean cloths. Collect, contain, and dispose of all wash media, residues, and cleaning materials in accordance with all Federal, state, and local regulations.

3.2.2.3 After cleaning, visually inspect all sea bay and associated piping surfaces; submit a CFR .

3.2.2.4 Renew all disturbed gaskets and seals.

3.2.3 Inspection. Visually inspect all sea bay interior surfaces and manhole cover surfaces for damage and deterioration; and submit a CIR, to include but not be limited to, the following:

- Degree of fouling; quantity of marine growth present.

- Structural condition.
- Condition of manhole cover (to include fasteners and gasket seating surfaces).
- Piping condition.
- Coating system condition.
- Inaccessible areas, if any.
- Percent deterioration of zinc anodes.

3.2.3.1 Ultrasonic thickness (UT) measurement. The Contractor shall take a total of 50 UT measurements in accordance with SFLC Std Spec 0740, Appendix C in locations designated by the Coast Guard Inspector and using Coast Guard Drawing listed in Section 2 “References” as guidance. Submit a CIR.

3.2.3.1.1 In addition to the UT measurements, take a total of 40 pit-depth measurements, using a suitable pit depth gauge

3.3 Sea bay closing. After all authorized repairs, in the presence of the Coast Guard Inspector, the Contractor shall reinstall the sea bay manhole cover with new gasket material conforming to ASTM D1330.

4. NOTES

4.1 Location. The Sea Bay is located centerline in the Engine Room, at Frame 68 – as shown on Coast Guard Drawing 175 WLM 633001, Sheet 3; and has one access - an 18" x 15" manhole on the top; dimensions are approximately 40" longitudinally, 72" transversely, and 33" vertically..

WORK ITEM 13: Sea Bay, Preserve 100%

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to preserve 100% of the interior surfaces of the Sea Bay (See Section 4.1 (Location)).

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 175 WLM 256-004, Rev J, Sheets 5 and 13, Seawater Cooling System A & D, Hull Blocks 940-970

Coast Guard Drawing 175 WLM 256-013, Rev A, Sea Bay Thermometer Installation

Coast Guard Drawing 175 WLM 505-003, Rev A, Sea Connection Arrangements

Coast Guard Drawing 175 WLM 633-001, Rev D, Cathodic Protection

COAST GUARD PUBLICATIONS

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2020, General Requirements

Surface Forces Logistics Center Standard Specification 6310 (SFLC Std Spec 6310), 2020, Requirements for Preservation of Ship Structures

Surface Forces Logistics Center Standard Specification 8636 (SFLC Std Spec 8636), 2020, Temporary Hull Accesses

OTHER REFERENCES

None.

3. REQUIREMENTS

3.1 General.

3.1.1 CIR.

None.

3.1.2 Tech Rep.

Not applicable.

3.1.3 Protective measures - general. The Contractor shall furnish and install all protective coverings to seal off and protect all non-affected vessel's components, equipment, and spaces in the vicinity of the work area against contamination during the performance of work. Upon completion of work, the Contractor shall remove all installed protective measures, inspect for the presence of contamination, and return all contaminated equipment, components, and spaces to original condition of cleanliness.

3.1.4 Interferences. The Contractor shall handle all interferences in accordance with SFLC Std Spec 0000, paragraph 3.3.5 (Interferences). Known interferences include, but are not limited to the below-listed:

- Seawater piping.
- Chlorinator unit.
- Temperature sensor.

3.1.5 Temporary access openings. With express permission of the KO via submission of a CFR and in accordance with SFLC Std Spec 8636, the Contractor may perform all work required to cut open and close temporary access openings to facilitate accomplishment of the work specified herein.

3.2 Sea Bay and piping preservation. The Contractor shall prepare and coat all interior surfaces of the Sea Bay, including all accessible associated piping, using the coating system specified for "Underwater Water (U/W) Body and Boot-Top (U/W Body and Boot-Top, Icebreaker <235', in Salt Water)", in SFLC STD SPEC 6310, Appendix A (Cutter and Boat Exterior Painting Systems).

3.3 In-process quality control measures. The Contractor shall abide by all the safety, preservation, and quality control requirements specified in SFLC Std Spec 0000, paragraph 3.2.4.2 (In-process QC measures for "critical-coated surfaces).

NOTE
Surfaces being preserved are considered "critical-coated surfaces".

4. NOTES

4.1 Location. The Sea Bay is located centerline in the Engine Room, at Frame 68 – as shown on Coast Guard Drawing 175 WLM 633001, Sheet 3; and has one access - an 18" x 15" manhole on the top; dimensions are approximately 40" longitudinally, 72" transversely, and 33" vertically.

WORK ITEM 14: Thruster Unit (General), Overhaul

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to perform overhaul of the Bow Thruster Unit.

1.2 Government-furnished property.

MTI	ITEM DESCRIPTION	NSN/PN	QTY	ESTIMATED COST ($/UNIT)
N	Seal Kit, Thruster	NSN: 2010-01-555-9048	1 ea.	4376.00
N	Anode, Zinc	NSN: 5365-01-495-5350	9 ea.	113.75
N	**Seal Spacer (B125SM44178)	NSN: 2010-01-495-6823	1 ea.	700.00
N	**Shaft Sleeve	NSN: 2010-01-495-2638	1 ea	5702.40

****New or refurbished equipment that the Government may provide for installation in place of existing equipment**.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 175-WLM 568-001, Rev B, Bow Thruster Arrangement & Detail

Coast Guard Drawing 175-WLM 568-002, Rev N, Bow Thruster Detail

COAST GUARD PUBLICATIONS

Coast Guard Technical Publication (TP) 3628, Mar 2017; Vol 4 of 9, Instruction Manual, Bow Thruster

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2020, General Requirements

Surface Forces Logistics Center Standard Specification 5000 (SFLC Std Spec 5000), 2020, Auxiliary Machine Systems

Surface Forces Logistics Center Standard Specification 6310 (SFLC Std Spec 6310), 2020, Requirements for Preservation of Ship Structures

OTHER REFERENCES

None

3. REQUIREMENTS

3.1 General.

3.1.1 CIR.

None.

3.1.2 Tech Rep. The Contractor shall provide the services of qualified Tech Rep, who is familiar with the Rolls Royce (formerly Bird Johnson) equipment/system, to accomplish the following tasks – on site:

- Provide manufacturer's proprietary information, software, and tools pertinent to the equipment/system.
- Assist with proper repair methods, and ensure compliance with manufacturer's procedures and standards during disassembly, inspection, repair, modification, calibration, and reassembly of the equipment/system.

3.1.1.1 The Contractor shall ensure that the Tech Rep is a certified representative of Rolls Royce.

3.1.1.2 The Contractor shall submit the Tech Rep's name and résumé to the COR at the Arrival Conference.

3.1.3 Protective measures. The Contractor shall furnish and install all protective measures in accordance with SFLC Std Spec 0000, paragraph 3.3.3 (Vessel component, space, and equipment protection).

3.1.3.1 Hydraulic system. The Contractor shall maintain existing hydraulic system cleanliness and take all necessary precautions to prevent the introduction of contaminants into the hydraulic system. Immediately after disconnecting or removing components from the hydraulic system, seal all openings to the rest of the system using caps for externally threaded connection points, bolt-on blanks, or taped-on discs/covers made of durable plastic or sheet-metal that is no less than 1/16-inch thick.

NOTE

Be aware that plastic bags may be used only when arrangement or configuration prevents the use of the other sealing methods specified above.

3.1.4 Interferences. The Contractor shall handle all interferences in accordance with SFLC Std Spec 0000, paragraph 3.3.5 (Interferences). Known interferences include, but are not limited to the below-listed:

- Grid Cover on port thruster tube.
- Grid Cover on starboard thruster tube.

3.2 Operational test - initial. Prior to commencement of work, the Contractor shall witness Coast Guard Personnel perform an initial operational test of the thruster units, to demonstrate existing operational condition. Submit a CFR.

3.3 Hydraulic fluid sampling and testing. The Contractor shall sample and test the system hydraulic fluid in accordance with SFLC Std Spec 5000, Appendix C, Paragraph C2.1 (Fluids).

3.4 Fluid disposal. The Contractor shall drain and dispose of all oil from the gear case, approximately 60 gallons, in accordance with all applicable Federal, state and local regulations.

3.5 Maintenance. The Contractor shall perform the following maintenance requirements to the thruster units in accordance with TP 3628 and as shown on CG Dwgs 175-WLM 568-001 and 175-WLM 568-002.

3.5.1 Polish each propeller to a 63 RMS surface finish. Visually inspect each propeller for pitting, erosion, and bending. Submit a CFR. Include in the report the condition of the blade roots and tips and any recommendations for repair.

3.5.2 Visually inspect the magnetic plug to the gear box for the presence of any metal particles. Remove all metal particles from the plug. Thoroughly clean each lubrication oil head tank and gear box free of sludge and any other foreign particles. Submit a CFR.

3.5.3 In the presence of the Coast Guard Inspector, renew the system oil in accordance with TP 3628, and SFLC Std Spec 5000, Appendix C, Paragraph C2.1 (Fluids).

3.5.4 Remove and dispose of each existing propeller shaft seal. Clean and visually inspect each shaft surface for excessive wear.

3.5.5 Reassemble and reinstall all removed components, with new Contractor-furnished propeller shaft seal and associated O-rings.

3.5.6 Visually check for any excessive wear or damage to the teeth of the gears. Check the wear pattern on the spiral bevel gears to diagnose any problems. Submit a CFR.

3.5.7 Measure the shaft runout to inspect for bends. Take gear backlash readings on each gear set and compare results with the number etched on the back of the gear. Submit a CFR.

3.5.8 Renew the pinion gear seal in accordance with TP 3628.

3.6 Zinc renewal. The Contractor shall renew zincs located on the thruster gearbox with Government-furnished zinc anodes.

3.7 Touch-up preservation, general. The Contractor shall prepare and coat all new and disturbed exterior and interior surfaces, as applicable, to match existing adjacent surfaces in accordance with SFLC Std Spec 6310, paragraph 3.1.13 (Touch-ups and minor coating repairs.)

3.8 Operational test – post repairs. After completion of work, the Contractor shall thoroughly test, in the presence of the Coast Guard Inspector and demonstrate the Thruster Systems to be in satisfactory operating condition. Submit a CFR.

3.8.1 Test both Thrusters at dockside and at sea trials.

3.8.2 Operate thrusters over entire range of RPM in both directions.

NOTE
Coast Guard personnel will operate all shipboard machinery and equipment.

4. NOTES

This section is not applicable to this work item.

WORK ITEM 15: Anchor Windlass, Inspect And Service

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to inspect and service the double wildcat and double gypsy hydraulic anchor windlass assembly.

1.2 Government-furnished property.

MTI	ITEM DESCRIPTION	NSN/PN	QTY	ESTIMATED COST ($/UNIT)
N	Anchor Windlass Overhaul kit	NSN: 5430-01-546-4684	1 ea.	12,474.00
N	Ball Valve	NSN: 4820-01-013-3430	1 ea.	87.36
N	Valve, Counterbalance	NSN: 4820-01-F16-4571 PN: CBEH-LKN-BCL Sun Hydraulics Corp	1 ea.	354.00
N	** Motor, Hydraulic	NSN: 4320-01-419-3520	1 ea.	1,811.00
N	** Valve, Linear, Directional Control	NSN: 4810-01-511-3173	1 ea.	983.14
N	Hydraulic Brake	NSN: 2530-01-F14-4033 P/N: 90B3C4G087	1 ea.	2000.00

****New or refurbished equipment that the Government may provide for installation in place of existing equipment.**

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 175 WLM 581-001, Rev F, Anchor Handling System

COAST GUARD PUBLICATIONS

Coast Guard Technical Publication (TP) 3631, Section 581-A, Sep 2013, Manufacturer's Instruction Book-SWBS Groups 573-581, Anchor Windlass

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2020, General Requirements

Surface Forces Logistics Center Standard Specification 5000 (SFLC Std Spec 5000), 2020 Auxiliary Machine Systems

OTHER REFERENCES

None

3. REQUIREMENTS

3.1 General.

3.1.1 CIR. The Contractor shall submit a CIR for the inspections listed in Table 1:

- Task# 1
- Task# 2

3.1.2 Tech Rep.

Not applicable.

3.1.3 Protective measures. The Contractor shall furnish and install all protective coverings to seal off and protect all non-affected vessel's components, equipment, and spaces near the work area against contamination during the performance of work. Upon completion of work, the Contractor shall remove all installed protective measures, inspect for the presence of contamination, and return all contaminated equipment, components, and spaces to original condition of cleanliness.

3.1.4 Interferences. The Contractor shall handle all interferences in accordance with SFLC Std Spec 0000, paragraph 3.3.5 (Interferences). Known interferences include, but are not limited to the below-listed:

- Port and starboard anchors (remove at the swivel shot).
- Port and starboard anchor chains.

NOTE

Each anchor weighs 2,250 pounds and each chain is 1-1/8 inch Stud-Link, Grade III with a length of 7 shots.

3.2 Inspection and service particulars. The Contractor shall perform the tasks designated in Table 1 below, using Coast Guard Drawing 175 WLM 581-001 as guidance.

TABLE 1 – RECURRING MAINTENANCE REQUIREMENTS

#	TASK TYPE (SFLC STD SPEC 5000 PARA. REF.)	QTY	COMPONENT OR ASSEMBLY	APPENDIX AND PARA. FROM SFLC STD SPEC 5000	OTHER
1	Operate and Inspect	1	Anchor Windlass Assembly	3.2.1 (Operate and Inspect)	Submit A CIR.
2	Disassemble and Inspect	1	Anchor Windlass Assembly	3.2.3 (Disassemble and inspect)	Disassembly includes, but is not limited to the following: • Hydraulic Motor. • Band Brake Handwheel, Bevel Gear Box, and Linkage Assemblies up the Band Brake Assembly • DCV assembly. • Hydraulic Brake.

#	TASK TYPE (SFLC STD SPEC 5000 PARA. REF.)	QTY	COMPONENT OR ASSEMBLY	APPENDIX AND PARA. FROM SFLC STD SPEC 5000	OTHER
					• Primary Reducer. • Worm Reducer. • Counterbalance Valve • Band Brake Assembly. • Band Brake Lining. • Wildcat. • Main Gypsy/Capstan Shaft Assembly. Submit A CIR.
3	NDE	1	Anchor windlass assembly and foundation	3.2.5 (NDE)	Weld joints to NDE: all joints attaching winch foundations to deck.
4	Reassemble	1	Anchor Windlass Assembly		Reassemble anchor windlass assembly with provided GFP – see 1.2 (Government-furnished property).
5	Renew	All	Snap Rings, Thrust Buttons, O-Rings, Gaskets, Keys, Shims, Lockwashers, Dowel Pins, Thrust Washers, Cotter Pins, Clamp, Grease Fittings, Foundation Bolts Washers And Nuts .	N/A	Perform all renewals during reassembly and reinstallation, in accordance with TP-3631, Section 581-A.
6	Renew	1	Counterbalance Valve	C2.4 (Valves and manifolds)	GFP.
7	Preserve	1	Anchor windlass assembly and foundation	3.2.4 (Preservation)	
8	Renew	7.75 Gallons	Worm Reducer and Primary Reducer Oil	D2.4 (Open gearing and gear reducers)	See TP-3631, Section 581-A.
9	Groom and Lubricate	1	Anchor Windlass Assembly	3.2.6 (Groom and Lubricate)	
10	Final Op Test	1	Anchor Windlass	B2.5 (Anchor Windlass)	Submit CFR.
11	Fabricate and Install	1	Label plate	B2.9 (Label plate)	System: Anchor Windlass

3.3 Additional maintenance requirements. The Contractor shall perform only the additional tasks (s) marked with an "X" in Table 2 below.

TABLE 2 – ADDITIONAL MAINTENANCE REQUIREMENTS

#	TASK TYPE	QTY	COMPONENT OR ASSEMBLY	APPENDIX AND PARA. FROM SFLC STD SPEC 5000	OTHER
	Renew	1	Hydraulic Motor		GFP
	Renew	1	Directional Control Valve assembly		GFP
	Renew	1	Main Shaft		
	Renew	All	Hoses	C2.2 (Hose Assemblies)	

4. NOTES

4.1 Overhaul kit contents. Listed below is breakdown for the Anchor Windlass Assembly Overhaul Kit (NSN: 5430-01-546-4684):

Item #	Part #	Description	Qty	UOM
1	J194467	SEAL, SHAFT	1.00	EA
2	J20A1030	SEAL KIT,	1.00	EA
3	J20A0052	BALL BEARING,	1.00	EA
4	J20A0053	NEEDLE BEARING HYD MOTOR, HYDRAULIC	1.00	EA
5	J20A0151	SEAL KIT,HYDRAULIC MOTOR,	1.00	EA
6	J20A0054	SPRING KIT HYD MOTOR, HYDRAULIC MOTOR	1.00	EA
7	J194480	O-RING	1.00	EA
8	J20C0061	SEAL KIT, FOR HYDRAULIC BRAKE,	1.00	EA
9	J194481	GASKET	1.00	EA
10	J20B0027	DISC KIT HYD MOTOR BRAKE, ESKRIDGE BRAKE	1.00	EA
11	J194822	MASTER REPAIR KIT	1.00	EA
12	J20C1046	BEARING, REDUCER,	2.00	EA
13	J20C0057	TAPERED ROLLER BEARING CONE, TAPERED	2.00	EA
14	J20C0006	OIL SEAL,, CONE DRIVE GEAR PART NO:,	1.00	EA
15	J20C0144	BEARING CUP,	2.00	EA
16	J20C0145	BEARING CONE,	2.00	EA
17	J20C0009	OIL SEAL 356W525,	2.00	EA
18	JA2005500	THRUST WASHER, 5.00 OD X 3.25 ID X .25	2.00	EA
19	JA2024300	BUSHING, WILDCAT, 3.75 OD X 3.255 ID X	4.00	EA
20	JA2036700	THRUST WASHER, 1.75 OD X 1.031 ID X 0.25	2.00	EA
21	JA2036601	PIN, BRAKE, 4.50 LG,SST 304, ,	2.00	EA
22	JA2001401	BRAKE NUT, 2.5 DIA X 3.0 LG,BRONZE, 660	2.00	EA
23	JD2002402	LINING, BRAKE NONASBESTOS, 0.38 X 4.00 X	2.00	EA
24	J11C0034	RIVETS, BRASS, SEMI TUBE, .19 DIA X 0.75	104.00	EA
25	J07B1003	VALVE, CARTRIDGE,	1.00	EA
26	J17E0072	SEAL KIT, COUNTERBALANCE VALVE, (PORT A)	1.00	EA
27	J20D0013	HYD CONTROL VALVE SEAL KIT,	1.00	EA

FIGURE 1. OVERHAUL KIT CONTENTS

WORK ITEM 16: Anchor Chains and Ground Tackle, Inspect and Repair

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to perform inspection, preservation and repairs to the anchor chain assemblies (port and starboard), including associated ground tackle.

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 175 WLM 581-001, Rev F, Anchor Handling System Arrangement

COAST GUARD PUBLICATIONS

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2020, General Requirements

Surface Forces Logistics Center Standard Specification 6310 (SFLC Std Spec 6310), 2020, Requirements for Preservation of Ship Structures

OTHER REFERENCES

American Bureau of Shipping (ABS) Approved Chain, Accessory and Bar Manufacturing Facilities List, Oct 2016

Federal Specification (Fed Spec) RR-C-271, Rev E, Mar 2016, Chains and Attachments, Carbon and Alloy Steel

MIL-DTL-23549, Sep 2016, Grease, General Purpose

MIL-C-24633, Oct 2014, Chain, Stud Link, Anchor, Low Alloy Steel, Flash Butt Welded

The Society for Protective Coatings (SSPC)/NACE International (NACE) Joint Surface Preparation Standard SSPC-SP 6/NACE No. 3, 2007, Commercial Blast Cleaning

The Society for Protective Coatings (SSPC) Surface Preparation Specification No. 1 (SSPC-SP 1), 2015, Solvent Cleaning

3. REQUIREMENTS

3.1 General.

3.1.1 CIR. The Contractor shall submit a CIR for the inspections listed in the following paragraph(s):

- 3.2.3 (Inspections).

3.1.2 Tech Rep.

Not applicable.

3.1.3 Protective measures. The Contractor shall furnish and install all protective measures in accordance with SFLC Std Spec 0000, paragraph 3.3.3 (Vessel component, space, and equipment protection).

3.1.4 Interferences. The Contractor shall handle all interferences in accordance with SFLC Std Spec 0000, paragraph 3.3.5 (Interferences). Known interferences include, but are not limited to the following:

- Port and starboard anchors.

3.2 Required work particulars. The Contractor shall use the chain description (see 4.1 (Component characteristics)) and Coast Guard Drawing 175 WLM 581-001 for guidance, for accomplishing the tasks specified below for each anchor chain assembly.

3.2.1 Removal. Disconnect and remove the anchor and anchor chain assembly and fake out the chain on the drydock floor or in a suitable location, to facilitate the performance of the tasks specified herein.

NOTE

The use of Coast Guard equipment (e.g. anchor windlass) for off-loading and on-loading of anchors and anchor chain is authorized. Coast Guard personnel will operate all Government equipment.

3.2.2 Pre-inspection surface preparation.

3.2.2.1 Pressure wash the anchor, anchor chain and other components with fresh water and a fire hose to remove any mud, salts, or other contaminants adhering to the chain

3.2.2.2 Prepare the anchor and all shots of chain to a “Commercial Blast” standard, in accordance with SSPC-SP 6.

3.2.3 Inspections. Perform the following inspections and submit a CIR:

3.2.3.1 Visual inspection. Visually inspect the following:

- All swivels, outboard swivel shots, pelican hook and shackles, and cats paw (if applicable).
- Entire length of Shot 1, Shot 2, Shot n-1, and Shot n.

NOTES

1. For the purpose of reference in this item, the shots will be referred to by numbers. Mark each shot with a removable tag. Moving inboard from the anchor, the shots will be referred to as follows: ANCHOR, Shot 1, Shot 2, Shot 3...Shot n-2, Shot n-1, Shot n, and BITTER END. These shot numbers are designated in the order existing prior to work, and will not change - although the shot order itself will change.

2. Number n in the paragraph above is equal to the number of shots per chain.

3.2.3.2 Measurements – and condemning criteria.

3.2.3.2.1 Determine the suitability for continued service of the anchor chain assembly, by checking wire diameter dimension, using information provided in Table I (Dimensions for Condemning Anchor Chain) as guidance, as applicable. Gage the wire diameter of ten links per shot of chain, ensuring that each link shall be separated by approximately 10% of the shot length.

NOTE

For commercial grade chain, use 90 percent of the link diameter for condemning criteria.

3.2.3.2.2 If a Change Request has been released, perform six-link dimension, as specified in "Note 2" in Table I (Dimensions for Condemning Anchor Chain).

NOTE

Change Request will only be authorized to perform six link inspection only if ship's force has reported that the anchor chain has been jumping the capstan.

TABLE 1 - DIMENSIONS FOR CONDEMNING ANCHOR CHAIN

SIZE OF CHAIN (INCHES)	90 PERCENT OF LINK DIAMETER(1) (INCHES)	SIX-LINK DIMENSION(2) (INCHES)
1	0.90	26-3/4
1-1/8	1.013	30-1/16
1-1/4	1.125	33-7/16
1-3/8	1.238	36-3/4
1-1/2	1.35	40-1/8
1-5/8	1.463	43-7/16
1-3/4	1.575	46-13/16
1-7/8	1.688	50-1/8
2	1.80	53-1/2
2-1/8	1.913	56-13/16
2-1/4	2.025	60-3/16
2-3/8	2.138	63-1/2
2-1/2	2.25	66-7/8
2-5/8	2.363	70-3/16
2-7/8	2.475	73-9/16
3	2.558	76-7/8

1. Use a micrometer, caliper or GO/NO-GO gage* to check wire diameter dimension. Gage is to be made by Contractor/repair facility in accordance with the dimensions shown in Table 1 above. Check the diameters at right angles to the link. When measuring with a micrometer or caliper take one-half the sum of the two diameters as representing the line diameter.

2. Take six-link measurements with a load applied to the chain in order to take all slack out of the chain. Use a bar gauge to check the six-link dimension. When the gauge will not fit over six links, the chain has been stretched beyond allowable limit. Measure six links for the entire length of each shot, measuring from every third link.

***When using a GO/NO-GO gage, a failed check is to be verified by measuring with a micrometer or caliper. Measure the diameter at right angles and take one-half the sum of the two diameters as representing the link diameter. Take measurements on clean, bare metal.**

3.2.4 Detachable link assemblies maintenance.

NOTE

Detachable link components are not interchangeable.

3.2.4.1 Renew all detachable taper pin and link assemblies and associated link plugs.

3.2.4.2 Assemble detachable links, swivels and shackles; and repack with molybdenum disulfide grease (MIL-DTL-23549).

3.2.4.3 Change the relative position of the shots, as designated by the Coast Guard Inspector, to distribute the wear on the chain, ensuring that shot shall be rotated end for end upon reinstallation, as follows: ANCHOR, Shot 3... Shot n-2, Shot n-1, Shot n, Shot 1, Shot 2, BITTER END.

3.2.4.4 Renew shackle at bitter end of chain.

3.2.5 Chain renewal. If a Change Request has been released, renew designated section of chain with material conforming to MIL-C-24633. See paragraph 4.2 (Supply Information).

3.2.6 Surface coating. Using the coating system specified for "Anchor/Anchor Chain" in SFLC Std Spec 6310, Appendix A (Cutters and Boats Exterior Painting Systems), do the following:

3.2.6.1 Perform solvent cleaning of all surfaces specified to be coated (see below), in accordance with SSPC-SP 1.

3.2.6.2 Coat the anchor and all shots of chain Black (17038).

3.2.6.3 Color-coat the following shots:

- Shot n-1: Black (17038).
- Shot n: Black (17038).
- Shot 1: Yellow (13538).
- Shot 2: Red (11105).

3.2.6.4 Color coat/mark all detachable links, adjacent chain links, shackles, and swivels as follows and in accordance with attached Figure "Painting and Markings On Mooring Chain".

3.2.6.4.1 Remove all existing stainless steel wire prior to the installation of new markings.

3.2.6.4.2 Paint first shot detachable link (15 fathom mark) red (11105).

3.2.6.4.3 Paint second shot detachable link (30 fathom mark) white (17925).

3.2.6.4.4 Paint third shot detachable link (45 fathom mark) blue (15182).

3.2.6.4.5 Repeat pattern of red, white and blue for all subsequent detachable links up to the next to last shot.

3.2.6.4.6 The first link on each side of the 15 fathom detachable link shall be painted white (17925). The first link at each side of the detachable link shall also be marked by one turn of stainless steel wire around the stud. The first two links on each side of the 30 fathom (second shot) detachable link shall be painted white (17925). The second link at each side of the detachable link shall also be marked by two turns of wire around the stud. Repeat pattern for all subsequent shots up to the next to last shot.

3.2.7 Chain restowing. When directed by the Coast Guard Inspector, reassemble the anchor and anchor chain; restow the anchor chain in its chain locker, free for running, with the anchor properly housed and secured with the chain stopper set.

3.2.7.1 Lead the bitter ends down and through the deck bolts in the chain locker and secure to the chain locker pad eye.

3.2.7.2 Back out the chains to ensure the chain stopper is set properly.

3.2.7.3 Ensure that:

- the bitter ends of the chain are securely fastened in the chain locker with new bitter end shackles, conforming to Fed Spec RR-C-271, Type IV-A, Class 3, Grade A.
- The ground tackle is kept ready for use.
- Nothing interferes with a readiness to veer or slip the anchors.
- The detachable links located just inboard of the riding stopper and the detachable link tool set are readily accessible for use in slipping the anchor chains in an emergency.
- The anchor has a crown buoy attached, with sufficient length of rope to facilitate indicating the depths of water in which moored.

NOTE

Coast Guard personnel will operate all shipboard machinery and equipment.

3.3 Operational test, post repairs. After completion of work, the Contractor shall, in the presence of the Coast Guard Inspector, thoroughly test the anchor chain assembly to prove satisfactory operating condition, by releasing the chain stoppers and lowering both anchors under power to the drydock floor (or waterline, as applicable), letting out one additional shot, and raising again to ensure chains run on the wildcats without binding.

3.3.1 Correct any discrepancies, house the anchors and set the anchor chain pelican hooks.

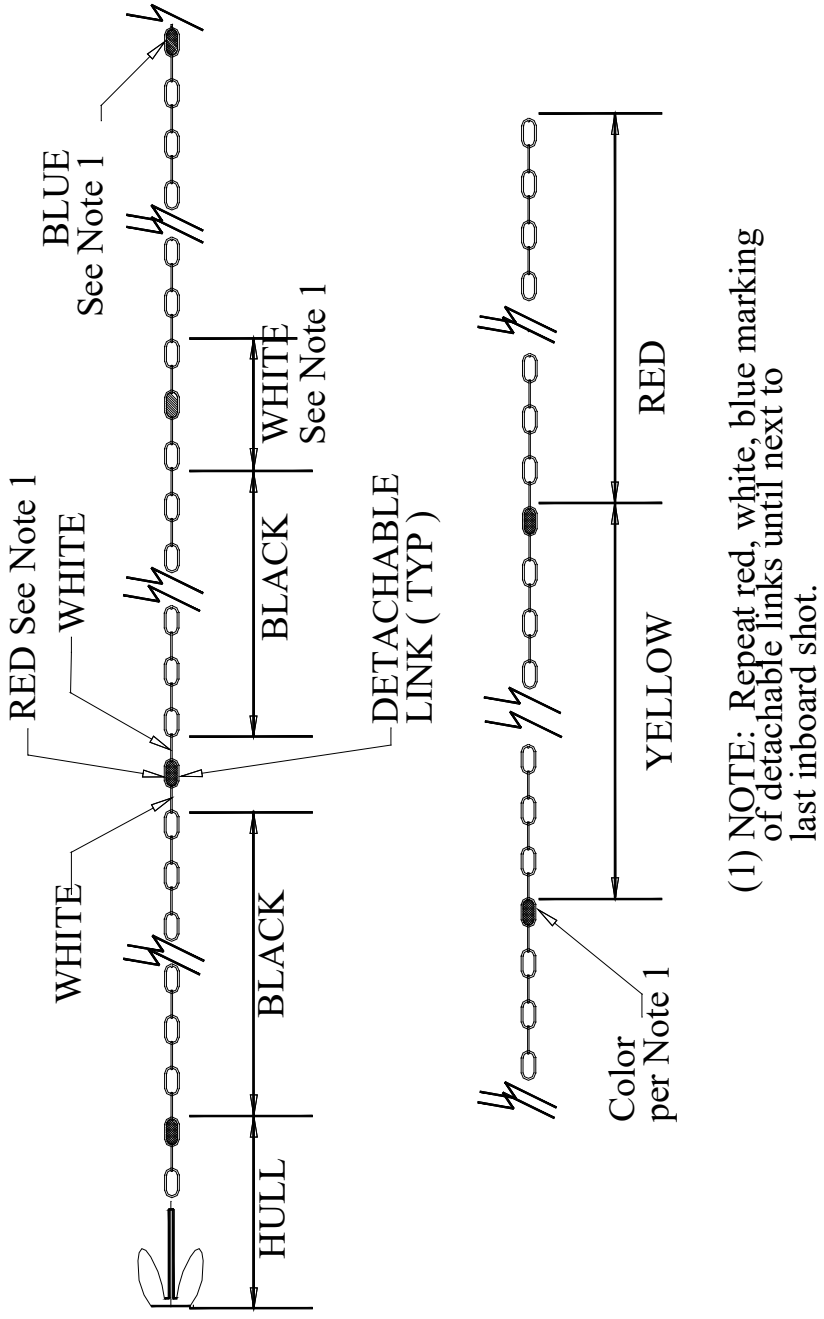
3.3.2 Submit a CFR.

3.4 Touch-up preservation. The Contractor shall prepare and coat all new and disturbed surfaces to match existing adjacent surfaces, in accordance with SFLC Std Spec 6310, paragraph 3.1.13 (Touch-ups and minor coating repairs).

4. NOTES

4.1 Component characteristics. Each anchor weighs 2,250 pounds and each chain is 1-1/8 inch Stud link, with a length of 7 shots. All shots of anchor chain include the corresponding detachable link(s).

PAINTING AND MARKINGS
ON MOORING CHAIN



4.2 Supply information. An ABS approved list of chain manufacturers may be found at the following website: http://ww2.eagle.org/en/rules-and-resources/approved-manufacturers-and-products.html

WORK ITEM 17: Chain Locker, Preserve, Partial

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to prepare and preserve up to 30% of the Chain Locker surfaces, as designated by the Coast Guard Inspector.

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 175 WLM 581-001, Rev F, Anchor Handling System Arrangement

Coast Guard Drawing 175 WLM 601-001, Rev T, General Arrangement Inboard and Outboard Profiles

Coast Guard Drawing 175-WLM-529-002 Rev G Main Drainage System Diagram

Coast Guard Drawing 175-WLM-505-002 Rev F Mechanical Remote Valve Operators Arrangement and Details

COAST GUARD PUBLICATIONS

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2020, General Requirements

Surface Forces Logistics Center Standard Specification 6310 (SFLC Std Spec 6310), 2020, Requirements for Preservation of Ship Structures

Surface Forces Logistics Center Standard Specification 8636 (SFLC Std Spec 8636), 2020, Temporary Hull Accesses

OTHER REFERENCES

None

3. REQUIREMENTS

3.1 General.

3.1.1 CIR. The Contractor shall submit a CIR for the inspections listed in the following paragraph(s):

None.

3.1.2 Tech rep.

Not applicable.

3.1.3 Protective measures. The Contractor shall furnish and install all protective measures in accordance with SFLC Std Spec 0000, paragraph 3.3.3 (Vessel component, space, and equipment protection).

3.1.4 Interferences. The Contractor shall handle all interferences in accordance with SFLC Std Spec 0000, paragraph 3.3.5 (Interferences). Known interferences include, but are not limited to the below-listed:

- Anchors and chains.

3.2 Temporary access openings. Due to limited access to work areas, the Contractor may, with express permission of the KO (via submission of a CFR), cut access holes to facilitate accomplishment of the work specified herein. Perform all work required to open and close the access openings in accordance with SFLC Std Spec 8636.

3.3 Surface preservation. The Contractor shall notify the Coast Guard Inspector 48 hours prior to beginning surface preparation. Remove access cover(s); prepare and coat all chain locker surfaces, including associated structural members, and including the internal surfaces of the access cover(s), using the system specified for "Chain Lockers", in SFLC Std Spec 6310, Appendix B (Cutter and Boat Interior Painting Systems). Select finish/top coat color to match existing adjacent surfaces.

NOTE

High pressure waterjetting is not acceptable for surface preparation on surfaces to be coated with inorganic zinc.

3.4 Inspection. After surface preparation and before paint application, the Contractor shall perform a visual inspection of all prepared surfaces and sounding tubes in accordance with Coast Guard Drawing 175 WLM 581-001 and 175 WLM 601-001. Submit a CFR.

3.5 In-process quality control measures. The Contractor shall abide by all the safety, preservation, and quality control requirements specified in SFLC Std Spec 0000, paragraph 3.2.4.2 (In-process QC measures for "critical-coated surfaces). Surfaces being preserved are considered "critical-coated surfaces".

4. NOTES

This section is not applicable to this work item.

WORK ITEM 18: Decks – Exterior (Buoy or Construction Deck), Preserve 100%

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to preserve the Buoy Deck surfaces, shown on Coast Guard Drawings 175 WLM 573-001 and 175 WLM 601-001 (see 4.1 (Definitions)).

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 175 WLM 130-001, Rev -Mods to Buoy Deck Incidental to Hawser Pipe Cover

Coast Guard Drawing 175 WLM 573-001, Rev T, Buoy Deck Arrangement

Coast Guard Drawing 175 WLM 601-001, Rev L, General Arrangement and Inboard and Outboard Profiles

Coast Guard Drawing 175 WLM 920-001, Rev K, Hull Block 920 Panels

COAST GUARD PUBLICATIONS

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2020, General Requirements

Surface Forces Logistics Center Standard Specification 6310 (SFLC Std Spec 6310), 2020, Requirements for Preservation of Ship Structures

Coast Guard Technical Publication (TP) 3498, Section A, Jul 2015, Buoy Chain Winch

OTHER REFERENCES

MIL-A-22262, Mar 1996; Abrasive Blasting Media Ship Hull Blast Cleaning

The Society for Protective Coatings (SSPC)/NACE-International (NACE) Joint Surface Preparation Standard SSPC-SP 10/NACE No. 2, 2007, Near-White Blast Cleaning

3. REQUIREMENTS

3.1 General.

3.1.1 CIR.

None.

3.1.2 Tech Rep.

Not applicable.

3.1.3 Protective measures. The Contractor shall furnish and install all protective measures in accordance with SFLC Std Spec 0000, paragraph 3.3.3 (Vessel component, space, and equipment protection). Specific areas/equipment/components to be protected include, but are not limited to:

- Buoy crane.
- Adjacent bulkhead surfaces.
- Deck fittings.

3.1.4 Interferences. The Contractor shall handle all interferences in accordance with SFLC Std Spec 0000, paragraph 3.3.5 (Interferences). Known interferences include, but are not limited to the following:

- Crossdeck winches.
- In-haul winch.
- Mechanical chain stoppers.
- Hydraulic chain stoppers.

3.2 Preservation particulars. The Contractor shall accomplish the following tasks:

3.2.1 Pre-surface preparation wash. Accomplish low-pressure (less than 5,000 psi) fresh water wash of all affected surfaces, to remove soluble chlorides and other surface contaminants. Capture, contain, and dispose of wash water for proper disposal in accordance with all Federal, state and local regulations.

3.2.2 Surface preparation. Prepare all designated deck surfaces (see 4.1 (Definition) by abrasive-blasting to SSPC-SP10/NACE No. 2, using grit conforming to MIL-A-22262 (1.5 to 2.5 mil anchor profile).

3.2.3 Substrate inspection. After completion surface preparation and before coating application, the Contractor shall perform a visual inspection of the prepared substrate, in the presence of the Coast Guard Inspector. Submit a CFR.

3.2.4 Surface coating. Coat all prepared surfaces with the coating system specified for "Weather Decks (Weather Deck, Buoy Tender Working Deck)", in SFLC Std Spec 6310, Appendix A (Cutter and Boat Exterior Painting Systems). Select a Gray (36231) inorganic zinc coating.

CAUTION

1. Unless a containment system is used during pier side/dockside preservation, the following shall be adhered to:

a) All surface preparation tools/equipment shall be vacuum-shrouded or close-looped systems, to contain surface preparation dust and debris.

b) Extreme precaution shall be taken while spraying the inorganic zinc coating, to prevent coating application overspray.

2. Organic zinc coating may not be substituted for inorganic zinc for Buoy Deck surfaces.

3.3 In-process quality control measures. The Contractor shall abide by all the safety, preservation, and quality control requirements specified in SFLC Std Spec 0000, paragraph 3.2.4.2 (In-process QC measures for "critical-coated surfaces). Surfaces being preserved are considered "critical-coated surfaces".

3.4 Weight tests. After reinstallation of inhaul winch and crossdeck winches, the Contractor shall accomplish the following (Coast Guard personnel will operate all equipment):

3.4.1 Inhaul winch. Perform all weight test requirements in accordance with CG TP-3498, Chpt 8, Para 8-6.4 (Static Load Test Weight: 24,750 (+1,238 -0) pounds; Rated Load Test Weight: 16,500 (+0 -825) pounds; and Emergency Brake Release Test Weight: 5,000 (+0 -250) pounds). Submit CFR.

3.4.2 Crossdeck winches. Perform weight tests in accordance with paragraph B2.3 (Winches).of SFLC Std Spec 5000 (Static Load Test Weight: 9,000 (450-0); Rated Load Test Weight: 6,000 (0-300) Pounds). Submit CFR.

4. NOTES

4.1 Definitions.

4.1.1 Buoy Deck. The Buoy Deck surfaces are defined as horizontal surfaces, Main Deck, Frame 52 forward; also included are all vertical and horizontal edges on the mating surfaces of the buoy deck cargo hatch, including coaming, channels, channel support plate, and the plates/covers for the auto gripe system; and Hawser pipe cover; as shown on Coast Guard Drawings 175 WLM 130-001, 175 WLM 573-001, 175 WLM 601-001, and 175 WLM 920-001.

4.1.2 Deck coaming. Coaming is defined as vertical raised sections of deck plating around an opening that provide a frame and/or deflect water, such as around a hatch or gooseneck.

WORK ITEM 19: Cathodic Protection, Zinc Anodes, Renew

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to renew the following cathodic protection anodes:

QTY	TYPE/DESCRIPTION	SIZE (INCHES)	LOCATION
39	ZHS/23	6” x 12” x 1-1/4”	See referenced drawing
11	ZHS/42	6” x 12” x 2-1/2”	See referenced drawing
10	ZSS/12	3” x 12” x 1-1/4”	See referenced drawing
16	ZTS/5	3” x 9” x 1-3/8”	See referenced drawing

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 175 WLM 633-001, Rev D, Cathodic Protection

COAST GUARD PUBLICATIONS

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2020, General Requirements

Surface Forces Logistics Center Standard Specification 6310 (SFLC Std Spec 6310), 2020, Requirements for Preservation of Ship Structures

OTHER REFERENCES

Commercial Item Description (CID) A-A-59313, Nov 2003, Thread Compound; Anti-seize, Zinc Dust-Petrolatum

MIL-A-18001, May 2005, Anodes, Sacrificial Zinc Alloy (Commercially Accepted - ASTM B418)

3. REQUIREMENTS

3.1 General.

3.1.1 CIR. The Contractor shall submit a CIR for the inspections listed in the following paragraph(s):

- None.

3.1.2 Tech Rep.

Not applicable.

3.1.3 Protective measures. The Contractor shall furnish and install all protective measures in accordance with SFLC Std Spec 0000, paragraph 3.3.3 (Vessel component, space, and equipment protection).

3.1.4 Interferences. The Contractor shall handle all interferences in accordance with SFLC Std Spec 0000, paragraph 3.3.5 (Interferences).

3.2 Renewal particulars. The Contractor shall accomplish the following tasks. Use Coast Guard Drawing 175 WLM 633-001 as guidance

3.2.1 Removals. The Contractor shall remove and dispose of all designated anodes (see Table under paragraph 1.1 (Intent)). Accomplish the following additional tasks, as applicable:

3.2.1.1 Retain all anode mounting hardware (studs, nuts, and washers).

3.2.1.2 Grind flush all residual roughness with the hull or mounting surfaces.

3.2.1.3 Visually inspect all mounting hardware, including studs, washers, and nuts. Verify the quality of the zinc anode stud weldment to the hull by tapping perpendicular on the nutted stud with a rubber hammer and submit a CFR.

3.2.2 New installations. Furnish and install new anodes conforming to MIL-A-18001, in place of the removed.

- Drill holes in each mounting strap, to facilitate stud attachment.

NOTE

All bolt studs may not have the exact same spacing.

- Renew up to 100% of mounting hardware.
- Ensure two star type lockwashers are installed: one between the nut and anode strap, and one between the anode strap and ship structure, to ensure electrical continuity between the anode and the attachment point.
- Apply antisieze compound, conforming to (CID) A-A-59313, to studs before each anode installation.
- Chip, grind, or wire-brush smooth all straps, welds, and mounting studs, as applicable. In addition, ensure that all installed anode surfaces are free of paint.

3.3 Electrical resistance testing. The Contractor shall measure the electrical resistance between each anode surface and an adjacent metal ship structure, utilizing an OHM meter and a scale, to ensure that it is less than 0.1 ohm. Submit a CFR.

3.4 Touch-up preservation. The Contractor shall prepare and coat the below listed surfaces to match existing adjacent surfaces in accordance with SFLC Std Spec 6310, paragraph 3.1.13 (Touch-ups and minor coating repairs.)

- External portions of studs, nuts, washers and straps, if applicable.
- Hull surfaces in way of removed anodes.

3.4.1 Wire brush all anodes within 24 hours before refloating the cutter. Take care not to disturb the U/W body coating system.

3.4.2 Do not paint new anodes.

4. NOTES

This section is not applicable to this work item.

WORK ITEM 20: Drydock

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to drydock the vessel, undock the vessel, and perform various drydocking-related tasks.

1.2 Government-furnished property.

MTI	ITEM DESCRIPTION	NSN/PN	QTY	ESTIMATED COST ($/UNIT)
Y	*Transducer Cover Plate	N/A	2 ea.	50.00

***Government-loaned property, which shall be returned to the vessel upon completion of the availability.**
****New or refurbished equipment that the Government may provide for installation in place of existing equipment.**
*****Government-furnished property, which is to be supplied by either the vessel or the C4IT Service Center.**

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 175 WLM 801-001, Rev A, Hull Lines

Coast Guard Drawing 175 WLM 801-003, Rev A, Curves of Form

Coast Guard Drawing 175 WLM 801-006, Rev J, Docking Drawing

COAST GUARD PUBLICATIONS

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2020, General Requirements

Surface Forces Logistics Center Standard Specification 8634 (SFLC Std Spec 8634), 2020, Drydocking

OTHER REFERENCES

None.

3. REQUIREMENTS

3.1 General.

3.1.1 CIR. The Contractor shall submit a CIR for the inspections listed in the following paragraph(s):

- None.

3.1.2 Tech Rep.

Not applicable.

3.1.3 Protective measures. The Contractor shall furnish and install all protective measures in accordance with SFLC Std Spec 0000, paragraph 3.3.3 (Vessel component, space, and equipment protection).

3.1.4 Interferences. The Contractor shall handle all interferences in accordance with SFLC Std Spec 0000, paragraph 3.3.5 (Interferences). Known interferences include, but are not limited to the following:

- Anchor assembly
- Load conditions
- U/W body appendages

3.2 Key personnel. The Contractor shall determine key personnel and require their presence during all drydocking phases as required by SFLC Standard Spec 8634. Submit list of key personnel to the COR.

3.3 Docking and undocking. The Contractor shall perform drydock and undock in accordance with SFLC Std Spec 8634, using Coast Guard Drawing 175 WLM 801-001, 175 WLM 801-003, and 175 WLM 801-006 for guidance.

3.4 Cutter conditions. The Contractor shall use the Full Load Condition values listed below all in inches, for purposes of performing Pre-Award calculations as described in Appendix A (Requirements for Calculations) of SFLC Std Spec 8634.

- Displacement (LT SW): 878.473
- VCG (FT ABL): 14.072
- LCG (FT aft FP): 87.469
- LCF (FT aft FP): 91.327
- Trim (FT by bow): 0.274
- MT1" (LT-FT/Inch): 136.75

3.4.1 Blocking. The Contractor shall facilitate docking the vessel in designated block position by arranging keel and side blocks and ensuring minimum block heights as shown on the vessel's docking plan.

TABLE 1 – BLOCKING

	BLOCK HEIGHT ABOVE DOCKING FACILITY DECK							
POS. #	MIN.	RUDDER REMOVAL	PROPELLER REMOVAL	SHAFT REMOVAL	STEEL PLATE	SITUATION AWARENESS	FIN STABILIZERS	ADDITIONAL
2	48"	NA	NA		NA	Sonar. Ensure clearance	NA	None

						around sonar(s) at Frames 21-22 and Frames 51-52.		

NOTE

This vessel has a Z-drive propulsion system.

3.4.2 Cable, sling, or strap tension calculation. If the Contractor plans to use a vertical lift, crane, or travel/mobile lift to haul out the vessel, the Contractor shall submit the cable, sling, or strap tension calculation specified in Table A1 and paragraph A2.7.2.7 of SFLC Std Spec 8634 with the Pre-Award calculations, using the loading condition specified in paragraph 3.4.

3.5 Pre-award calculations. The Contractor shall provide to the KO a set of pre-award calculations, as described in SFLC Std Spec 8634 Appendix A.

3.5.1 Provide vertical side/bilge block offsets for any side blocks placed in a location where vertical offsets are not already defined by the docking plan.

3.5.2 Submit an alternate blocking arrangement, as part of the pre-award calculation submission, to compensate for any changes from the docking plan.

3.5.2.1 If the alternate blocking arrangement interferes with U/W hull plate inspection or 100% preservation of U/W body surfaces required under separate work items in this specification package, the Contractor shall include a plan of how inspection/preservation will be accomplished. Plan shall include any modifications necessary to the prescribed docking plan including removing, shifting, repositioning blocks, or fleeting the vessel at no additional cost to the Government.

NOTE

1. The USCG has established several approved alternate docking plans for each vessel-class, to facilitate complete access to the entire U/W body structure, for periodic comprehensive inspection and/or 100% preservation. This inspection and preservation pattern and periodicity is a configuration management concern that is a vital requirement of the contract. Intention to deviate from these plans (fewer blocks, block spacing, additional blocks, etc) is to be identified on pre-award calculations (Paragraph 3.5.2); an alternate docking plan and mitigation strategy will be provided to maintain preservation and inspection configuration.

2. Pre-award calculations may be deemed unsatisfactory - and may adversely affect contract award if they are submitted with the following detrimental factors:

a. No methods have been proposed that meet the requirements for the specified docking plan.

b. Proposed block shifting or fleeting risk-mitigating plan may result in delays in period of performance.

c. Proposed alternate docking plan violates USCG configuration management policies.

3.6 Planned availability, immediate work and routine inspections. The Contractor shall perform designated routine drydocking work, in accordance with SFLC Std Spec 8634, paragraph 3.5.4 (within twenty four hours after docking).

3.6.1 Upon the COR convening the Coast Guard Underwater Hull Inspection Board (UWHIB), the Contractor shall facilitate and participate in the UWHIB inspections of the underwater hull. The Contractor shall provide a designated hull repair supervisor to accompany the UWHIB and mark on the hull proposed repairs areas, as necessary.

NOTES

1. **The COR will convene the UWHIB as soon as possible after the vessel has been dry-docked and the hull has been cleaned. No other work shall take place until the UWHIB completes their inspections.**
2. **The UWHIB will recommend the extent of underwater body coating system preservation required based on the conditions found during the underwater hull survey.**

WARNING

Do not use chemical additives in the freshwater wash. Take extreme care to avoid damaging or removing existing intact underwater body coating.

3.7 Fuel offloading. The Contractor shall be aware that fuel offloading is not mandatory to drydock the vessel.

3.8 Fleeting. At the Arrival Conference, the Contractor shall submit a second set of Drydocking calculations in accordance with SFLC Std Spec 8634, Appendix A for the alternate blocking position from that indicated in paragraph 3.4.1 Blocking position. Ensure the plans include any risk mitigating efforts necessary associated with other U/W body work items to ensure availability completion is not delayed.

4. NOTES

4.1 Arrival conditions. The COR will advise the Contractor of the actual tank and draft readings when the vessel arrives, and will discuss with the Contractor any liquid loading changes necessary.

WORK ITEM 21: Temporary Services, Provide - Cutter

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to provide temporary services to the Cutter, during the performance of this availability.

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

None

COAST GUARD PUBLICATIONS

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2020, General Requirements

Surface Forces Logistics Center Standard Specification 8635 (SFLC Std Spec 8635), 2020, Temporary Services

OTHER REFERENCES

None

3. REQUIREMENTS

3.1 General.

3.1.1 CIR. The Contractor shall submit a CIR for the inspections listed in the following paragraph(s):

None.

3.1.2 Tech Rep.

Not applicable.

3.1.3 Protective measures. The Contractor shall furnish and install all protective measures in accordance with SFLC Std Spec 0000, paragraph 3.3.3 (Vessel component, space, and equipment protection).

3.1.4 Interferences. The Contractor shall handle all interferences in accordance with SFLC Std Spec 0000, paragraph 3.3.5 (Interferences).

3.2 Temporary service particulars. The Contractor shall provide the below listed temporary services, in accordance with SFLC Std Spec 8635.

TABLE 1 - SERVICE SELECTION

*SUB-PARAGRAPH	TITLE	Y/N
3.3.1	Office space	Y
3.3.2	Telephone	Y
3.3.3	Parking	Y
3.3.4	Duty section berthing: 2 male. Duty section berthing shall be provided for during disruption of berthing areas	Y
3.3.5	Electrical power (including all requirements in associated sub-paragraphs)	Y
3.3.6	Hull grounding straps (not applicable when cutter is waterborne)	Y
3.3.7	Compressed air (including all requirements in associated sub-paragraphs)	Y
3.3.8	Hazardous material/hazardous waste disposal (see Tables 2 and 3 below)	Y
3.3.9	Heavy lift equipment: 50 hours	Y
3.3.10	Water supply	
3.3.10.1	Potable water: 250 gallons per day, at 50 psig.	Y
3.3.10.2	Hot-circulating water	N
3.3.10.3	Cooling water	Y
3.3.10.4	Firemain system (including all requirements in associated sub-paragraphs)	Y
3.3.11	Steam (including all requirements in associated sub-paragraphs)	N
3.3.12	Refuse disposal	Y
3.3.13	Sewage and grey water disposal (including all requirements in associated sub-paragraphs)	Y
3.3.14	Storage – General (including all requirements in associated sub-paragraphs):	
3.3.14	Dry stores.	Y
3.3.14	Paint and flammable stores.	Y
3.3.14	Refrigerated stores.	Y
3.3.15	Small boat storage (including all requirements in associated sub-paragraphs)	Y

***Each sub-paragraph number relates directly to the identical sub-paragraph number in SFLC Std Spec 8635.**

TABLE 2 - HAZARDOUS WASTE DISPOSAL – LIQUIDS (GALLONS)

PAINT THINNERS	ENGINE COOLANT	BILGE WATER
50	0	2000

TABLE 3 - HAZARDOUS WASTE DISPOSAL – SOLIDS

OILY FILTERS	OILY RAGS (LBS)	EMPTY 1-GAL CONTAINER*	EMPTY 5-GAL CONTAINER*	EMPTY 55-GAL CONTAINER*
0	200	0	0	4

***Previously housed hazardous materials.**

3.2 Extended temporary services. If the performance period of the contract is extended by the KO, the contractor shall continue to provide all temporary services as specified herein for the extension period.

4. NOTES

This section is not applicable to this work item.

WORK ITEM 22: Sea Trial Performance, Support, Provide

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to provide support for the performance of sea trials.

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

None

COAST GUARD PUBLICATIONS

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2020, General Requirements

OTHER REFERENCES

None

3. REQUIREMENTS

3.1 General.

3.1.1 CIR. The Contractor shall submit a CIR for the inspections listed in the following paragraph(s):

None.

3.1.2 Tech Rep.

Not applicable.

3.1.3 Protective measures. The Contractor shall furnish and install all protective measures in accordance with SFLC Std Spec 0000, paragraph 3.3.3 (Vessel component, space, and equipment protection).

3.1.4 Interferences. The Contractor shall handle all interferences in accordance with SFLC Std Spec 0000, paragraph 3.3.5 (Interferences).

3.2 Trial applicability. The Contractor shall provide support to the vessel crew to perform sea trials for all work items that require conducting operational tests while the vessel is waterborne or underway, prior to the item certification as being complete. The Contractor shall be responsible for ensuring all test procedures are prepared, approved, and distributed for the sea trials, and shall be responsible for recording test data and submitting CFRs to the COR.

3.3 Sea trial agenda. The Contractor shall prepare an agenda that details the Contractor's plans for ensuring completion of the required sea trials.

3.3.1 Agenda contents. The Contractor shall ensure the agenda consists of chronological list of administrative events, inspection events and test events. Events shall be arranged to permit expeditious conduct with minimum interference between concurrent events.

NOTE

Mutually compatible events may be scheduled simultaneously.

3.3.1.1 The Contractor shall ensure the agenda identifies installation of any test equipment or component modification that could impact the normal operation of equipment or systems during performance of the trials.

3.3.1.2 The Contractor shall ensure the agenda identifies any operating instructions or special test procedures that could impact the normal operations of equipment or systems.

3.3.1.3 The Contractor shall ensure the agenda includes the full name, title, security clearance, home address, home telephone number and name of next of kin of each Contractor-personnel scheduled to ride the ship during performance of the trials.

3.3.2 Agenda submission requirements. The Contractor shall submit four legible copies of the sea trial agenda to the COR two days prior to the scheduled trials. The Contractor shall coordinate both the planning and conduct of the post-overhaul ship trials with the ship's force (see 4.1 (Equipment operation)).

3.4 Environmental compliance. The Contractor shall abide by the below-listed rules, in addition to all other Federal, state, and local rules governing the overboard discharge of garbage and oil in the water.

3.4.1 Discharge of garbage.

TABLE 1 – GARBAGE RULES

GARBAGE TYPE	RULE
Plastics, including synthetic ropes, fishing nets, and plastic bags	Prohibited in all areas
Floating dunnage, lining and packing materials	Prohibited less than 25 miles from nearest land
Food waste, paper, rags, glass, metal, bottles, crockery and similar refuse	Prohibited less than 12 miles from nearest land
Comminuted or ground food waste, paper, rags, glass, etc…	Prohibited less than 3 miles from nearest land

3.4.2 Discharge of oil. The Contractor shall be aware that the Federal Water Pollution Control Act prohibits the discharge of oil or oily waste upon or into any navigable waters of the U.S. The prohibition

includes any discharge that causes a film or discoloration of the surface of the water or causes a sludge or emulsion beneath the surface of the water.

CAUTION

Violators are subject to substantial civil and/or criminal sanctions including fines and imprisonment.

3.5 Dock trials. The Contractor shall conduct dock trials to demonstrate the material readiness of the ship for sea trials. Additionally, all onboard tests conducted after installation and prior to sea trials to prove proper installation and satisfactory operation of equipment shall be conducted in accordance with the requirements specified in the work items designated in paragraph 3.1 (Trial applicability). Ensure that the dock trials are begun no later than 12 hours prior to the scheduled sea trials.

3.5.1 The Contractor shall provide a pier facility (or allow the cutter to move to a Coast Guard pier) in order to support dock trials. Dock trials may not be conducted while the cutter remains floating inside the dry-dock (not touching the blocks).

3.5.2 During dock trials, the Contractor shall ensure the Contractor's personnel observe tests under their cognizance and make such adjustments and repairs, as required.

3.6 Sea trials. As soon as possible after completion of the dock trials, the Contractor shall coordinate performance of the seal trials, based on the operational tests, as required in the applicable work items, for the following purpose:

- Performing tests that could not be performed while the ship was moored.
- Serving as final step in proving the success of the overhaul/repair tasks required in the designated work items, and ensuring that Contractor and COR are both satisfied that the ship is in all respects ready for final acceptance.

3.6.1 The Contractor shall have representatives on board the cutter to observe the trials for the purpose of observing whether or not the repairs are satisfactory.

3.6.2 The Contractor shall ensure the sea trials are be carried out in free route, away from other shipping, as designated by the COR.

3.7 Post-trial examination. After the completion of the sea trial, the Contractor shall perform a careful and thorough examination of parts of the repaired machinery, as designated by the COR. If any part of the ship or its equipment fails to meet contractual requirements during trials, perform additional trials after corrective measures have been taken.

NOTES

1. Examples of dock trials include conducting cold (pre-light off) and hot checks, cycling machinery (rudders, BPU, turning gear, fin stabilizers), and conducting any post-docking shaft alignment verification checks. This time may also be used to on-load fuel, if needed for operations.

2. The conditions of the trials will be determined largely by the character of the work that has been performed in each case, and as designated by the COR. A full power trial should be run at this time unless the COR elects to defer this run until all new machinery parts are run-in or the training status of the crew permits full power operation without undue hazard.

3. This examination may be conducted by the Engineer Officer of the ship, in which case he will report the results of the examination to the COR, fully describing any defects or improper conditions found.

4. Representatives of manufacturers who have furnished ship components may be invited to witness trials subject to approval of the CO or OINC of the ship.

4. NOTES

4.1 Equipment operation. Coast Guard personnel will operate all shipboard machinery and equipment during all tests.

S_63151_ByDckSprstrctr_PWB_0514_FLT
REC_63151_IBCT_BuoyDckAreaSprstrctr_175' WLM (ALL) (0514)
SYY_NNN_63151_ByDckSprstrctr_AUT_MMYY_HULL#

WORK ITEM 23: Fan Space, Inspect and Preserve/Renew

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to inspect and preserve deck, overhead, bulkheads surfaces including Mounting Brackets in the Fan Space (01-52-0-Q). Preservation includes but is not limited to TABLE 1:

TABLE 1: EXTENT OF WORK

ITEM	EXTENT OF WORK
Fan motors, inspect	The contractor shall inspect fan motors in the compartment IAW applicable standards specs reference below.
Fan Space Vent ducting, preserve	The contractor shall inspect, preserve the Fan space Vent ducting. Submit CFR.
Fan Space Compartment insulations, Renew	The contractor shall: -Renew approx. 180 SQFT of insulation on bulkheads/overhead of compartment insulation and approx. Submit CFR
Steel, crop and renew	The contractor shall: -Crop and renew approx. 10-15 SQFT of steel on the deck/bulkhead due to wastage. Submit CFR
Mounting Bracket, Preserve	Mounting brackets for ducting, fans, and piping shall be preserved IAW SFLC STD SPEC 6310.
Vent Screen, renew	The two vent screens on the port and starboard sides of the space that lead to the exterior of the superstructure shall be renewed.

1.2 Government-furnished property.

None.

2. REFERENCES

Coast Guard Drawing 175-WLM 601-001, Rev T, General Arrangement, Inboard and Outboard Profiles

NAVSEA Drawing 804-5773931, Rev A, Acoustic & Thermal Insulation For Compartments Installation Details

COAST GUARD PUBLICATIONS

Surface Forces Logistics Center Standard Specification (SFLC Std Spec) 0000, 2020, General Requirements

Surface Forces Logistics Center Standard Specification (SFLC Std Spec) 0740, 2020, Welding and Allied Processes

Surface Forces Logistics Center Standard Specification (SFLC Std Spec) 6310, 2020, Requirements for Preservation of Ship Structures

OTHER REFERENCES

None.

3. REQUIREMENTS

3.1 General.

3.1.1 CIR. The Contractor shall submit a CIR for the inspections listed in the following paragraph:

- 3.1.6 Ultrasonic Thickness Measurement.

3.1.2 Tech Rep.

Not applicable.

3.1.3 Protective measures - general. The Contractor shall furnish and install all protective coverings to seal off and protect all non-affected vessel's components, equipment, and spaces in the vicinity of the work area against contamination during the performance of work. Upon completion of work, the Contractor shall remove all installed protective measures, inspect for the presence of contamination, and return all contaminated equipment, components, and spaces to original condition of cleanliness.

3.1.4 Interferences. The Contractor shall handle all interferences in accordance with SFLC Std Spec 0000, paragraph 3.3.5 (Interferences). Known interferences include, but are not limited to the below-listed:

- Air Handler Unit.
- Brackets
- Two supply fans

- One exhaust fan
- HVAC ducting
- Pre-heaters
- Light fixtures
- Support framing
- Insulation
- Intake and exhaust screens

3.1.5 Substrate visual inspection. Upon completion of surface preparation and prior to application of primer coat (see 3.2 (Surface preservation)), the Contractor shall perform a visual inspection of the prepared surfaces; submit a CFR.

3.1.6 Ultrasonic Thickness Measurement. Prior to priming deck surfaces, the Contractor shall take a total of 30 UT measurements of the deck, in locations designated by the CG Inspector, in accordance with SFLC Std Spec 0740, Appendix C. Submit a CIR.

3.2 Preservation particulars. The Contractor shall prepare and coat the designated deck surfaces including all adjacent structural members, if applicable, using the system specified for "Decks, Metal Interior and Non-Skid Areas (Steel and Aluminum Decks - Wet Areas, Food Preparation Areas, Exit Areas, and Areas Subject To Condensation)" in SFLC Std Spec 6310, Appendix B (Cutter and Boat Interior Painting Systems). Select finish/top coat color to match existing adjacent surfaces.

3.2.5 New thermal and acoustic insulation installation. Install new faced thermal and acoustic insulation material, over plating surfaces and structural members identified in Table 1, as shown on NAVSEA Drawing 804-5773931. Coat the newly installed insulation using the system specified for "Insulation Surfaces, Fiberglass Sheet/Closed Cell PVC Foam" in SFLC Std Spec 6310, Appendix B (Cutter and Boat Interior Painting Systems).

4. NOTES

4.1 The Fan space conditions are illustrated in PHOTO 1, below:

PHOTO 1: FAN SPACE

WORK ITEM 24: Crane Winch DCV, Replace

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to remove obsolete crane winch directional control valve assembly YMD-6859 and replace with YMD-12866 to complete TCTO.

1.2 Government-furnished property.

MTI	ITEM DESCRIPTION	PN	QTY	ESTIMATED COST ($/UNIT)
N	Hydraulic Control Valve Assembly Parts Kit	PN: AMD-2633 ACN 4810-01-F18-5588	1	15,061.00

****New or refurbished equipment that the Government may provide for installation in place of existing equipment.**

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 175-WLM 556-1, Rev J, Hydraulic System Diagram

COAST GUARD PUBLICATIONS

Coast Guard Technical Publication (TP) 3630, 07-JAN-97, Manufacturers Instruction Book-SWBS Group(s) 573

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2020, General Requirements

Surface Forces Logistics Center Standard Specification 3041 (SFLC Std Spec 3041), 2020, Shipboard Electrical Cable Test

Surface Forces Logistics Center Standard Specification 3042 (SFLC Std Spec 3042), 2020, Shipboard Electrical Cable Removal, Relocation, Splice, Repair, And Installation

Surface Forces Logistics Center Standard Specification 5000 (SFLC Std Spec 5000), 2020, Auxiliary Machine Systems

Surface Forces Logistics Center Standard Specification 6310 (SFLC Std Spec 6310), 2020, Requirements for Preservation of Ship Structures

OTHER REFERENCES

Appleton Marine Control Valve Retrofit Manual 20793

3. REQUIREMENTS

3.1 General.

3.1.1 CIR. The Contractor shall submit a CIR for the inspections listed in the following locations:

- 3.2 Table 1 - Tasks

3.1.2 Tech Rep. The Contractor shall provide the services of an Appleton Marine authorized/ licensed Tech Rep for the Crane model SB230-42 to accomplish the following on site:

- Provide manufacturer's proprietary system/ equipment information, software, and tools.
- Assist with and ensure compliance with manufacturer's procedures and standards during disassembly, inspection, repair, modification, calibration, and reassembly of the equipment/system.

3.1.2.1 Ensure the Tech Rep is an Appleton Marine Certified Representative for the system/equipment stated above and demonstrated on their résumé.

3.1.2.2 Submit the name and résumé of the Tech Rep to the COR at the Arrival Conference.

3.1.3 Protective measures. The Contractor shall furnish and install all protective coverings to seal off and protect all non-affected vessel's components, equipment, and spaces near the work area against contamination during the performance of work. Upon completion of work, the Contractor shall remove all installed protective measures, inspect for the presence of contamination, and return all contaminated equipment, components, and spaces to original condition of cleanliness.

3.1.3.1 Protective measures, hydraulic system(s). Maintain existing hydraulic system cleanliness and take all necessary precautions to prevent the introduction of contaminants into the hydraulic system. Immediately after disconnecting or removing components from the hydraulic system, seal all openings to the rest of the system using caps for externally threaded connection points, bolt-on blanks, or taped-on discs/covers made of durable plastic or sheet-metal that is no less than 1/16-inch thick.

NOTE

Be aware that plastic bags may be used only when arrangement or configuration prevents the use of the other sealing methods specified above.

3.1.4 Interferences. The Contractor shall handle all interferences in accordance with SFLC Std Spec 0000, paragraph 3.3.5 (Interferences). Known interferences include, but are not limited to the following:

- Piping
- Hydraulic Hoses
- Foundation
- Electrical wiring
- Hydraulic Oil

3.2 Tasks to be accomplished. The Contractor shall perform the tasks designated in Table 1 below in accordance with all the sighted references TP-3630, SFLC Std Spec 3041, SFLC Std Spec 3042, SFLC Std Spec 0000, SFLC Std Spec 5000, and CG Dwg 175-WLM 556-1. Install all GFPs.

TABLE 1- TASKS

#	TASK TYPE (SFLC STD SPEC 5000 PARA. REF.)	QTY	COMPONENT OR ASSEMBLY	APPENDIX AND PARA. FROM SFLC STD SPEC 5000	OTHER
1	Operate and Inspect	1	Buoy Crane	3.2.1 (Operate and Inspect)	Submit A CIR.
2	Unbolt and remove	1	Winch DCV Assembly		Clean, inspect and preserve DCV foundation area to install the new DCV. Submit a CFR.
3	Cleaning	All	Hydraulic components	3.1.7 (Cleaning of hydraulic system components at assembly).	GFP, Submit CFR.
4	Install replacement DCV	1	Winch New DCV Assembly, YMD-12866	C2.4 (Valves and manifolds)	GFP, New DCV assembly orientation is not the same as existing DCV assembly. Fill in existing bolt holes. Use the new template Refer to Notes section to mark, drill and tap the new mounting holes. Submit CFR.
5	Install	All	Tubing	C2.3 (Piping and tubing)	The Contractor shall furnish tubing. Using TP-3630, dwg AMD-1111. Submit CFR.
6	Install	All	Hydraulic hoses	C2.2 (Hose assemblies)	Four hoses are GFP, Clean and reuse hoses as necessary. Using TP-3630, dwg CMD-424 Submit CFR
7	Install	All	Electrical wiring		GFP, Install per (SFLC Std Spec 3041) and (SFLC Std Spec 3042). Using TP-3630, dwg CMD-425.
8	Preserve	All	New installation	3.2.4 (Preservation)	
9	Groom and Lubricate	1	Buoy Handling Crane	3.2.6 (Groom and Lubricate)	Coordinate with Crane Spec.
10	Operational and Weight Test		Buoy Handling Crane	3.2.8 (Operational and weight test) B2.4 (Boom and crane)	Coordinate with Crane Spec Submit CFR.
11	Fabricate and Install}	1	Label Plate	B2.9 (Label Plates)	

3.3 Special requirements for various components. If a Change Request has been authorized for additional work on any of the components listed in Table 3 below, the Contractor shall refer to the corresponding Appendix or paragraph of SFLC Std Spec 5000.

TABLE 3 - COMPONENTS

COMPONENT	APPENDIX & PARAGRAPH IN SFLC STD SPEC 5000
Fluids	C2.1
Hose assemblies	C2.2
Piping and tubing	C2.3
Valves and manifolds	C2.4
Gages	C2.5
Gas charged accumulators	C2.6
Heat exchangers and fluid coolers	C2.7
Systems	C2.8
Fastener assemblies	D2.1
Wire rope assemblies	D2.2
Brakes and clutches	D2.3
Open gearing and gear reducers	D2.4

4. NOTES

4.1 (AMD-2633) Control Valve Assembly Parts Kit Inventory.

ITEM DESCRIPTION	PN	QTY
HYDRAULIC CONTROL VALVE	YMD-12866	1
MOUNTING PLATE	MMD-6516	1
SPLIT FLANGE KIT, 1-1/4” CODE 61	20SFO	1
UNION BRANCH SWIVEL TEE	6600-06-06-06-SS	1
STR. THREAD O-RING CONNECTOR	6400-06-06-0-SS	1
45 STRAIGHT THREAD TO JIC	6802-16-16-NOW-SS	2
45 DEG. STR.THD. O-RING ELBOW	6802-12-12-NOW-SS	2
FHCS: M10 X 20 MM LG		4
LOCK WASHER: ½ DIA		3
HHCS: ½-13NC X 1.0 LG		3
HOSE ASSEMBLY (S.S) 1.0 ID X 165.5 LG.	YMD-8529	1
HOSE ASSEMBLY (S.S) 1.0 ID X 170 LG	YMD-8529	1
HOSE ASSEMBLY (S.S) 0.75 ID X 160 LG	YMD-9932	1
HOSE ASSEMBLY (S.S) 0.75 ID X 145 LG	YMD-9932	1
ELECTRIC CABLE: 1 PAIR, #18 AWG		75 FT
ELECTRIC CONNECTOR	YMD-8093	5
RUBBER CAP	YMD-8372	5
O-RING ADAPTER	BRANNEN 6410-12-16-O-SS	2
O-RING PLUG	BRANNEN 6408-06-O-SS	1

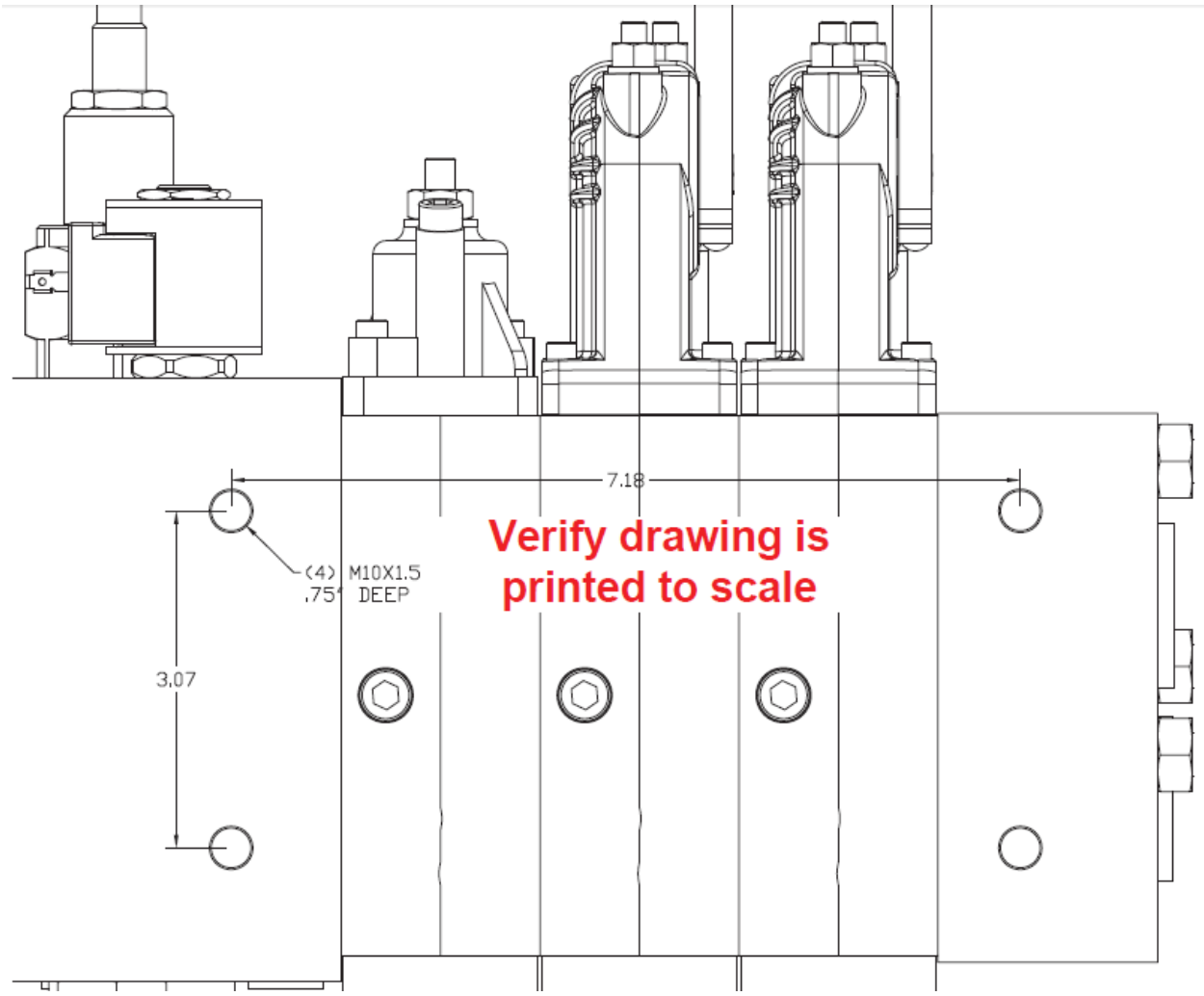


FIGURE 2. YMD-12866 HYDRAULIC CONTROL VALVE TEMPLATE

WORK ITEM 25: Auxiliary Sea Water Piping, Modify

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to modify the Auxiliary Sea Water (ASW) system.

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 175 WLM 256-012, Rev A, ASW System Piping Modifications

NAVSEA Drawing 804-1385781, Rev E, Hangers, Pipe, for Surface Ships

COAST GUARD PUBLICATIONS

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2020, General Requirements

Surface Forces Logistics Center Standard Specification 0740 (SFLC Std Spec 0740), 2020, Welding and Allied Processes

Surface Forces Logistics Center Standard Specification 6310 (SFLC Std Spec 6310), 2020, Requirements for Preservation of Ship Structures

OTHER REFERENCES

None.

3. REQUIREMENTS

3.1 General.

3.1.1 CIR.

None.

3.1.2 Tech Rep.

Not applicable.

3.1.3 Protective measures - general. The Contractor shall furnish and install all protective coverings to seal off and protect all non-affected vessel's components, equipment, and spaces in the vicinity of the work area against contamination during the performance of work. Upon completion of work, the Contractor shall remove all installed protective measures, inspect for the presence of contamination, and return all contaminated equipment, components, and spaces to original condition of cleanliness.

3.1.4 Interferences. The Contractor shall handle all interferences in accordance with SFLC Std Spec 0000, paragraph 3.3.5 (Interferences). Known interferences include, but are not limited to the below-listed:

- Sea Bay, 3-52-0-V.
- Longitudinal and transverse structural members.
- Various pipe insulation segments.
- False bulkheads at approximately frame 70 in mess room (1-61-0-L) and galley (1-61-2-Q).
- Exhaust and air supply ductwork in the uptake space (1-70-1-Q).
- Insulation.

3.2 Preparation.

3.2.1 Piping system depressurization. After properly completing Tag Out Procedures, the Contractor shall depressurize and drain affected piping segments.

3.2.2 Contractor furnished material. The Contractor shall furnish all materials on sheet 1 of Coast Guard Drawing 175 WLM 256-012 with the exception of the items listed in para 5.1.

3.3 Sea Bay cleaning and inspection. The Contractor shall accomplish the following:

3.3.1 Emptying. Remove and dispose of all residual fluids and/or residues within the Sea Bay and associated piping.

3.3.2 Cleaning. Clean the Sea Bay and the piping attached directly to the Sea Bay, as far back as can be reached from the sea bay, to remove all foreign materials, such as marine growth, sediment or sludge. Ensure that all persistent residues remaining after the cleaning are removed, taking care not to damage the coating system. Remove cleaning media and residues continuously, during the washing process. Remove any residual wash media and wipe up residual moisture with clean cloths.

3.3.3 Disposal. Collect, contain, and dispose of all fluids, residues, and cleaning materials in accordance with all Federal, state, and local regulations.

3.3.4 Inspection. Visually inspect the Sea Bay’s interior surfaces and manhole surfaces (for example, fasteners and gasket seating surfaces), for damage and deterioration; submit a written report of the findings to the Contracting Officer's Representative (COR) within 24 hours after completing the inspections. The report shall include, but is not limited to:

- Structural condition.
- Inaccessible areas, if any.
- Condition of piping connected to the Sea Bay.

3.3.5 Sea Bay zinc. Renew the Sea Bay zinc.

3.4 Sea Bay and piping preservation. If a Change Request has been released and authorized, the Contractor shall preserve the interior of the Sea Bay and the interior of the ajoining piping (as far back into the pipe as practicable using the spray wand used to preserve the Sea Bay) using the system specified for "Underwater Water (U/W) Body and Boot-Top (U/W Body and Boot-Top, Steel Hulls (5-10 Years), in Salt Water)" in SFLC Std Spec 6310, Appendix A (Cutter and Boat Exterior Painting Systems). Select finish/top coat color to match existing adjacent surfaces.

3.5 Sea Bay/sea chest vent pipe modifications. The Contractor shall modify the sea bay and the port and stbd sea chest vents as shown in Coast Guard Drawing 175 WLB 256-012 to allow over flow sea water to dump to weather.

3.6 Sea Bay Waster Piece Modifications. The Contractor shall modify existing waster pieces and install in the sea bay as shown in Coast Guard Drawing 175 WLB 256-012, to help prevent air from entering the sea water piping.

3.7 ASW pump suction/discharge piping. The Contractor shall replace 90-10 CuNi suction and discharge piping with 70-30 CuNi piping and fittings as shown in Coast Guard Drawing 175 WLB 256-012. Use Di-Electric flange gasket kits where specified. Install new 90-10 CuNi sea bay warm water system piping as shown in Part Elevation 27-B.

3.8 Heat pump ASW piping modifications. The Contractor shall modify ASW piping leading to Heat Pumps #1 thru #6 as shown in Coast Guard Drawing 175 WLB 256-012 to increase flow to each cooler/condenser. Modify #3 and #4 discharge overboard piping as shown in Elevation 29-C and Plan View 19-D of Coast Guard Drawing 175 WLB 256-012. Alternate these modifications to allow for continuous operation of AC units.

3.8.1 Install (6) ea. contractor furnished gate valves in line with the ASW supply side of each HVAC unit to provide isolation, as located by the Coast Guard inspector. NESU Boston will furnish ordering info.

WARNING!

The Contractor shall provide temporary HVAC, as the ASW mod affects the operation of the (6) heat pump units, as required to maintain the existing climate in all affected spaces.

3.9 Sea Chest Piping Modifications. The Contractor shall replace 90-10 CuNi piping with 70-30 CuNi piping and fittings as shown in Coast Guard Drawing 175 WLB 256-012.

3.10 Z-drive cooling water piping modifications. The Contractor shall modify ASW piping leading to the port and stbd Z-Drive lube oil and hydraulic oil coolers as shown in Coast Guard Drawing 175 WLB 256-012 to allow the flow to each cooler to be in parallel vice series.

3.11 Valve handles. The Contractor shall ensure all handles of newly installed valves shall be coated as per Std Spec 6300.

3.11.1 Nameplate label - general. Contractor to provide labels for all newly installed valves. Any label plates existing shall be reused. Ensure the newly installed nameplate(s) is/are made of the melamine type material with either engraved black letters on white background or white letters on black background; or metal photo type material with black letters photographically sealed onto an aluminum surface.

3.12 Pipe hangers. The Contractor shall fabricate and install new pipe hangers in accordance with NAVSEA Drawing 804-1385781. Pipe hangers and supports shall be lined with synthetic rubber.

3.13 Fasteners. The Contractor shall ensure all fasteners including flange bolts and flange ring studs shall be monel and coat with molykote anti-seize.

3.14 Touch-up preservation, general. The Contractor shall prepare and coat all new and disturbed exterior and interior surfaces, as applicable, to match existing adjacent surfaces in accordance with SFLC Std Spec 6310, paragraph 3.1.13 (Touch-ups and minor coating repairs.)

3.15 Flush out ASW piping. After all work is completed, the Contractor shall flush all new and disturbed ASW piping with clean fresh water for five minutes to remove all scale and foreign debris. Do not drain any fluids, including fresh water, into any space, bilge, or exterior location.

3.16 Hydrostatic test. After all authorized repairs, the Contractor shall hydrostatically test all new and disturbed piping and components of the ASW system in accordance with SFLC Std Spec 0740, Appendix C, "Hydrostatic Test". Ensure zero leakage from or permanent deformation of pressure-containing parts by repairing all leaks, deformations, and discrepancies. Submit a CFR.

CAUTION!

Cooler and condenser tubing shall be isolated from the test pressure if the test pressure exceeds the pressure rating of the cooler or condenser.

3.17 Nondestructive inspection. The Contractor shall perform all testing and inspection requirements as specified in SFLC Std Spec 0740.

4. NOTES

4.1 Project-furnished property.

ITEM DESCRIPTION	NSN/PART NO.	QTY
6" IPS 70/30 CuNi cl700 Pipe	MIL-T-16420	10 ft.
8" IPS 70/30 CuNi cl700 Pipe	MIL-T-16420	10 ft.
Elbow, 90deg, Lg Rad, 6"IPS, 70/30 CuNi, Class 700, Butt Weld	N/A	2 ea.
Elbow, 45deg, Lg Rad, 6"IPS, 70/30 CuNi, Class 700, Butt Weld	N/A	2 ea.
3" IPS, 70/30 CuNi, Class 200 Pipe	MIL-T-16420	4 ft.
2" IPS, 70/30 CuNi, Class 700 Pipe	MIL-T-16420	20 ft.
2" IPS, 70/30 CuNi, Class 200 Pipe	MIL-T-16420	10 ft.

3/4” IPS, 70/30 CuNi, Class 200 Pipe	MIL-T-16420	120 ft.
1/2” IPS, 70/30 CuNi, Class 200 Pipe	MIL-T-16420	30 ft.

WORK ITEM 26: Hull Plating, Side Scan, Ultrasonic Testing

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to perform thickness measurements of underwater (u/w) hull plating by ultrasonic side scan method.

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 175 WLM 801-6, Rev J; Docking Plan

Coast Guard Drawing 175 WLM 801-19, Rev C; Shell Expansion

COAST GUARD PUBLICATIONS

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2020, General Requirements

OTHER REFERENCES

American Society for Nondestructive Testing (ASNT) SNT-TC-1A, 2013, Recommended Practice for Personal Qualification and Certification in Nondestructive Testing

3. REQUIREMENTS

3.1 General.

3.1.1 CIR. The Contractor shall submit a CIR for the inspections listed in the following paragraph(s):

- 3.2 Side scan requirements and procedures.

3.1.2 Tech Rep.

Not applicable.

3.1.3 Protective measures. The Contractor shall furnish and install all protective measures in accordance with SFLC Std Spec 0000, paragraph 3.3.3 (Vessel component, space, and equipment protection).

3.1.4 Interferences. The Contractor shall handle all interferences in accordance with SFLC Std Spec 0000, paragraph 3.3.5 (Interferences). Known interferences include, but are not limited to the following:

- Hull zinc anode system
- Docking blocks.

3.2 Work coordination and preparation. The Contractor shall plan all specified vessel work detailed in this specification package to ensure the side scan survey does not necessitate a work stoppage. The Contractor shall abide by the following guidance, to facilitate the ultrasonic survey:

- Ensure that all u/w body surface preparation and primer coat application tasks are completed within ten days of lifting the vessel.
- Provide a continuous supply of fresh water at .50 gpm within 50 feet of the vessel with standard hose bib fitting.
- Provide 110 VAC electrical power, and scaffolding or other suitable means of access to bring inspection personnel within one foot of all the body surface inspection areas that are five feet above ground level.
- After completion of the hull survey, and authorized hull repairs, resume/complete u/w body preservation process by applying the second coat of the anti-corrosive coating system, and all anti-fouling paint coats.
- Pay close attention to manufacturer's recommended practices in regards to paint system overcoat time limitations and required degree of surface cleanliness prior to resuming u/w body coating application.

3.3 Side scan requirements and procedures. The Contractor shall ensure the following referring to the Coast Guard drawings listed in Section 2 (References) herein as guidance during the performance of the tasks specified below and submit a CIR.

3.3.1 Testing company and personnel. Provide the services of a qualified ultrasonic testing company, with suitable side scan equipment, to conduct a "Scanning Crawler Automated Test" of the vessel's u/w hull plating for the presence of metal corrosion and deterioration. Ensure the following:

- All scanning operations are completed by personnel meeting the personnel qualification and certification, as required by contractor process. This contractor developed personnel qualification and certification process shall meet, at a minimum, ASNT Recommended Practice No. SNT-TC-1A.
- An SNT Level III Analyst is on site, to oversee the project and evaluate the collected data.
- An SNT Level III or II Analyst is on site, to verify with a hand held gauge all areas on the hull identified as thinner than the specified criteria, in order to expedite all repair procedures.
- Qualified personnel are provided to complete all on-site corrosion inspections.

3.3.2 Coast Guard notification. Accomplish all required tasks within 10 calendar days of the start of the availability.

3.3.2.1 Provide a daily update to the COR on all areas inspected and potential issues or schedule changes.

3.3.2.2 Notify the COR at least 3 days prior to completion for an onsite review of readings and repair areas.

3.3.3 Scanning parameters. Use the following parameters during the course of this inspection:

- Automated scanning resolution shall be set to 0.5" x 0.5"
- Plates where scan data indicating wastage greater than or equal to 25% nominal plate thickness shall be highlighted in "RED" and designated "repair areas".
- Plates where scan data indicating wastage greater than or equal to 15% to 24% of nominal plate thickness shall be highlighted in "YELLOW".
- Plates where scan data indicating wastage greater than or equal to 10% to 14% of nominal plate thickness shall be highlighted in DARK GREEN.
- Hand held UT readings shall be taken to verify bad metal areas found with the side scan equipment. All readings shall be provided to the COR and the lowest reading marked on the hull at the bad metal location.
- Areas that are accessible but cannot be reached by the automated scanner shall be scanned with a hand-held meter at a resolution of 2" x 2". Any repair areas found during the hand scan shall be marked on the ships hull and their approximate positions recorded on the plate drawings and report summary.

3.3.3.1 Any scanning parameter or scope of work changes shall be approved by the KO.

3.3.3.2 The echo to echo transducer is not authorized due to inconsistent readings and technical difficulties.

3.3.3.3 There shall be no deviation from the color scheme specified above.

3.3.4 Ensure that the side scan inspection area includes the Port, Starboard, and Transom exterior shell plate below the water line, but shall exclude the following list.

- Areas under and within 6-inches of blocks and side blocks (areas that are accessible 6 inches from blocks and side blocks shall be hand scanned.)
- Areas up to 6-inches around any obstacle on the hull including sea suctions, discharges, rudderposts, knuckle, bow stem, stabilizer tubes, and stern tubes, as applicable.
- Any areas blocked by immovable scaffolding or shipyard activity.

3.4 Side scan reports. The Contractor shall submit to the COR a final report within 3 working days after the side scan inspection is completed. A copy of all repair areas shall be clearly marked, in yellow or white, on the provided shell plate drawing(s), and provide a summary document of same areas. Submit two hard copies of the report with two CD's containing the electronic (raw) data, as part of the CIR submission prior to departing the job site. Ensure the reports include:

- Inspection overview.
- Data sheets for each plate with designated repair areas outlined in blue.
- Mosaic of scanned data overlaid on Coast Guard Drawing 175 WLM 801-19.

3.4.1 Photos. Provide digital photos of all designated repair areas.

3.4.2 Electronic files. Ensure CD's contain a complete copy of the report, interactive data files, and digital pictures. All electronic files shall be compatible with standard USCG workstation operating software. Electronic files format shall be such that the CG has the capability to change the percent of wastage (format conditioning) per plate. Electronic files shall be capable of being opened using MS Word, MS

Excel, or PDF software. Digital pictures shall be recorded in JPEG format.

4. NOTES

This section is not applicable to this work item.

WORK ITEM 27: Hull and Structural Plating, General, 10.2 lbs. Steel, Renew

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to renew 10.2-pound steel shell plating.

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 175 WLM 801-19, Rev C; Shell Expansion

COAST GUARD PUBLICATIONS

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2020, General Requirements

Surface Forces Logistics Center Standard Specification 6310 (SFLC Std Spec 6310), 2020, Requirements for Preservation of Ship Structures

OTHER REFERENCES

None.

3. REQUIREMENTS

3.1 General.

3.1.1 CIR. The Contractor shall submit a CIR for the inspections listed in the following paragraph(s):

None.

3.1.2 Tech Rep.

Not applicable.

3.1.3 Protective measures. The Contractor shall furnish and install all protective measures in accordance with SFLC Std Spec 0000, paragraph 3.3.3 (Vessel component, space, and equipment protection).

3.1.4 Interferences. The Contractor shall handle all interferences in accordance with SFLC Std Spec 0000, paragraph 3.3.5 (Interferences).

NOTE

This item does not address interferences in way of repair work. Cost of interference removal and reinstallation shall be negotiated via the Change Request process.

3.2 Renewal. The Contractor shall renew up to 4 square feet of the steel plating specified in Section 1.1 (Intent) herein, as designated by the Coast Guard Inspector. Use Coast Guard Drawing 175 WLM 801-19 as guidance.

3.3 Touch-up preservation. The Contractor shall prepare and coat all new and disturbed surfaces to match existing adjacent surfaces in accordance with SFLC Std Spec 6310, paragraph 3.1.13 (Touch-ups and minor coating repairs.)

4. NOTES

This section is not applicable to this work item.

WORK ITEM 28: Hull and Structural Plating, General, 12.75 lbs. Steel Plate, Renew

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to renew 12.75-pound steel plating.

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 175 WLM 801-19, Rev C; Shell Expansion

COAST GUARD PUBLICATIONS

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2020, General Requirements

Surface Forces Logistics Center Standard Specification 6310 (SFLC Std Spec 6310), 2020, Requirements for Preservation of Ship Structures

OTHER REFERENCES

None

3. REQUIREMENTS

3.1 General.

3.1.1 CIR. The Contractor shall submit a CIR for the inspections listed in the following paragraph(s):

None.

3.1.2 Tech Rep.

Not applicable.

3.1.3 Protective measures. The Contractor shall furnish and install all protective measures in accordance with SFLC Std Spec 0000, paragraph 3.3.3 (Vessel component, space, and equipment protection).

3.1.4 Interferences. The Contractor shall handle all interferences in accordance with SFLC Std Spec 0000, paragraph 3.3.5 (Interferences).

NOTE

This item does not address interferences in way of repair work. Cost of interference removal and reinstallation shall be negotiated via the Change Request process.

3.2 Renewal. The Contractor shall renew up to 4 square feet of the steel plating specified in Section 1.1 (Intent) herein, as designated by the Coast Guard Inspector. Use Coast Guard Drawing 175 WLM 801-19 as guidance.

3.3 Touch-up preservation, general. The Contractor shall prepare and coat all new and disturbed surfaces to match existing adjacent surfaces in accordance with SFLC Std Spec 6310, paragraph 3.1.13 (Touch-ups and minor coating repairs.)

4. NOTES

This section is not applicable to this work item.

WORK ITEM 29: Hull and Structural Plating, General, 15.3 lbs. Steel Plate, Renew

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to renew 15.3-pound steel shell plating.

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 175 WLM 801-19, Rev C; Shell Expansion

COAST GUARD PUBLICATIONS

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2020, General Requirements

Surface Forces Logistics Center Standard Specification 6310 (SFLC Std Spec 6310), 2020, Requirements for Preservation of Ship Structures

OTHER REFERENCES

None.

3. REQUIREMENTS

3.1 General.

3.1.1 CIR. The Contractor shall submit a CIR for the inspections listed in the following paragraph(s):

None.

3.1.2 Tech Rep.

Not applicable.

3.1.3 Protective measures. The Contractor shall furnish and install all protective measures in accordance with SFLC Std Spec 0000, paragraph 3.3.3 (Vessel component, space, and equipment protection).

3.1.4 Interferences. The Contractor shall handle all interferences in accordance with SFLC Std Spec 0000, paragraph 3.3.5 (Interferences).

NOTE

This item does not address interferences in way of repair work. Cost of interference removal and reinstallation shall be negotiated via the Change Request process.

3.2 Renewal. The Contractor shall renew up to 4 square feet of the steel plating specified in Section 1.1 (Intent) herein, as designated by the Coast Guard Inspector. Use Coast Guard Drawing 175 WLM 801-19 as guidance.

3.3 Touch-up preservation, general. The Contractor shall prepare and coat all new and disturbed surfaces to match existing adjacent surfaces in accordance with SFLC Std Spec 6310, paragraph 3.1.13 (Touch-ups and minor coating repairs.)

4. NOTES

This section is not applicable to this work item.

WORK ITEM 30: Hull And Structural Plating, General, 20.4 lbs. Steel Plate, Renew

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to renew 20.4-pound steel shell plating.

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 175 WLM 801-19, Rev C; Shell Expansion

COAST GUARD PUBLICATIONS

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2020, General Requirements

Surface Forces Logistics Center Standard Specification 6310 (SFLC Std Spec 6310), 2020, Requirements for Preservation of Ship Structures

OTHER REFERENCES

None.

3. REQUIREMENTS

3.1 General.

3.1.1 CIR. The Contractor shall submit a CIR for the inspections listed in the following paragraph(s):

None.

3.1.2 Tech Rep.

Not applicable.

3.1.3 Protective measures. The Contractor shall furnish and install all protective measures in accordance with SFLC Std Spec 0000, paragraph 3.3.3 (Vessel component, space, and equipment protection).

3.1.4 Interferences. The Contractor shall handle all interferences in accordance with SFLC Std Spec 0000, paragraph 3.3.5 (Interferences).

NOTE

This item does not address interferences in way of repair work. Cost of interference removal and reinstallation shall be negotiated via the Change Request process.

3.2 Renewal. The Contractor shall renew up to 4 square feet of the steel plating specified in Section 1.1 (Intent) herein, as designated by the Coast Guard Inspector. Use Coast Guard Drawing 175 WLM 801-19 as guidance.

3.3 Touch-up preservation. The Contractor shall prepare and coat all new and disturbed surfaces to match existing adjacent surfaces in accordance with SFLC Std Spec 6310, paragraph 3.1.13 (Touch-ups and minor coating repairs.).

4. NOTES

This section is not applicable to this work item.

WORK ITEM 31: Hull and Structural Plating, General, 7.5 lbs., 3/16 in. Steel Plate, Renew

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to renew 7.5-pound (3/16th) hull plating.

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 175 WLM 801-19, Rev C; Shell Expansion

COAST GUARD PUBLICATIONS

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2020, General Requirements

Surface Forces Logistics Center Standard Specification 6310 (SFLC Std Spec 6310), 2020, Requirements for Preservation of Ship Structures

OTHER REFERENCES

None.

3. REQUIREMENTS

3.1 General.

3.1.1 CIR. The Contractor shall submit a CIR for the inspections listed in the following paragraph(s):

None.

3.1.2 Tech Rep.

Not applicable.

3.1.3 Protective measures. The Contractor shall furnish and install all protective measures in accordance with SFLC Std Spec 0000, paragraph 3.3.3 (Vessel component, space, and equipment protection).

3.1.4 Interferences. The Contractor shall handle all interferences in accordance with SFLC Std Spec 0000, paragraph 3.3.5 (Interferences).

NOTE

This item does not address interferences in way of repair work. Cost of interference removal and reinstallation shall be negotiated via the Change Request process.

3.2 Renewal. The Contractor shall renew the specified size plating, as designated by the Coast Guard Inspector, up to 4 square feet, using Coast Guard Drawing 175 WLM 801-19 as guidance.

3.3 Touch-up preservation, general. The Contractor shall prepare and coat all new and disturbed surfaces to match existing adjacent surfaces in accordance with SFLC Std Spec 6310, paragraph 3.1.13 (Touch-ups and minor coating repairs.)

4. NOTES

This section is not applicable to this work item.

WORK ITEM 32: Hull and Structural Plating, General, 7.65 lbs. Steel Plate, Renew

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to renew 7.65-pound steel plating.

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 175 WLM 801-19, Rev C; Shell Expansion

COAST GUARD PUBLICATIONS

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2020, General Requirements

Surface Forces Logistics Center Standard Specification 6310 (SFLC Std Spec 6310), 2020, Requirements for Preservation of Ship Structures

OTHER REFERENCES

None.

3. REQUIREMENTS

3.1 General.

3.1.1 CIR. The Contractor shall submit a CIR for the inspections listed in the following paragraph(s):

None.

3.1.2 Tech Rep.

Not applicable.

3.1.3 Protective measures. The Contractor shall furnish and install all protective measures in accordance with SFLC Std Spec 0000, paragraph 3.3.3 (Vessel component, space, and equipment protection).

3.1.4 Interferences. The Contractor shall handle all interferences in accordance with SFLC Std Spec 0000, paragraph 3.3.5 (Interferences).

NOTE

This item does not address interferences in way of repair work. Cost of interference removal and reinstallation shall be negotiated via the Change Request process.

3.2 Renewal. The Contractor shall renew up to 4 square feet of the steel plating specified in Section 1.1 (Intent) herein, as designated by the Coast Guard Inspector. Use Coast Guard Drawing 175 WLM 801-19 as guidance.

3.3 Touch-up preservation, general. The Contractor shall prepare and coat all new and disturbed surfaces to match existing adjacent surfaces in accordance with SFLC Std Spec 6310, paragraph 3.1.13 (Touch-ups and minor coating repairs.)

4. NOTES

This section is not applicable to this work item.

WORK ITEM 33: Hull And Structural Plating, General, Cracked Steel Welds, Repairs

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to repair cracked steel welds.

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 175 WLM 801-19, Rev C; Shell Expansion

COAST GUARD PUBLICATIONS

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2020, General Requirements

Surface Forces Logistics Center Standard Specification 6310 (SFLC Std Spec 6310), 2020, Requirements for Preservation of Ship Structures

OTHER REFERENCES

None.

3. REQUIREMENTS

3.1 General.

3.1.1 CIR. The Contractor shall submit a CIR for the inspections listed in the following paragraph(s):

None.

3.1.2 Tech Rep.

Not applicable.

3.1.3 Protective measures. The Contractor shall furnish and install all protective measures in accordance with SFLC Std Spec 0000, paragraph 3.3.3 (Vessel component, space, and equipment protection).

NOTE

This item does not address interferences in way of repair work. Cost of interference removal and reinstallation shall be negotiated via the Change Request process.

3.2 Repair particulars. The Contractor shall perform crack repairs to steel plate in one linear foot increments. Be aware that the linear footage of crack repair is the length of the crack.

3.2.1 Ensure that the crack is repaired by welding on both sides of the plate.

3.3 Touch-up preservation. The Contractor shall prepare and coat all new and disturbed surfaces to match existing adjacent surfaces in accordance with SFLC Std Spec 6310, paragraph 3.1.13 (Touch-ups and minor coating repairs.) 175.0

4. NOTES

This section is not applicable to this work item.

WORK ITEM 34: Hull and Structural Plating, General, Degraded Weld, Steel, Repair

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to renew degraded steel welds.

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 175 WLM 801-19, Rev C; Shell Expansion

COAST GUARD PUBLICATIONS

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2020, General Requirements

Surface Forces Logistics Center Standard Specification 6310 (SFLC Std Spec 6310), 2020, Requirements for Preservation of Ship Structures

OTHER REFERENCES

None.

3. REQUIREMENTS

3.1 General.

3.1.1 CIR. The Contractor shall submit a CIR for the inspections listed in the following paragraph(s):

None.

3.1.2 Tech Rep.

Not applicable.

3.1.3 Protective measures. The Contractor shall furnish and install all protective measures in accordance with SFLC Std Spec 0000, paragraph 3.3.3 (Vessel component, space, and equipment protection).

3.1.4 Interferences. The Contractor shall handle all interferences in accordance with SFLC Std Spec 0000, paragraph 3.3.5 (Interferences).

NOTE

This item does not address interferences in way of repair work. Cost of interference removal and reinstallation shall be negotiated via the Change Request process.

3.2 Renewal. The Contractor shall renew degraded steel welds designated by the Coast Guard Inspector, up to 10 linear feet in increments of one linear foot, using Coast Guard Drawing 175 WLM 801-19 as guidance.

3.3 Touch-up preservation, general. The Contractor shall prepare and coat all new and disturbed exterior and interior surfaces, as applicable, to match existing adjacent surfaces in accordance with SFLC Std Spec 6310, paragraph 3.1.13 (Touch-ups and minor coating repairs).

4. NOTES

This section is not applicable to this work item.

WORK ITEM 35: Voids, Non-Accessible, Internal Surfaces, Preserve

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to preserve internal surfaces of non-accessible voids. Refer to Table 1.

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 175 WLM 184-001, Rev A, V850 Transducer Adapter Ring

Coast Guard Drawing 175 WLM 801-006, Rev J, Docking Plan

Coast Guard Drawing 175 WLM 801-019, Rev C, Shell Expansion

COAST GUARD PUBLICATIONS

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2020, General Requirements

OTHER REFERENCES

MIL PRF-16173, Sep 2006, Corrosion Preventive Compound, Solvent Cutback, Cold-Application

3. REQUIREMENTS

3.1 General.

3.1.1 CIR. The Contractor shall submit a CIR for the inspections listed in the following paragraph(s):

None.

3.1.2 Tech Rep.

Not applicable.

3.1.3 Protective measures. The Contractor shall furnish and install all protective measures in accordance with SFLC Std Spec 0000, paragraph 3.3.3 (Vessel component, space, and equipment protection).

3.1.4 Interferences. The Contractor shall handle all interferences in accordance with SFLC Std Spec 0000, paragraph 3.3.5 (Interferences).

3.2 Work coordination. The Contractor shall coordinate performance of this work item with the "Voids (Non-Accessible), Leak Test" work item, which is a separate work item in this specification package. The Contractor shall refer to the Coast Guard drawing(s) listed in Section 2 (References) for guidance.

3.3 Preservation of void internal surfaces. The Contractor shall accomplish the following tasks for each void designated in Table 1, using the Coast Guard Drawings listed in Section 2 (References) herein as guidance:

- Fill all void interior surfaces with a rust preventive compound conforming to MIL-PRF-16173, Class II, Grade 3, to coat all surfaces.
- Drain, collect, and dispose of remaining compound in accordance with all applicable Federal, state, and local regulations.
- Ensure that the coated surfaces are left exposed to the atmosphere for 24 hours to allow for adequate drying.

TABLE 1 - DRAIN PLUGS FOR NON-ACCESSIBLE VOIDS

VOID	FRAME	SIDE
Forward Scan Sonar Fairing	21-22	S
V850 Transducer Fairing	51-52	S

4. NOTES

This section is not applicable to this work item.

WORK ITEM 36: Voids, Accessible, Clean and Inspect

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to clean and inspect the following void(s):

TABLE 1 - VOIDS

TYPE OF STRUCTURE	LOCATION	CAPACITY - 95% (GALLONS)	LOW SUCTION (GALLONS)
Void	3-18-0-T	2,000	100
Void	3-52-0-V	5,000	100

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 175 WLM 601-003, Rev N, Booklet of General Drawings (552-564)

Coast Guard Drawing 175 WLM 601-002, Rev H, Booklet of General Drawings (IDA LEWIS)

COAST GUARD PUBLICATIONS

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2020, General Requirements

OTHER REFERENCES

ASTM International (ASTM) D1330, 2015, Standard Specification for Rubber Sheet Gaskets

3. REQUIREMENTS

3.1 General.

3.1.1 CIR. The Contractor shall submit a CIR for the inspections listed in the following paragraph(s):

- 3.3.3 Inspection

Not applicable.

3.1.2 Tech Rep.

Not applicable.

3.1.3 Protective measures. The Contractor shall furnish and install all protective measures in accordance with SFLC Std Spec 0000, paragraph 3.3.3 (Vessel component, space, and equipment protection).

3.1.4 Interferences. The Contractor shall handle all interferences in accordance with SFLC Std Spec 0000, paragraph 3.3.5 (Interferences).

NOTE

Coast Guard personnel will operate all shipboard machinery and equipment.

3.2 Operational test, initial. Prior to commencement of work, the Contractor shall witness Coast Guard personnel perform an initial operational test of the TLI's for tanks listed in paragraph 1.1 (Intent), to demonstrate existing operational condition. Submit a CFR.

3.3 Cleaning and inspection requirements. The Contractor shall refer to Coast Guard Drawing 175 WLM 601-003 for guidance to accomplish the following tasks:

3.3.1 Content removal. The Contractor shall remove and dispose of all fluids and/or residues in accordance with all applicable Federal, state, and local regulations.

3.3.2 Cleaning. The Contractor shall remove access cover(s). Clean the designated structure's interior surfaces free of all foreign materials, such as sediment, sludge and fungal growth. Remove all persistent residues, taking care not to damage the tank coating system. Remove cleaning media and residues continuously from the compartment during the washing process. Remove any residual wash media and wipe up residual moisture with clean lint-free cloths. Collect, contain, and dispose of all wash media, residues, and cleaning materials in accordance with all Federal, state, and local regulations.

3.3.3 Inspection. The Contractor shall visually inspect all interior surfaces, including, but not limited to bulkheads, floor and overhead plating, structural members, manhole cover surfaces, fasteners and gasket seating surfaces. Submit a CFR including the following, as applicable:

- Structural condition.
- Inaccessible areas, if any.
- Condition of coating, including measurements taken, percentage, location, and type of coating failure.
- Tank level indicator (TLI) and/or float switch condition.
- Sounding tube and striker plate condition.
- Suction and discharge piping condition.
- Fastener material and condition.

3.4 Closing. The Contractor shall ensure that the compartment(s) remain open for approximately 24 hours after completion of the tasks specified above. Notify the COR at least 24 hours prior to closing the compartment(s). After satisfactory inspection by the Coast Guard Inspector, and completion of all authorized repairs, close the manhole cover(s) with new gasket material conforming to ASTM D1330 and

cotton grommets on the studs (as applicable). The Contractor shall renew up to 10% of missing or damaged nuts and washers.

NOTE

Coast Guard personnel will operate all shipboard machinery and equipment.

3.5 Operational test, post repairs. After completion of work and in the presence of the Coast Guard inspector, the Contractor shall thoroughly test and demonstrate the TLI's for tanks listed in paragraph 1.1 (Intent), to be in satisfactory operating condition. Submit a CFR.

4. NOTES

This section is not applicable to this work item.

WORK ITEM 37: Hydraulically Operated Cargo Hatch, Inspect and Service

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to perform inspections and service for the hydraulically-operated cargo hatch.

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 175 WLM 130-001, Rev -, Mods to Buoy Deck Incidental to Hawser Pipe Cover

Coast Guard Drawing 175 WLM 549-001, Rev E, Onboard Lubrication Requirements

Coast Guard Drawing 175 WLM 601-001, Rev T; General Arrangement Inboard and Outboard Profiles

Coast Guard Drawing 175 WLM 920-001, Rev K, Hull Block 920 Panels

COAST GUARD PUBLICATIONS

Coast Guard Technical Publication (TP) 3610, Section 167-A, Nov 2005, Hydraulic Cargo Hatch - Model No. D-WK-787

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2020, General Requirements

Surface Forces Logistics Center Standard Specification 0740 (SFLC Std Spec 0740), 2020, Welding and Allied Processes

Surface Forces Logistics Center Standard Specification 5000 (SFLC Std Spec 5000), 2020, Auxiliary Machine Systems

Surface Forces Logistics Center Standard Specification 6310 (SFLC Std Spec 6310), 2020, Requirements for Preservation of Ship Structures

OTHER REFERENCES

None

3. REQUIREMENTS

3.1 General.

3.1.1 CIR. The Contractor shall submit a CIR for the inspections listed in the following paragraph(s):

- 3.2 (Tasks to be accomplished) – Task #1.

3.1.2 Tech Rep.

Not applicable.

3.1.3 Protective measures. The Contractor shall furnish and install all protective measures in accordance with SFLC Std Spec 0000, paragraph 3.3.3 (Vessel component, space, and equipment protection).

3.1.4 Interferences. The Contractor shall handle all interferences in accordance with SFLC Std Spec 0000, paragraph 3.3.5 (Interferences). Known interferences include, but are not limited to the below-listed:

- Electrical and hydraulic switches.
- Dogs.
- Toggles.
- Hydraulic cylinders.
- Hydraulic lines.
- Electrical cables.
- Hoses.
- Overhead insulation.

3.2 Tasks to be accomplished. The Contractor shall perform the following tasks:

CAUTION

Do not paint gaskets or any moving parts, including dogs, nuts, wedges, spindles, yokes, packing, connecting rods and hinge pins.

CAUTION

For Task #2, failure to remove hinge interferences during hatch removal/reinstallation may result in damage to coaming and hinges. Protect hinges during hatch removal and reinstallation.

				ADDITION REQUIREMENTS	
#	**TASK TYPE**	**QTY**	**COMPONENT OR ASSEMBLY**	**APPENDIX AND PARA. FROM 5000_STD**	**OTHER**
1	Operate and Inspect	1	Cargo hatch assembly	3.2.1 (Operate and inspect)	1. Check hatch for proper operation of all indicators, switches, dogging un-dogging and overall operation. 2. Check entire coaming and drains for

				ADDITION REQUIREMENTS	
#	**TASK TYPE**	**QTY**	**COMPONENT OR ASSEMBLY**	**APPENDIX AND PARA. FROM 5000_STD**	**OTHER**
					signs or debris or clogging of drains. 3. Conduct a visual inspection of the hatch. Check all linkages. 4. Inspect both inner and outer knife-edges for proper height and evenness of wear. 5. Inspect entire hatch structure, for signs of paint wear and corrosion. 6. Inspect gasket channels for corrosion. 7. Take 10 UT measurements of gasket channel surfaces, in locations designated by the Coast Guard Inspector, in accordance with SFLC Std Spec 0740, Appendix C. 8. Inspect hydraulic hose condition. 9. Check condition of dogs and wedges. Submit A CIR.
2	Remove and reinstall	1	Cargo hatch assembly	N/A	Remove hatch, to facilitate inspections and service tasks, and reinstall hatch, upon completion of work. Coaming in way of hatch hinges may be an interference to hatch removal. Inspect hinge clearance prior to commencing unshipping operations and determine if modifications are required. Modify/remove as necessary and return to original configuration at hatch reinstallation. Failure to remove interferences may result in damage to coaming and hinges. Protect hinges during hatch removal and reinstallation.
3	NDE	1	Cargo hatch assembly	3.2.5 (NDE)	Components designated for NDE: All welds. Submit a CFR.
4	Service and Inspect	1	Hydraulic hatch lift cylinder	3.2.2 (Service and inspect)	Submit CFR
5	Renew	1	Cargo hatch gasket	N/A	See CG TP-3610. Conduct gasket compression test, upon installation. Submit CFR.
6	Preserve	1	Cargo hatch assembly	3.2.4 (Preservation)	Use Coating System: "Weather Decks (Weather Deck, Buoy Tender Working Deck)" in accordance with in SFLC Std Spec 6310, Appendix A (Cutter and Boat Exterior Painting Systems). Submit CFR.
7	Groom And Lubricate	1	Cargo hatch assembly	3.2.6 (Groom and lubricate)	See Coast Guard Drawing 175 WLM 549-001.

				ADDITION REQUIREMENTS	
#	**TASK TYPE**	**QTY**	**COMPONENT OR ASSEMBLY**	**APPENDIX AND PARA. FROM 5000_STD**	**OTHER**
8	Boundary Testing	1	Cargo hatch assembly	N/A	Accomplish a chalk test and water hose test, in accordance with SFLC Std Spec 0740, Appendix C. Adjust dogs in accordance with CG TP-3610. Submit a CFR.
9	Operational Testing – Post Repairs	1	Cargo hatch assembly	N/A	1. Raise and lower, dog and un-dog, the hatch three complete cycles. 2. Verify hatch operates in accordance with parameters specified in TP-3610 with no unusual noise or binding. Submit CFR.
10	Touch-Up Preservation	All	New and disturbed surfaces	N/A	Prepare and coat all new and disturbed exterior and interior surfaces to match existing adjacent surfaces, in accordance with SFLC Std Spec 6310, Appendix A (Cutter and Boat Exterior Painting Systems) and Appendix B (Cutter and Boat Interior Painting Systems), respectively, and as applicable.

4. NOTES

This section is not applicable to this work item.

WORK ITEM 38: Masts (Main, Fwd, and Task Light), Preserve

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to partially preserve the Main aluminum Masts and 100% preserve the FWD Mast, the FWD Mast Support Pipe and Task Light Masts.

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 175 WLM 601-003, Rev N; Booklet of General Drawings 552-564

Coast Guard Drawing 175 WLM 170-1, Rev G; Mast Arrangement & Details

COAST GUARD PUBLICATIONS

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2020, General Requirements

Surface Forces Logistics Center Standard Specification 3042 (SFLC Std Spec 3042), 2020, Shipboard Electrical Cable Removal, Relocation, Splice, Repair, and Installation

Surface Forces Logistics Center Standard Specification 6310 (SFLC Std Spec 6310), 2020, Requirements for Preservation of Ship Structures

OTHER REFERENCES

None

3. REQUIREMENTS

3.1 General.

3.1.1 CIR. The Contractor shall submit a CIR for the inspections listed in the following paragraph(s):

- None

3.1.2 Tech Rep.

Not applicable.

3.1.3 Protective measures. The Contractor shall furnish and install all protective measures in accordance with SFLC Std Spec 0000, paragraph 3.3.3 (Vessel component, space, and equipment protection).

3.1.3.1 The Contractor shall, once the equipment has been removed from the Mast, ensure it is stored in a protective environment. Areas/equipment/components to be protected include, but are not limited to the following (as applicable):

- Cable runs
- Label plates
- Connectors
- Rubber gaskets
- Yardarm blinkers
- Wind speed air vanes
- Navigation lights
- Ship's bell
- Adjacent bulkhead and deck surfaces
- Contact points
- Insulators
- Rubber shock mounts
- Safety climb.

3.1.3.2 The Contractor shall coil up electrical cabling down to associated deck/bulkhead penetrations. Mark, seal, and cover all coiled cabling. Ensure the cable is protected from abrasion and damage. Do not bend any electrical cable to a radius less than 20 times their diameter. Do not hoist a radar pedestal using its array.

3.1.4 Interferences. The Contractor shall handle all interferences in accordance with SFLC Std Spec 0000, paragraph 3.3.5 (Interferences). Known interferences include, but are not limited to the following.

- Radar gear, including associated pedestals
- Navigation lights
- Electrical fittings
- Rigging
- Antennas
- Wind direction indicator

3.1.4.1 The Contractor shall notify the COR 72 hours in advance of beginning interference removals.

3.1.5 Personnel qualification. The Contractor shall ensure that all Contractor personnel performing removal and installation of electronics equipment shall have the training of an electronics journeyman and be knowledgeable in the areas of electrical and physical standards for equipment such as radar, waveguides and antennas.

NOTE

Coast Guard personnel will operate all shipboard machinery and equipment.

3.2 Operational test - initial. Prior to commencement of work, the Contractor shall witness Coast Guard Personnel perform an initial operational test of all mast electrical and electronic equipment to demonstrate existing operational condition. Submit a CFR.

3.3 Mast removal. The Contractor shall be aware that removal of the Main Mast is not practical for this class of cutters. The Contractor may elect to remove (unship) the Fwd Mast, Fwd Mast Support Pipe and Task Light Masts. If any the masts has been removed, after all authorized work on the mast is complete, the Contractor shall reinstall the mast, using the below sketch as guidance. Prepare and touch-up coat all disturbed surfaces (upon mast reinstallation) to match existing adjacent surfaces, in accordance with COMDTINST M10360.3, Appendix A (Cutter and Boat).

3.3.1 Surface preparation optional methods. The Contractor has the option of using either high/ultrahigh pressure water jetting or abrasive blasting to achieve the required surface preparation, prior to application of the coating system specified in 3.3 (Preservation requirements). The Contractor may add abrasives to the water jet stream, for one or both of the following reasons:

- Achieving greater productivity.
- Achieving the required surface profile.

NOTE

Water jetting without abrasive addition does not provide any additional anchor profile to the surface, beyond what was present after the previous surface preparation.

3.3.2 Substrate inspection. After surface preparation and before the coating application, the Contractor shall perform a visual inspection of all cleaned mast surfaces, including electrical hangers, hardware, and safety rail hardware. Submit a CFR

3.4 Preservation requirements. The Contractor shall prepare and coat the mast surfaces using the system specified for "Freeboard/Superstructure/Mast (Freeboard/Superstructure)" in Appendix A (Cutter and Boat Exterior Painting Systems) of SFLC Std Spec 6310. Select the following:

- "Option I" system, for aluminum surfaces
- "Option I" system, for steel surfaces
- Spar (10371), as the top/finish color.

3.5 Weather-proofing requirements. The Contractor shall weatherproof all connectors, cables and fasteners in accordance with SFLC Std Spec 3042.

3.6 In-process quality control measures. The Contractor shall abide by all the safety, preservation, and quality control requirements specified in SFLC Std Spec 0000, paragraph 3.2.4.2 (In-process QC measures for critical-coated surfaces).

NOTES

1. Unless a containment system is used for surface preparation dust and debris and coating application overspray during pier side/dockside preservation, the following shall be adhered to:

a. All surface preparation tools/equipment shall be vacuum-shrouded.

b. Coatings shall be applied by brushing or rolling.

2. Coating application by brushing or rolling may require additional coats to obtain required dry film thickness.

3. Surfaces being preserved are considered "critical-coated surfaces".

3.7 Repair of un-intended damages. The Contractor shall repair all damages (including overspray) incurred to vessel surfaces (including those not covered by the intended scope of this work item), during surface preparation and paint application procedures.

NOTE

Coast Guard personnel will operate all shipboard machinery and equipment.

3.8 Operational test – post repairs. After completion of work, the Contractor shall witness an operational test (by Coast Guard personnel, including C4IT personnel) of all mast electrical and electronic equipment, to prove satisfactory operating condition. Submit a CFR.

4. NOTES

4.1 Coast Guard Inspector. CG Inspector will ensure that antennas are mounted and weather-proofed before final operational test.

4.2 The Fwd mast support pipe conditions are illustrated below in PHOTO 1.

PHOTO1: FWD MAST SUPPORT PIPE

WORK ITEM 39: Fathometer Transducer, General Maintenance

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to clean and inspect the fathometer transducers.

1.2 Government-furnished property.

MTI	ITEM DESCRIPTION	NSN/PN	QTY	ESTIMATED COST ($/UNIT)
N	***Fathometer Transducer, Shallow Water, 50-200 kHz (Airmar Technology SS505)	NSN: 5845-01-470-2500	1 ea.	343.63

***Government-furnished property, which is to be supplied by either the vessel or the C4IT Service Center

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 175 WLM 184-001, Rev-, CRP-V850 Transducer Adapter Ring

COAST GUARD PUBLICATIONS

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2020, General Requirements

Surface Forces Logistics Center Standard Specification 0740 (SFLC Std Spec 0740), 2020, Welding and Allied Processes

OTHER REFERENCES

The Society for Protective Coatings SSPC-SP 10/NACE No.2, Jan 2007, Near-White Blast Cleaning

The Society for Protective Coatings SSPC-SP 11, Jul 2012, Power Tool Cleaning to Bare Metal

None.

3. REQUIREMENTS

3.1 General.

3.1.1 CIR.

None.

3.1.2 Tech Rep.

Not applicable.

3.1.3 Protective measures. The Contractor shall furnish and install all protective measures in accordance with SFLC Std Spec 0000, paragraph 3.3.3 (Vessel component, space, and equipment protection).

3.1.3.1 Protect all exposed ends of transmission lines, control lines, connectors, and cables from weather, moisture, and physical damage while they are disconnected from the transducer.

3.1.3.2 Take all necessary measures to protect transducer from damage during the performance of work specified herein. Inform the COR, in writing, of all damage, if any, that is incurred by the transducer.

3.1.4 Interferences. The Contractor shall handle all interferences in accordance with SFLC Std Spec 0000, paragraph 3.3.5 (Interferences).

3.2 Transducer maintenance and inspection. The Contractor shall accomplish the following tasks while the vessel is not waterborne, using Coast Guard Drawing 175 WLM 184-001 for disassembly and reassembly guidance:

3.2.1 Transducer removal. Disconnect and remove the existing fathometer transducers, along with the associated transducer hull adapter(s) and gasket(s), if so installed. Retain all mounting hardware for reinstallation. Remove the emergency cover plate setscrews from each transducer hull ring.

3.2.2 Cleaning.

3.2.2.1 Transducer. Clean each removed transducer. To remove marine growth from the face of a shallow water transducer, use a stiff brush, putty knife, or wet sand with fine sandpaper (#220 grade or finer) to restore a smooth surface to the transducer face. For deep water transducers, the cleaning method shall not scratch the beam window.

3.2.2.2 Hull. Clean each transducer hull ring and associated adapter (if so equipped) in accordance with either SSPC SP-10 or SP-11. Clean all vacated tapped holes of anti-seize compound and beeswax tallow. Chase all threads. Protect all tapped holes with plugs or temporary bolts to exclude debris.

3.2.3 Inspection. Perform all inspections in the presence of the Coast Guard Inspector. Visually inspect each transducer for cracks. Inspect all cleaned surfaces and surrounding welds for corrosion. Submit a CFR.

3.2.4 Preservation. Prepare, prime and paint the hull opening and surrounding areas under the work item for underwater body preservation. Prepare, prime and paint the surfaces of each transducer hull ring adapter in accordance with the referenced drawing(s).

3.2.5 Reinstallation. After the last coat of paint has cured for at least 24 hours (total cure time depends upon specific coating system used and environmental conditions), reinstall each hull ring adapter and transducer in accordance with the applicable drawing using new gaskets, mold release coating, and adhesive sealants.

3.2.5.1 Be aware that the Government, at no additional consideration, may elect to furnish new transducer(s) for reinstallation instead of reusing the old.

3.2.5.2 Ensure that the horizontal major axis of each transducer is oriented with respect to the vessel's centerline. Reuse retained mounting hardware, coating all bolt threads with anti-seize compound.

3.2.5.3 Reconnect each transducer cable to its terminal board in the adjacent connection box. Renew all stuffing tube packing and seals. Inspect the connection in the presence of the Coast Guard Inspector.

3.2.5.4 Protect each transducer from damage with a metal cover plate bolted to the hull until just prior to undocking.

3.3 Undocking. The Contractor shall, upon completion of all underwater body work and prior to undocking, remove all temporary coverings from the fathometer transducer(s) affected by this work item. Install new Monel set screws in each hull ring, coating the threads with anti-seize compound. Recess the set screws ⅛ inch and cover with beeswax tallow.

3.4 Post installation tests. The Contractor shall accomplish the following tasks after completion of work, in the presence of the Coast Guard Inspector:

3.4.1 Water hose test. Inspect and perform a water hose test of all affected boundaries in accordance with SFLC Std Spec 0740, Appendix C. Submit a CFR.

3.4.2 Leak repairs. Observe each transducer for leaks during the vessel re-floating process. Repair all leaks detected. Submit a CFR.

3.4.3 Operational test – post repairs. After completion of work, thoroughly test and prove the new transducer(s) to be satisfactory operating condition. Submit a CFR.

4. NOTES

4.1 Operation of equipment. Coast Guard personnel will operate all shipboard machinery and equipment.

WORK ITEM 40: Underwater Speed Log Transducers, Service and Inspect

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to inspect and service the designated underwater (speed) log transducer(s).

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 175 WLM 424_3 Doppler Speed Log System Replacement Ripout, Installation, Arrangement, Wiring, And Details

COAST GUARD PUBLICATIONS

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2020, General Requirements

Surface Forces Logistics Center Standard Specification 0740 (SFLC Std Spec 0740), 2020, Welding and Allied Processes

Coast Guard Technical Publication (TP) 3446, Jun 2009, Doppler Speed Log, Model SRD-500 Dual Axis

OTHER REFERENCES

None.

3. REQUIREMENTS

3.1 General.

3.1.1 CIR. The Contractor shall submit a CIR for the inspections listed in the following paragraph(s):

None.

3.1.2 Tech Rep.

Not applicable.

3.1.3 Protective measures. The Contractor shall furnish and install all protective measures in accordance with SFLC Std Spec 0000, paragraph 3.3.3 (Vessel component, space, and equipment protection).

3.1.3.1 Protect all exposed ends of transmission lines, control lines, connectors, and cables from weather, moisture, and physical damage while they are disconnected from the transducer.

3.1.3.2 Take all necessary measures to protect transducer from damage during the performance of work specified herein. Inform the COR, in writing, of all damage, if any, that is incurred.

3.1.4 Interferences. The Contractor shall handle all interferences in accordance with SFLC Std Spec 0000, paragraph 3.3.5 (Interferences).

NOTE

Coast Guard personnel will operate all shipboard

3.2 Operational test - initial. Prior to commencement of work, the Contractor shall witness Coast Guard personnel test all items or shipboard devices to be disturbed, used, repaired, or altered, to demonstrate existing operational condition. Submit a CFR.

3.3 Transducer maintenance and inspection. The Contractor shall accomplish the following tasks while the vessel is not waterborne using Coast Guard Drawing 175 WLM 424_3 for disassembly and reassembly guidance.

3.3.1 Transducer removal. Disconnect and remove the existing speed log transducer, along with the associated transducer hull adapter(s) and gasket(s), if so installed. Retain all mounting hardware for reinstallation.

3.3.2 Remove the mounting bolt covers, mounting bolts, and inspect for damage. Renew any damaged bolts. Protect the face of the transducer with a cover plate or similar suitable protection before performing any maintenance on the drydocked vessel.

3.3.3 Cleaning.

3.3.3.1 Transducer. Clean the removed speed log transducer. Clean the face of the transducer. Special attention shall be made to not damage the face of the transducer. Remove any mineral deposits from the stem of the transducer.

NOTE

The transducer lens is a precision shape and any damage to this surface will affect the operational characteristics of the system. Clean the lens surface with a cleaning powder that contains as little abrasive material as possible.

The transducer assembly should NEVER be painted. If the transducer assembly lens is accidentally painted, remove the paint off the lens with paint thinner (such as turpentine), then clean as described above to ensure that no solvents remain.

3.3.3.2 Hull. Clean each transducer hull ring and associated adapter (if so equipped) in accordance with either SSPC SP-10 or SP-11. Clean all vacated tapped holes of anti-seize compound and beeswax tallow. Chase all threads. Protect all tapped holes with plugs or temporary bolts to exclude debris.

3.3.4 Inspection. Perform all inspections in the presence of the Coast Guard Inspector. Visually inspect transducer for cracks. Inspect all cleaned surfaces and surrounding welds for corrosion. Submit CFR.

3.3.5 Preservation. Prepare, prime and paint the hull opening and surrounding areas under the work item for underwater body preservation. Prepare, prime and paint the surfaces of the transducer hull ring adapter in accordance with the Coast Guard drawing(s) listed in Section 2 (References).

3.4 Underwater log transducer reinstallation. After the last coat of paint has cured for at least 24 hours (cure time is dependent upon specific paint system used and environmental conditions), the Contractor shall reinstall the underwater log transducer and remake all electrical connections. Reinstall any hull ring adapter and transducer in accordance with the applicable drawing using new gaskets, mold release coating, and adhesive sealants. Prior to use, coat the mounting bolts with anti-seize compound. Replace the mounting bolt covers.

3.4.1 Be aware that the Government at no additional consideration may elect to furnish new transducers for reinstallation instead of reusing the existing.

3.4.2 Ensure that the horizontal major axis of the transducer is oriented with respect to the vessel's centerline.

3.5 Post installation tests. The Contractor shall accomplish the following tasks after completion of work, in the presence of the Coast Guard Inspector:

3.5.1 Water hose test. If not waterborne, inspect and perform a water hose test of all affected boundaries in accordance with SFLC Std Spec 0740, Appendix C. Submit a CFR.

3.5.2 Static head test. While waterborne, inspect the underwater log transducer penetration for leakage. Repair all leaks. Submit a CFR.

NOTE
Coast Guard personnel will operate all shipboard

3.5.3 Operational test – post repairs. While underway after completion of work, witness an operational test of the new underwater log transducer to demonstrate that it is operating satisfactorily. Submit a CFR.

4. NOTES

4.1 Operation of equipment. Coast Guard personnel will operate all machinery and equipment.

WORK ITEM 41: Sea Bay, Preserve - Partial

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to perform partial preservation of interior surfaces of the Sea Bay System.

1.2 Government-furnished property.

None

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 175 WLM 256-004, Rev J, Sheets 5 and 13, Seawater Cooling System A & D, Hull Blocks 940-970

Coast Guard Drawing 175 WLM 256-013, Rev A, Sea Bay Thermometer Installation

Coast Guard Drawing 175 WLM 505-003, Rev A, Sea Connection Arrangements

Coast Guard Drawing 175 WLM 633-001, Rev D, Cathodic Protection

COAST GUARD PUBLICATIONS

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2020, General Requirements

Surface Forces Logistics Center Standard Specification 6310 (SFLC Std Spec 6310), 2020, Requirements for Preservation of Ship Structures

Surface Forces Logistics Center Standard Specification 8636 (SFLC Std Spec 8636), 2020, Temporary Hull Accesses

OTHER REFERENCES

None

3. REQUIREMENTS

3.1 General.

3.1.1 CIR.

None

3.1.2 Tech Rep.

Not applicable.

3.1.3 Protective measures - general. The Contractor shall furnish and install all protective coverings to seal off and protect all non-affected vessel's components, equipment, and spaces in the vicinity of the work area against contamination during the performance of work. Upon completion of work, the Contractor shall remove all installed protective measures, inspect for the presence of contamination, and return all contaminated equipment, components, and spaces to original condition of cleanliness.

3.1.4 Interferences. The Contractor shall handle all interferences in accordance with SFLC Std Spec 0000, paragraph 3.3.5 (Interferences). Known interferences include, but are not limited to the below-listed:

- Seawater piping.
- Chlorinator unit.
- Temperature sensor.

3.1.5 Temporary access openings. With express permission of the KO via submission of a CFR and in accordance with SFLC Std Spec 8636, the Contractor may perform all work required to cut open and close temporary access openings to facilitate accomplishment of the work specified herein.

3.2 Sea Bay and piping preservation. The Contractor shall prepare and coat up to 33 % of interior surfacesof the Sea Bay, including all accessible associated piping, using the coating system specified for "Underwater Water (U/W) Body and Boot-Top (U/W Body and Boot-Top, Icebreaker <235', in Salt Water)", in SFLC STD SPEC 6310, Appendix A (Cutter and Boat Exterior Painting Systems). Submit a CFR for preservation additional surfaces up to 33% of the Sea Bay.

3.3 In-process quality control measures. The Contractor shall abide by all the safety, preservation, and quality control requirements specified in SFLC Std Spec 0000, paragraph 3.2.4.2 (In-process QC measures for "critical-coated surfaces).

NOTE
Surfaces being preserved are considered "critical-coated surfaces".

4. NOTES

4.1 Location. The Sea Bay is located centerline in the Engine Room, at Frame 68 – as shown on Coast Guard Drawing 175 WLM 633_001, Sheet 3; and has one access - an 18" x 15" manhole on the top; dimensions are approximately 40" longitudinally, 72" transversely, and 33" vertically.

WORK ITEM 42: Hydraulic Chain Stoppers, Inspect And Service

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to inspect and service the Coast Guard Yard Model Rising Sheave Chain Stoppers (RSCS).

1.2 Government-furnished property.

MTI	ITEM DESCRIPTION	NSN/PN	QTY	ESTIMATED COST ($/UNIT)
N	Repair Kit Assembly	NSN: 2040-01-496-9418	2 ea.	1,968.67
N	Rod Seal Repair Kit (FL-2605-29 PC#37)	NSN: 2040-01-496-9422	2 ea.	3,030.07
N	Repair Kit, Cable Chain (Includes Pads) (FL-2605-29 PC#36)	NSN: 3020-01-538-0684	16 ea.	257.99
N	Cylinder Assembly Actuating, Linear	NSN: 3040-01-496-9424	2 ea.	1,969.24

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Fleet Drawing FL-2605-029, Rev L, Chain Stopper System – Rising Sheave Assembly

Coast Guard Drawing 175 WLM 573-050, Rev A, Hydraulic Piping Installation for Chain Stopper

Coast Guard Drawing 175 WLM 573-051, Rev B, Chain Stopper Structural Modifications for Hydraulic Roller Assembly

COAST GUARD PUBLICATIONS

Coast Guard Technical Publication (TP) 3939, SWBS 573-A, Apr 2007, Rising Sheave Chain Stopper

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2020, General Requirements

Surface Forces Logistics Center Standard Specification 5000 (SFLC Std Spec 5000), 2020, Auxiliary Machine Systems

OTHER REFERENCES

None

3. REQUIREMENTS

3.1 General.

3.1.1 CIR. The Contractor shall submit a CIR for the inspections listed in the following task(s) in Table 1:

- Task #1.
- Task #2.
- Task #3.
- Task #4.

3.1.2 Tech Rep.

Not applicable.

3.1.3 Protective measures, general. The Contractor shall furnish and install all protective coverings to seal off and protect all non-affected vessel's components, equipment, and spaces near the work area against contamination during the performance of work. Upon completion of work, the Contractor shall remove all installed protective measures, inspect for the presence of contamination, and return all contaminated equipment, components, and spaces to original condition of cleanliness.

3.1.3.1 Protective measures, hydraulic system(s). Maintain existing hydraulic system cleanliness and take all necessary precautions to prevent the introduction of contaminants into the hydraulic system. Immediately after disconnecting or removing components from the hydraulic system, seal all openings to the rest of the system using caps for externally threaded connection points, bolt-on blanks, or taped-on discs/covers made of durable plastic or sheet-metal that is no less than 1/16-inch thick.

NOTE
Be aware that plastic bags may be used only when arrangement or configuration prevents the use of the other sealing methods specified above.

3.1.4 Interferences. The Contractor shall handle all interferences in accordance with SFLC Std Spec 0000, paragraph 3.3.5 (Interferences).

3.2 Inspection and repair tasks. The Contractor shall refer to Coast Guard Drawings FL-2605-029, 175 WLM 573-050, and 175 WLM 573-051; and TP-3939 as guidance. Perform all work in Table 1 below accordance with SFLC Std Spec 5000.

TABLE 1 - TASKS

				ADDITION REQUIREMENTS	
#	**TASK TYPE (SFLC STD SPEC 5000 PARA. REF.)**	**QTY**	**COMPONENT OR ASSEMBLY**	**APPENDIX AND PARA. FROM SFLC STD SPEC 5000**	**OTHER**
1	Operate and Inspect	2	Hydraulic Chain Stopper Assembly	3.2.1 (Operate and Inspect)	Additional inspections: 1. Check the hydraulic stopper mechanical foundation and all mounting hardware. 2. Inspect hydraulic hoses, ensuring that hose tags match hose log installation dates. 3. Verify the relief valve; adjust settings to 2150 PSI. 4. Visually inspect the seal gland; check for signs of water intrusion. 5. Visually inspect the stopper roller. 6. Verify proper speed of raise and lower (3 - 6 seconds each way). 7. Submit a CIR.
2	Disassemble and Inspect	2	Directional Control Valve Assembly	C2.4 (Valves and manifolds)	Submit a CIR.
3	Disassemble and Inspect	2	Rising Sheave Assembly (Sheave Pin Assembly)	3.2.3 (Disassemble and Inspect)	1. Renew all fasteners exposed to weather. 2. Lubricate in accordance with references. 3. Reassemble with provided GFE. Inspect extension rods (Pc 27 of DWG FL-2605-029) for drilled through-hole. If hole is not present, drill as directed by DWG FL-2605-029, Detail 51-C. 4. Submit a CIR.
4	Disassemble and Inspect	4	Hydraulic Cylinder	3.2.3 (Disassemble and Inspect)	Submit A CIR.
5	NDE	2	Hydraulic Chain Stopper Assembly and Machinery Foundation	3.2.5 (NDE)	Areas to NDE: 1. Entire stopper structure and all weld joints attaching chain stoppers to deck. 2. Foundation of the hydraulic rams and holdback blocks. 3. Submit a CFR.
6	Preserve	2	Hydraulic Chain	3.2.4 (Preservation)	Finish coat color:

				ADDITION REQUIREMENTS	
#	TASK TYPE (SFLC STD SPEC 5000 PARA. REF.)	QTY	COMPONENT OR ASSEMBLY	APPENDIX AND PARA. FROM SFLC STD SPEC 5000	OTHER
			Stopper Assembly, including Foundation and Chain Stopper Pockets.		1. Chain stopper: Black (17038) 2. Foundation: Gray (16099).
7	Groom and Lubricate	2	Hydraulic Chain Stopper Assembly	3.2.6 (Groom and lubricate)	
8	Final Test	2	Hydraulic Chain Stopper Assembly	B2.2 (Hydraulic chain stoppers)	Operational Load Test Weight: 16,500 (+0 -825) pounds Submit a CFR.
9	Fabricate and Install	2	Label Plate	B2.9 (Label plates)	Weight: 16,500 (+0 -825) pounds

3.3 Special requirements for various components. If a Change Request has been authorized for additional work on any of the components listed in Table 2 below, the Contractor shall refer to the corresponding Appendix or paragraph of SFLC Std Spec 5000.

TABLE 2 – SPECIAL REQUIREMENTS

COMPONENT	APPENDIX & PARAGRAPH IN SFLC STD SPEC 5000
Fluids	C2.1
Hose assemblies	C2.2
Piping and tubing	C2.3
Valves and manifolds	C2.4
Gages	C2.5
Gas charged accumulators	C2.6
Heat exchangers and fluid coolers	C2.7
Systems	C2.8
Fastener assemblies	D2.1
Wire rope assemblies	D2.2
Brakes and clutches	D2.3
Open gearing and gear reducers	D2.4

4. NOTES

This section is not applicable to this work item.

WORK ITEM 43: Mechanical Chain Stoppers, Inspect and Service

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to inspect and service the port and starboard mechanical chain stoppers.

1.2 Government-furnished property.

MTI	ITEM DESCRIPTION	NSN/PN	QTY	ESTIMATED COST ($/UNIT)
N	Hardware Kit, Pins	NSN: 2030-01-485-7209	2 ea.	528.47
N	Hardware Kit, Mechanical	NSN: 2030-01-485-7215	2 ea.	538.91

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing FL 2605-031, Rev D, Mechanical Chain Stopper, 1-7/8" Buoy Chain

Coast Guard Drawing FL 2605-034, Rev D, Mechanical Chain Stopper Repair Kit: 1-7/8", 1-5/8" & 1-1/4"

COAST GUARD PUBLICATIONS

Coast Guard Technical Publication (TP) 3749, 26-APR-05, 1-7/8 Inch ATON Mechanical Chain Stopper

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2020, General Requirements

Surface Forces Logistics Center Standard Specification 5000 (SFLC Std Spec 5000), 2020, Auxiliary Machine Systems

OTHER REFERENCES

None

3. REQUIREMENTS

3.1 General.

3.1.1 CIR. The Contractor shall submit a CIR for the inspections listed in Table 1, as follows:

- Task #1.
- Task #2.

3.1.2 Tech Rep.

Not applicable.

3.1.3 Protective measures. The Contractor shall furnish and install all protective coverings to seal off and protect all non-affected vessel's components, equipment, and spaces near the work area against contamination during the performance of work. Upon completion of work, the Contractor shall remove all installed protective measures, inspect for the presence of contamination, and return all contaminated equipment, components, and spaces to original condition of cleanliness.

3.1.4 Interferences. The Contractor shall handle all interferences in accordance with SFLC Std Spec 0000, paragraph 3.3.5 (Interferences).

3.2 Repair particulars. The Contractor shall use FL2605-31, FL 2605-034, and TP 3749 for reference, and perform all tasks in Table 1.

TABLE 1 – REPAIR TASKS

				ADDITIONAL REQUIREMENTS	
#	**TASK TYPE (SFLC STD SPEC 5000 PARA. REF.)**	**QTY**	**COMPONENT OR ASSEMBLY**	**APPENDIX AND PARA. FROM SFLC STD SPEC 5000**	**OTHER**
1	Operate and Inspect	2	Mechanical Chain Stopper Assembly	3.2.1 (Operate and Inspect)	Submit a CIR.
2	Disassemble and Inspect	2	Mechanical Chain Stopper Assembly	3.2.3 (Disassemble and Inspect)	Submit a CIR. Reassemble chain stoppers with GFP. Refer to paragraph 3.2.1 for materials.
3	NDE	2	Mechanical Chain Stopper Assembly	3.2.5 (NDE)	NDE task is limited to chain stopper welds.
4	Preserve	2	Mechanical Chain Stopper Assembly and foundation	3.2.4 (Preservation)	Select the following top coating colors: Black (17038) for the chain stopper surfaces. Gray (16099) for the foundation surfaces.
5	Groom and Lubricate	2	Mechanical Chain Stopper Assembly	3.2.6 (Groom and Lubricate)	
6	Weight Test	2	Mechanical Chain Stopper Assemblies	B2.1(Mechanical Chain Stoppers)	Operational test load: 25,000 lbs.
7	Fabricate and Install	2	Label plate	B2.9 (Label plates)	

3.2.1 Breakdown GFP kit. For full kit parts list, refer to Coast Guard Drawing FL 2605-034. Pin and bushing kits contain the following parts, typically: spring assembly pin, SS washers, SS hex bolt, end

hinge pins, middle hinge pins, lock hinge pin, grease fittings and bronze bushings. At the installation of each bronze bushing, the Contractor shall drill a hole to line up with grease fitting in accordance with Coast Guard Drawing FL 2605-033 and FL 2605-034. Clean each bushing after drilling.

4. NOTES

This section is not applicable to this work item.

WORK ITEM 44: Grey Water Holding Tanks, Clean and Inspect

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to clean and inspect the following tank(s):

TABLE 1 – TANKS

TYPE OF TANK	LOCATION	CAPACITY - 95% (Gallons)	LOW SUCTION (Gallons)
Grey Water Collection Tank	3-83-1-W	2,822	200
Grey Water Collection Tank	3-83-2-W	2,822	200

1.2 Government-furnished property.

None.

1. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 175 WLM 506-001, Rev G, Overflows, Air Escapes & Sounding Tubes Diagram

Coast Guard Drawing 175 WLM-528-001, Rev E, Plumbing and Interior Deck Drains Diagram

Coast Guard Drawing 175 WLM 593-001, Rev G, Sewage & Waste Water System Diagram

Coast Guard Drawing 175 WLM 593-009, Rev E, Independent Tanks, Sewage Holding Tank

Coast Guard Drawing 175 WLM 633-001, Rev D, Cathodic Protection

COAST GUARD PUBLICATIONS

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2020, General Requirements

OTHER REFERENCES

ASTM International (ASTM) D1330, 2015, Standard Specification for Rubber Sheet Gaskets

3. REQUIREMENTS

3.1 General.

3.1.1 CIR. The Contractor shall submit a CIR for the inspections listed in the following paragraph(s):

- 3.6 Inspection.

3.1.2 Tech Rep.

Not applicable.

3.1.3 Protective measures. The Contractor shall furnish and install all protective measures in accordance with SFLC Std Spec 0000, paragraph 3.3.3 (Vessel component, space, and equipment protection).

3.1.3.1 Plug all inlet and outlet piping in the tank(s) to prevent contaminants from entering. Use plugs with an attached lanyard, ring or other system that will ensure plugs are not lost in the pipe openings.

3.1.4 Interferences. The Contractor shall handle all interferences in accordance with SFLC Std Spec 0000, paragraph 3.3.5 (Interferences). Known interferences include, but are not limited to the following:

- Piping.
- Pump(s).
- Zincs.

3.2 Plug log. The Contractor shall keep a written record of all plugs put in any tank vents. A separate list shall be kept for each tank being entered.

3.2.1 Ensure that all plugs are removed from each tank upon completion of work in the tank.

3.2.2 The plug log shall be available to the Coast Guard Inspector when the inspector is performing his close-out inspection on each tank.

NOTE

Coast Guard personnel will operate all shipboard machinery and equipment.

3.3 Operational test, initial. Prior to commencement of work, the Contractor shall witness Coast Guard personnel perform an initial operational test of all items or shipboard devices to be disturbed, used, repaired, or altered, to demonstrate existing operational condition. Submit a CFR.

3.4 Service disruption. When grey water is disrupted due to Contractor repairs, the Contractor shall refer to SFLC Standard Spec 0000 par 3.2.11 to provide required temporary facilities.

3.5 Cleaning. The Contractor shall accomplish the following for the tank(s) listed. The Contractor shall refer to Coast Guard drawings 175 WLM 593-001,175 WLM 593-009, 175 WLM 506-001, 175 WLM 528-001, 175 WLM 633-001, and Tech Pub 3611 Manufacturers Instruction Book, SWBS Group 202, Section A for guidance.

3.5.1 Content removal. Remove and dispose of all contents, fluids, and/or residues in accordance with all applicable Federal, state, and local regulations

3.5.2 Cleaning requirements. Remove manhole cover(s). Clean all tank structure's interior surfaces free of all foreign materials, sediment, and sludge. Remove all persistent residues, taking care not to damage the tank coating system. Remove cleaning media and residues continuously from the tank during the washing process. Remove any residual wash media and wipe up residual moisture with clean lint-free cloths. Collect, contain, and dispose of all wash media, residues, and cleaning materials in accordance with all Federal, state, and local regulations. Clean all tank vent lines. Remove and clean the eductors and level switches inside of the tank(s). Reinstall the eductors and level switches upon completion of tank cleaning. Use new gaskets and o-rings to install/reinstall all removed/disturbed components.

3.6 Inspection. The Contractor shall visually inspect all interior surfaces, including, but not limited to bulkheads, floor and overhead plating, structural members, manhole cover surfaces, fasteners and gasket seating surfaces. Submit the Tank and Void Inspection Form, and a CFR including the following, as applicable:

- Tank structural condition.
- Inaccessible areas.
- Condition of tank coating, including measurements taken, percentage, location, and type of coating failure (not applicable for stainless steel tanks).
- Tank level indicator (TLI), vacuum and/or float switch condition.
- Suction and discharge piping and vent line condition.
- Fastener material (stainless steel) and condition.
- Zinc anode condition (remaining percentage).

3.7 Control panel assembly. The Contractor shall open and vacuum clean the control panel assembly. Inspect the control panel assembly for any indications of overheating or loose wiring or connections. Submit a CFR

3.8 Closing. The Contractor shall notify the COR at least 24 hours prior to closing the tank(s). After satisfactory inspection by the Coast Guard Inspector, and completion of all authorized repairs, close the manhole cover(s) with new gasket material conforming to ASTM D1330.

3.8.1 Renew 100% of nylon insert/nylock nuts and washers.

3.8.1 Chase threads on studs to ensure even installation of the access covers. Renew any damaged or missing fasteners. Existing undamaged fasteners may be reused. For purpose of bid, assume 10% of existing fasteners will require renewal. Renew all nylon insert/nylock nuts.

NOTE

Coast Guard personnel will operate all shipboard machinery and equipment.

3.9 Operational test, post repairs. After completion of work, the Contractor shall thoroughly test, in the presence of the Coast Guard Inspector and demonstrate all items or shipboard devices that have been disturbed, used, repaired, altered, or installed to be in satisfactory operating condition. Submit a CFR.

3.9.1 The Contractor shall adjust the set point on each of the vacuum pressure switches (as applicable) to the set points noted previously.

3.9.2 The Contractor shall verify operation of the low and high level switches/alarms and that the pumps cycle from lead to lag status during operation. Demonstrate proper operation of tank TLIs to prove satisfactory operating condition.

3.9.3 Upon completion of testing and, in the presence of the Coast Guard Inspector, the Contractor shall pump tank(s) to the limit of the ship's installed pumps.

4. NOTES

This section is not applicable to this work item.

WORK ITEM 45: Sewage Holding Tanks, Clean and Inspect

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to clean and inspect the following tank(s):

TABLE 1 – TANKS

TYPE OF TANK	LOCATION	CAPACITY - 95% (Gallons)	LOW SUCTION (Gallons)
Sewage Holding Tank	2-84-2-W	847	200
Vacuum Collection Tank	2-82-2-W	330	20

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 175 WLM 506-001, Rev G, Overflows, Air Escapes & Sounding Tubes Diagram

Coast Guard Drawing 175 WLM-528-001, Rev E, Plumbing and Interior Deck Drains Diagram

Coast Guard Drawing 175 WLM 593-001, Rev G, Sewage & Waste Water System Diagram

Coast Guard Drawing 175 WLM 593-009, Rev E, Independent Tanks, Sewage Holding Tank

Coast Guard Drawing 175 WLM 633-001, Rev D, Cathodic Protection

COAST GUARD PUBLICATIONS

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2020, General Requirements

OTHER REFERENCES

ASTM International (ASTM) D1330, 2015, Standard Specification for Rubber Sheet Gaskets

3. REQUIREMENTS

3.1 General.

3.1.1 CIR. The Contractor shall submit a CIR for the inspections listed in the following paragraph(s):

- 3.5.3 Inspection.

3.1.2 Tech Rep.

Not applicable.

3.1.3 Protective measures. The Contractor shall furnish and install all protective measures in accordance with SFLC Std Spec 0000, paragraph 3.3.3 (Vessel component, space, and equipment protection).

3.1.3.1 Plug all inlet and outlet piping in the tank(s) to prevent contaminants from entering. Use plugs with an attached lanyard, ring or other system that will ensure plugs are not lost in the pipe openings.

3.1.4 Interferences. The Contractor shall handle all interferences in accordance with SFLC Std Spec 0000, paragraph 3.3.5 (Interferences). Known interferences include, but are not limited to the following:

- Piping.
- Pump(s).
- Zincs.

3.2 Plug log. The Contractor shall keep a written record of all plugs put in any tank vents. A separate list shall be kept for each tank being entered.

3.2.1 Ensure that all plugs are removed from each tank upon completion of work in the tank.

3.2.2 The plug log shall be available to the Coast Guard Inspector when the inspector is performing his close-out inspection on each tank.

NOTE

Coast Guard personnel will operate all shipboard machinery and equipment.

3.4 Operational test - initial. Prior to commencement of work, the Contractor shall witness Coast Guard personnel perform an initial operational test of all items or shipboard devices to be disturbed, used, repaired, or altered, to demonstrate existing operational condition. Submit a CFR.

3.4 Service disruption. When sewage collection service is disrupted due to contractor repairs, the Contractor shall refer to SFLC Standard Spec 0000 par 3.2.11 to provide required temporary facilities.

3.5 Cleaning and inspection requirements. The Contractor shall accomplish the following for the tank(s) listed in paragraph 1.1 (Intent), referring to Coast Guard drawings 175 WLM 593-001,175 WLM 593-009, 175 WLM 506-001, 175 WLM 528-001, 175 WLM 633-001, and Tech Pub 3611 Manufacturers Instruction Book, SWBS Group 202, Section A for guidance:

3.5.1 Content removal. Remove and dispose of all contents, fluids, and/or residues in accordance with all applicable Federal, state, and local regulations

3.5.2 Cleaning requirements. Remove manhole cover(s). Clean all tank structure's interior surfaces free of all foreign materials, sediment, and sludge. Remove all persistent residues, taking care not to damage the tank coating system. Remove cleaning media and residues continuously from the tank during the washing process. Remove any residual wash media and wipe up residual moisture with clean lint-free cloths. Collect, contain, and dispose of all wash media, residues, and cleaning materials in accordance with all Federal, state, and local regulations. Clean all tank vent lines. Remove and clean the eductors and level switches inside of the tank(s). Reinstall the eductors and level switches upon completion of tank cleaning. Use new gaskets and o-rings to install/reinstall all removed/disturbed components.

3.5.3 Inspection. Visually inspect all interior surfaces, including, but not limited to bulkheads, floor and overhead plating, structural members, manhole cover surfaces, fasteners and gasket seating surfaces. Submit a CFR including the following, as applicable:

- Tank structural condition.
- Inaccessible areas.
- Condition of tank coating, including measurements, percentage, location, and type of coating failure (not applicable for stainless steel tanks).
- Tank level indicator (TLI), vacuum and/or float switch condition.
- Suction and discharge piping and vent line condition.
- Fastener material (stainless steel) and condition.
- Zinc anode condition (remaining percentage).

3.5.4 Control panel assembly. Open and vacuum clean the control panel assembly. Inspect the control panel assembly for any indications of overheating or loose wiring or connections. Submit a CFR

3.6 Closing. The Contractor shall notify the COR at least 24 hours prior to closing the tank(s). After satisfactory inspection by the Coast Guard Inspector, and completion of all authorized repairs, close the manhole cover(s) with new gasket material conforming to ASTM D1330.

3.6.1 The Contractor shall renew 100% of nylon insert/nylock nuts and washers.

3.6.1 Chase threads on studs to ensure even installation of the access covers. Renew any damaged or missing fasteners. Existing undamaged fasteners may be reused. For purpose of bid, assume 10% of existing fasteners will require renewal. Renew all nylon insert nuts.

NOTE

Coast Guard personnel will operate all shipboard machinery and equipment.

3.7 Operational test, post repairs. After completion of work, the Contractor shall accomplish the following in the presence of the Coast Guard Inspector, and submit a CFR:

3.7.1 Adjust the set point on each of the vacuum pressure switches (as applicable) to the set points noted previously.

3.7.2 Verify operation of the low and high level switches/alarms and that the pumps cycle from lead to lag status during operation. Demonstrate proper operation of tank TLIs to prove satisfactory operating condition.

3.7.3 Upon completion of testing and, in the presence of the Coast Guard Inspector, pump tank(s) to the limit of the ship's installed pumps.

4. NOTES

4.1 Vessel equipment. The cutter is equipped with an ENVIROVAC Model 1122 Vacuum Sewage System. The vacuum tank is made of 316L stainless steel. The sewage collection tank is equipped with two (2) magnetic level switches, two (2) vacuum pressure switches, two (2) sewage ejectors, two (2) solenoid operated ball valves, and other associated components. (Ships with hull numbers 551 through 558 use a mercury float level sensor switch.) Point of contact for the system is listed below.

ENVIROVAC Inc.

1260 Turret Dr.

Rockford IL. 6115-1486

(815) 654-8300

4.2 Eductor seal information.

Ref. No.	Part Number	Description	Qty Per Assembly	Total Quantity
2	5500020-005	O-ring	1	2
3	5500033-002	Gasket, Ring, 125 x 100 x 2mm	1	2
4	5500033-001	Gasket, Ring, 135 x 90 x 2mm	2	4
5	5600032	Nozzle, 45mm	1	2

4.3 Sewage Holding tank data. The sewage holding tank is described in Coast Guard Drawing 175 WLM 593-009. The sewage holding tank has two (2) type ZHS-42 stud mounted zincs installed inside of the tank, as described in Coast Guard Drawing 175 WLM 633-001 and is fitted with a manual internal wash down system and a tank level indicating system as well as high level and low level alarms and pump controls. The sewage tank is vented on top of the stack as shown in Coast Guard Drawing 175 WLM 506-001.

WORK ITEM 46: Grey Water Piping, Clean and Flush

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to clean the grey water piping system.

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 175 WLM 593-001, Rev G, Sewage and Waste Water System Diagram

COAST GUARD PUBLICATIONS

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2020, General Requirements

OTHER REFERENCES

3. REQUIREMENTS

3.1 General.

3.1.1 CIR.

None.

3.1.2 Tech Rep.

Not applicable.

3.1.3 Protective measures. The Contractor shall furnish and install all protective measures in accordance with SFLC Std Spec 0000, paragraph 3.3.3 (Vessel component, space, and equipment protection).

3.1.4 Interferences. The Contractor shall handle all interferences in accordance with SFLC Std Spec 0000, paragraph 3.3.5 (Interferences). Known interferences include, but are not limited to the below-listed:

- Grey water pumps

3.2 Contamination prevention. The Contractor shall take all precautions to prevent contamination of personnel and spaces in accordance with all applicable Federal, state, and local regulations.

3.3 Personnel qualification. The Contractor shall ensure that personnel accomplishing this work are qualified and experienced in operating the pressurized water system and handling the chemicals. For each operator/cleaning technician, submit documentation of applicable experience and training obtained within the last twelve months along with the Cleaning Plan (see paragraph 3.5.2 (Plan Submittal)).

NOTE

Coast Guard personnel will operate all shipboard machinery and equipment.

3.4 Operational test - initial. Prior to commencement of work, the Contractor shall witness Coast Guard personnel perform an initial operational test of all items or shipboard devices to be disturbed, used, repaired, or altered, to demonstrate existing operational condition. Submit a CFR.

3.5 Piping hydrojet cleaning. The Contractor shall perform the following work:

3.5.1 The Contractor shall clean and flush approximately 900 linear feet of grey water system piping, shown on Coast Guard Drawing 175-WLM 593-001.

3.5.2 Prior to commencing work, coordinate with the Coast Guard Inspector. Determine required down times for affected piping system. Determine the feasibility/need for the piping system to be split to minimize system down time.

3.5.3 With the aid of ship's force, split the plumbing drain system fore and aft by closing isolation valves in the drainage system. Work on only one section of the plumbing drain system at a time to allow use of toilet and shower facilities in the other section of the system by the ship's duty section.

3.5.4 Using the referenced Coast Guard drawings as guidance, hydro blast the internal surfaces of all of the plumbing drain piping. Hydro blast pressure shall be at least 2500 psig at the discharge nozzle in all piping to ensure removal of all salts and scale from piping internal surfaces.

NOTE

Ship's force will provide an assistant to the Contractor to show the Contractor the location of clean-out connections within the plumbing drain system.

3.5.4.2 Open each of the clean out connections as required to clean and hydro blast all of the internal piping within the system. Catch any fluid that drains from the clean out connections when it is opened and clean up any spills using bleach to disinfect the spill after cleaning.

3.5.4.3 It may be necessary for the Contractor to install additional clean-out connections to access all portions of the plumbing drain system. If additional clean-out connections are needed, a separate specification item in this specification package shall be authorized to install additional clean-out connections.

3.5.4.4 Hydro blast cleaning water may be collected in the ship's sewage system and disposed of via the ship's sewage shore tie connections.

3.5.5 Clean until all of the following conditions are met:

- All visible calcium carbonate deposits, solid deposits and build-up are removed from pipe walls.
- Discharge water from the piping being cleaned is free of all visible scale and deposits.

3.5.5.1 Inspect the piping interior using a borescope in the presence of the COR, to verify that all solid deposits visible to the unmagnified eye have been removed. Continue the cleaning process until all visible solid deposits are removed from the pipe walls.

3.5.6 In the event that hydroblasting alone does not clean piping to required conditions, Contractor shall use chemical cleaning methods.

3.5.6.1 Ensure that chemical cleaners do not damage the environment, heat exchanger or the vessel.

3.5.6.2 Submit the written plan for chemical cleaning to the COR for approval 96 hours before work is to commence. The procedure shall include products to be used, safety precautions, disposal requirements, sequence of events, etc. Submit a MSDS to the COR for all chemicals proposed for use. Changes to the chemical cleaning plan as written, need to be approved by the COR (and Facilities).

3.5.6.3 Chemical cleaning waste water disposal. Dispose of all cleaning fluids and debris in accordance with all applicable Federal, state, and local regulations. Remove all unused chemicals from USCG property immediately upon completion of work item. Do not drain any fluids (including fresh water) into any space, bilge, or exterior location.

- Sequence of each location that ensures all piping sections will be cleaned and all foreign debris removed.
- Flush twice the volume of the system cleaned with water to include 3 repeated pH tests between 6 and 8. The flushing water shall be collected and disposed by the Contractor.

3.6 Pumps and valves. The Contractor shall replace system tank valve(s) with temporary spool piece(s). Visually inspect system pumps and valve(s); and submit a CFR. Upon completion of work, reinstall the removed tank valve(s) with new gaskets.

3.7 Gasket renewal. The Contractor shall reinstall all removed valves and fittings with new gasket material conforming to applicable referenced drawings.

NOTE

Coast Guard personnel will operate all shipboard machinery and equipment.

3.8 Operational test – post repairs. After completion of work, the Contractor shall thoroughly test, in the presence of the Coast Guard Inspector and demonstrate all items or shipboard devices that have been disturbed, used, repaired, altered, or installed to be in satisfactory operating condition. Submit a CFR.

3.8.1 Leak test. After all system components are reinstalled, the Contractor shall test all disturbed piping for leaks, as follows, and submit a CFR:

- Plug all system openings (except the highest) and fill system with water to the point of overflow. Ensure that the water level does not go down (without adding any water) for sufficient time to inspect the entire system (no less than 15 minutes).
- Closely monitor the system for leaks. Repair all leaks detected.
- Repeat test and inspection until no leaks are detected.

4. NOTES

This section is not applicable to this work item.

WORK ITEM 47: Sewage Piping, Clean and Flush

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to clean the sewage piping system.

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 175 WLM 593-001, Rev G, Sewage and Waste Water System Diagram

COAST GUARD PUBLICATIONS

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2020, General Requirements

OTHER REFERENCES

ASTM International (ASTM) D1330, 2010, Standard Specification for Rubber Sheet Gaskets

3. REQUIREMENTS

3.1 General.

3.1.1 CIR. The Contractor shall submit a CIR for the inspections listed in the following paragraph(s):

None.

3.1.2 Tech Rep.

Not applicable.

3.1.3 Protective measures. The Contractor shall furnish and install all protective measures in accordance with SFLC Std Spec 0000, paragraph 3.3.3 (Vessel component, space, and equipment protection).

3.1.4 Interferences. The Contractor shall handle all interferences in accordance with SFLC Std Spec 0000, paragraph 3.3.5 (Interferences). Known interferences include, but are not limited to the below-listed:

- Sewage pumps
- Toilets

3.2 Contamination prevention. The Contractor shall take all precautions to prevent contamination of personnel and spaces in accordance with all applicable Federal, state, and local regulations.

3.3 Personnel qualification. The Contractor shall ensure that personnel accomplishing this work are qualified and experienced in operating the pressurized water system and handling the chemicals. For each operator/cleaning technician, submit documentation of applicable experience and training obtained within the last twelve months along with the Cleaning Plan.

NOTE

Coast Guard personnel will operate all shipboard machinery and equipment.

3.4 Operational test - initial. Prior to commencement of work, the Contractor shall witness Coast Guard personnel perform an initial operational test of all items or shipboard devices to be disturbed, used, repaired, or altered, to demonstrate existing operational condition. Submit a CFR.

3.5 Cleaning plan. Submit the written plan for chemical cleaning to the COR for approval 96 hours before work is to commence. The procedure shall include products to be used, safety precautions, disposal requirements, sequence of events, etc. Submit a MSDS to the COR for all chemicals proposed for use. Changes to the chemical cleaning plan as written, need to be approved by the COR (and Facilities).

CAUTION

Although the Coast Guard prefers pressurized water as the cleaning fluid, the Contractor may propose chemical cleaning as an alternative, providing that the proposed chemical cleaning agent is environmentally safe, suitable for use in marine sewage piping application, and pre-approved by the COR.

The chemicals used in the cleaning (including cleaning chemicals, neutralizing compounds, and defoaming chemicals) shall not cause any significant detrimental effects to the sewage piping system or any other system components Due to the fact that system piping has historically been difficult to clean by pressure washing only, chemical cleaning is usually required to successfully complete the cleaning process.

3.5.1 Procedure requirements. The Contractor shall ensure that the procedure includes the following:

- Methods of cleaning.
- All safety precautions required during cleaning operations.
- List of qualified personnel who will operate machinery or handle chemicals (see paragraph 3.3 (Personnel qualification) herein).
- Locations in the sewage piping where cleaning will take place, and any additional fittings necessary.
- Sequence of each location that ensures all piping sections will be cleaned and all foreign debris removed.

3.5.2 Plan submittal. The Contractor shall submit the written plan to the COR for approval at least 48 hours prior to commencing cleaning operations. Changes to the chemical cleaning plan as written, need to be approved by the COR (and local Facilities).

3.6 Clean and flush. The Contractor shall clean and flush approximately 200 linear feet of sewage system piping, shown on Coast Guard Drawing 175 WLM 593-001.

3.6.1 Pumps and valves. Replace system tank valve(s) with temporary spool piece(s) before cleaning. Visually inspect system pumps and valve(s); and submit a CFR. Upon completion of work, reinstall the removed tank valve(s) with new gaskets.

3.6.2 Cleaning. Continue cleaning until all of the following conditions are met:

- All visible calcium carbonate deposits, solid deposits and build-up are removed from pipe walls.
- Discharge water from the piping being cleaned is free of all visible scale and deposits.

3.6.3 Inspect the piping interior using a borescope in the presence of the COR, to verify that all solid deposits visible to the unmagnified eye have been removed. Continue the cleaning process until all visible solid deposits are removed from the pipe walls.

3.6.4 Flush twice the volume of the system cleaned with water to include 3 repeated pH tests between 6 and 8. The flushing water shall be collected and disposed by the Contractor.

3.7 Waste disposal. The Contractor shall dispose of all cleaning fluids and debris in accordance with all applicable Federal, state, and local regulations. Remove all unused chemicals from USCG property immediately upon completion of work item. Do not drain any fluids (including fresh water) into any space, bilge, or exterior location.

3.8 Gasket renewal. The Contractor shall reinstall all removed valves and fittings with new gasket material conforming to ASTM D1330.

NOTE

Coast Guard personnel will operate all shipboard machinery and equipment.

3.9 Operational test – post repairs. After completion of work, the Contractor shall thoroughly test, in the presence of the Coast Guard Inspector and demonstrate all items or shipboard devices that have been disturbed, used, repaired, altered, or installed to be in satisfactory operating condition. Submit a CFR.

3.9.1 Leak test. After all system components are reinstalled, the Contractor shall test all disturbed piping for leaks, as follows, and submit a CFR:

- Plug all system openings (except the highest) and fill system with water to the point of overflow. Ensure that the water level does not go down (without adding any water) for sufficient time to inspect the entire system (no less than 15 minutes).
- Closely monitor the system for leaks. Repair all leaks detected.
- Repeat test and inspection until no leaks are detected.

4. NOTES

This section is not applicable to this work item.

WORK ITEM 48: Tanks (Grey Water Holding), Preserve "Partial"

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to prepare and preserve the following tank(s):

TABLE 1 – TANKS

TYPE OF TANK	LOCATION	CAPACITY - 95% (Gallons)	LOW SUCTION (Gallons)	% OF TANK COATING REPAIR
Grey Water Collection	3-83-1-W	2,822	200	33
Grey Water Collection	3-83-2-W	2,822	200	33

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 175 WLM 506-001, Rev G, Overflows, Air Escapes & Sounding Tubes Diagram

Coast Guard Drawing 175 WLM-528-001, Rev E, Plumbing and Interior Deck Drains Diagram

Coast Guard Drawing 175 WLM 593-001, Rev G, Sewage & Waste Water System Diagram

Coast Guard Drawing 175 WLM 593-009, Rev E, Independent Tanks, Sewage Holding Tank

Coast Guard Drawing 175 WLM 633-001, Rev D, Cathodic Protection

COAST GUARD PUBLICATIONS

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2020, General Requirements

Surface Forces Logistics Center Standard Specification 6310 (SFLC Std Spec 6310), 2020, Requirements for Preservation of Ship Structures

Surface Forces Logistics Center Standard Specification 8636 (SFLC Std Spec 8636), 2020, Temporary Hull Accesses

OTHER REFERENCES

None

3. REQUIREMENTS

3.1 General.

3.1.1 CIR.

None.

3.1.2 Tech Rep.

Not applicable.

3.1.3 Protective measures. The Contractor shall furnish and install all protective measures in accordance with SFLC Std Spec 0000, paragraph 3.3.3 (Vessel component, space, and equipment protection).

3.1.4 Interferences. The Contractor shall handle all interferences in accordance with SFLC Std Spec 0000, paragraph 3.3.5 (Interferences). Known interferences include, but are not limited to the below-listed:

- Piping.
- Pump(s).
- Zincs.

3.1.5 Temporary access openings. Due to limited access to work areas, the Contractor may, with express permission of the KO (via submission of a CFR), cut access holes to facilitate accomplishment of the work specified herein. Perform all work required to open and close the access openings in accordance with SFLC Std Spec 8636.

NOTE

This item is written to be used as an "Option" item, in conjunction with the clean and inspect "Definite" item. Requirements for tank opening and closing, content disposal, and inspection are covered in the clean and inspect work item.

3.2 Surface preservation. The Contractor shall, referring to Coast Guard drawings 175 WLM 593-001,175 WLM 593-009, 175 WLM 506-001, 175 WLM 528-001, 175 WLM 633-001, and Tech Pub 3611 Manufacturers Instruction Book, SWBS Group 202, Section A for guidance, prepare and coat up to 33 % of the interior surfaces of each of the designated tanks, using the system specified for "Tanks and Voids (Grey Water, Sewage, and CHT Tanks), Option I", in SFLC Std Spec 6310, Appendix B (Cutters and Boat Interior Paint Systems). Power tool clean all affected surfaces to "bare metal", in lieu of using abrasive blasting; and feather edges of existing intact coating to the prepared areas, in order to provide a smooth transition with the new paint. Select finish/top coat color to match existing adjacent surfaces.

3.3 In-process quality control measures. The Contractor shall abide by all the safety, preservation, and quality control requirements specified in SFLC Std Spec 0000, paragraph 3.2.4.2 (In-process QC

measures for “critical-coated surfaces). Surfaces being preserved are considered “critical-coated surfaces”.

4. NOTES

This section is not applicable to this work item.

WORK ITEM 49: Tanks (Sewage Holding), Preserve "Partial"

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to prepare and preserve the following tank(s):

TABLE 1 – TANKS

TYPE OF TANK	LOCATION	CAPACITY - 95% (Gallons)	LOW SUCTION (Gallons)	% OF TANK COATING REPAIR
Sewage Holding	2-84-2-W	847	200	33
Vacuum Collection	2-82-2-W	330	200	33

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 175 WLM 506-001, Rev G, Overflows, Air Escapes & Sounding Tubes Diagram

Coast Guard Drawing 175 WLM-528-001, Rev E, Plumbing and Interior Deck Drains Diagram

Coast Guard Drawing 175 WLM 593-001, Rev G, Sewage & Waste Water System Diagram

Coast Guard Drawing 175 WLM 593-009, Rev E, Independent Tanks, Sewage Holding Tank

Coast Guard Drawing 175 WLM 633-001, Rev D, Cathodic Protection

COAST GUARD PUBLICATIONS

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2020, General Requirements

Surface Forces Logistics Center Standard Specification 6310 (SFLC Std Spec 6310), 2020, Requirements for Preservation of Ship Structures

Surface Forces Logistics Center Standard Specification 8636 (SFLC Std Spec 8636), 2020, Temporary Hull Accesses

OTHER REFERENCES

None

3. REQUIREMENTS

3.1 General. The Contractor shall refer to Coast Guard drawings 175 WLM 593-001,175 WLM 593-009, 175 WLM 506-001, 175 WLM 528-001, 175 WLM 633-001, and Tech Pub 3611 Manufacturers Instruction Book, SWBS Group 202, Section A for guidance.

3.1.1 CIR.

None.

3.1.2 Tech Rep.

Not applicable.

3.1.3 Protective measures. The Contractor shall furnish and install all protective coverings to seal off and protect all non-affected vessel's components, equipment, and spaces near the work area against contamination during the performance of work. Upon completion of work, the Contractor shall remove all installed protective measures, inspect for the presence of contamination, and return all contaminated equipment, components, and spaces to original condition of cleanliness.

3.1.4 Interferences. The Contractor shall handle all interferences in accordance with SFLC Std Spec 0000, paragraph 3.3.5 (Interferences). Known interferences include, but are not limited to the below-listed:

- Piping.
- Pump(s).
- Zincs.

3.1.5 Temporary access openings. Due to limited access to work areas, the Contractor may, with express permission of the KO (via submission of a CFR), cut access holes to facilitate accomplishment of the work specified herein. Perform all work required to open and close the access openings in accordance with SFLC Std Spec 8636.

NOTE

Requirements for tank opening and closing, content disposal, and inspection are covered in the clean and inspect item.

3.2 Surface preservation. The Contractor shall prepare and coat the designated tank interior surfaces, using the system specified for "Tanks and Voids (Grey Water, Sewage, and CHT Tanks), Option I", in SFLC Std Spec 6310, Appendix B (Cutters and Boat Interior Paint Systems). Power tool clean all affected surfaces to “bare metal”, in lieu of using abrasive blasting; and feather edges of existing intact coating to the prepared areas, in order to provide a smooth transition with the new paint. Select finish/top coat color to match existing adjacent surfaces.

3.3 In-process quality control measures. The Contractor shall abide by all the safety, preservation, and quality control requirements specified in SFLC Std Spec 0000, paragraph 3.2.4.2 (In-process QC

measures for “critical-coated surfaces). Surfaces being preserved are considered “critical-coated surfaces”.

4. NOTES

This section is not applicable to this work item.

WORK ITEM 50: Tanks, Ballast, Preserve, Partial

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to prepare and coat part of the surfaces of the following tank(s) up to the percentage indicated, in locations designated by the Coast Guard Inspector:

TABLE 1 – TANKS

TYPE OF STRUCTURE	LOCATION	CAPACITY - 95% (GALLONS)	LOW SUCTION (GALLONS)	% OF TANK COATING REPAIR
Forepeak Ballast Tank	3-0-0-V	3,309	99	33
Ballast Tank	3-35-6-V	7,922	238	33
Ballast Tank	3-35-1-V	7,922	238	33

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 175 WLM 601-003, Rev N, Booklet of General Drawings (552-564)

Coast Guard Drawing 175 WLM 601-002, Rev H, Booklet of General Drawings (IDA LEWIS)

COAST GUARD PUBLICATIONS

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2020, General Requirements

Surface Forces Logistics Center Standard Specification 6310 (SFLC Std Spec 6310), 2020, Requirements for Preservation of Ship Structures

Surface Forces Logistics Center Standard Specification 8636 (SFLC Std Spec 8636), 2020, Temporary Hull Accesses

OTHER REFERENCES

ASTM International (ASTM) D1330, 2010, Standard Specification for Rubber Sheet Gaskets

3. REQUIREMENTS

3.1 General. The Contractor shall accomplish the work specified herein for all tanks listed in paragraph 1.1 (Intent). The Contractor shall refer to Coast Guard Drawing 175 WLM 601-003 for guidance..

3.1.1 CIR. The Contractor shall submit a CIR for the inspections listed in the following paragraph(s):

None.

3.1.2 Tech Rep.

Not applicable.

3.1.3 Protective measures. The Contractor shall furnish and install all protective measures in accordance with SFLC Std Spec 0000, paragraph 3.3.3 (Vessel component, space, and equipment protection).

3.1.4 Interferences. The Contractor shall handle all interferences in accordance with SFLC Std Spec 0000, paragraph 3.3.5 (Interferences).

3.2 Temporary access openings. Due to limited access to work areas, the Contractor may, with express permission of the KO (via submission of a CFR), cut access holes to facilitate accomplishment of the work specified herein. Perform all work required to open and close the access openings in accordance with SFLC Std Spec 8636.

3.3 Content removal. The Contractor shall remove and dispose of all fluids and/or residues in accordance with all applicable Federal, state, and local regulations. Plug all inlet and outlet piping in the tank to prevent contaminants from entering the tank. Use plugs with an attached lanyard, ring or other system that will ensure plugs are not lost in the pipe openings. Maintain a plug accountability log outside the tank(s) to prevent any of the installed temporary plugs from being lost inside the tank or forgotten inside at tank closure.

3.4 Surface preservation. The Contractor shall remove and retain the manhole covers for all tanks listed under paragraph 1.1 (Intent); prepare and coat designated interior tank surfaces (see paragraph 1.1 (Intent)) using the system specified in SFLC Std Spec 6310, Appendix B (Cutter and Boat Interior Paint Systems) for “Tanks and Voids, Ballast Tanks; Option I or II”. Power tool clean all affected surfaces to “bare metal”, in lieu of using abrasive blasting; and feather edges of existing intact coating to the prepared areas in order to provide a smooth transition with the new paint. Select top coat color to match existing adjacent surfaces.

3.5 In-process quality control measures. The Contractor shall abide by all the safety, preservation, and quality control requirements specified in SFLC Std Spec 0000, paragraph 3.2.4.2 (In-process QC measures for “critical-coated surfaces). Surfaces being preserved are considered “critical-coated surfaces”.

3.6 Inspection. After surface preparation and before coating application, the Contractor shall visually inspect all interior surfaces and manhole surfaces; including, but not limited to bulkheads, floor and overhead plating, structural members, manhole cover surfaces, fasteners and gasket seating surfaces. Submit a CFR including the following, as applicable:

- Structural condition.
- Inaccessible areas.

- Tank level indicator (TLI) and/or float switch condition.
- Sounding tube and striker plate condition.
- Suction and discharge piping.
- Fastener condition.

3.7 Tank closing. The Contractor shall ensure that the tank(s) remain open for at least 24 hours after completion of the tasks specified above. Notify the COR at least 24 hours prior to closing the tank(s). After satisfactory inspection by the Coast Guard Inspector and after all authorized repairs, accomplish the following:

- Reinspect all TLIs, as applicable, to verify proper operation. Submit CFR.
- Close tank manhole cover(s) with new gasket material conforming to ASTM D1330 and new stud cotton grommets (as applicable).
- Renew 100% of nylon insert/nylock nuts and washers.

4. NOTES

This section is not applicable to this work item.

63140_ESD_0121_FLT
REC_63140_100Prcnt_FLT_175' WLM (ALL) (1215)

WORK ITEM 51: Hull Plating Freeboard, Preserve, 100 Percent

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to preserve 100% of the freeboard surfaces defined in 4.1 Definition of freeboard surfaces.

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 175 WLM 601-001, Rev L, General Arrangement and Inboard and Outboard Profiles

Coast Guard Fleet Drawing FL 2804-12, Rev -, U.S.C.G. Emblem

Coast Guard Fleet Drawing FL 2804-22, Rev-, Consolidated Visual ID for Cutters

COAST GUARD PUBLICATIONS

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2020, General Requirements

Surface Forces Logistics Center Standard Specification 6310 (SFLC Std Spec 6310), 2020, Requirements for Preservation of Ship Structures

OTHER REFERENCES

None.

3. REQUIREMENTS

3.1 General.

3.1.1 CIR. The Contractor shall submit a CIR for the inspections listed in the following paragraph(s):

None.

3.1.2 Tech Rep.

Not applicable.

3.1.3 Protective measures. The Contractor shall furnish and install all protective measures in accordance with SFLC Std Spec 0000, paragraph 3.3.3 (Vessel component, space, and equipment protection) and to the following specific components, spaces and equipment:

- Areas where underwater body coating system interfaces with freeboard coating system (unless u/w body surfaces are also being preserved).
- Adjacent deck surfaces and deck fittings.
- Deck equipment.

3.1.4 Interferences. The Contractor shall handle all interferences in accordance with SFLC Std Spec 0000, paragraph 3.3.5 (Interferences). Known interferences include, but are not limited to the below-listed:

- None.

3.2 Initial inspection. Prior to removing the existing coating system, the Contractor shall inspect and verify whether or not all hull identification numbers and letters have permanent markings (weld beads or impressions), showing their location on the hull. Submit a CFR.

3.3 Surface preparation optional methods. The Contractor shall have the option of using either high/ultrahigh pressure water Jetting or abrasive blasting to achieve the required surface preparation, prior to application of the coating system specified in 3.6 (Preservation requirements). The Contractor may add abrasives to the waterjet stream, for one or both of the following reasons:

- Achieving greater productivity.
- Achieving the required surface profile.

NOTE

Waterjetting without abrasive addition does not provide any additional anchor profile to the surface, beyond what was present after the previous surface preparation.

3.4 Substrate inspection. After completing surface preparation and before coating application, the Contractor shall perform a visual inspection of the prepared substrate, and submit a CFR.

3.5 Pre-surface preparation wash. The Contractor shall accomplish low-pressure (less than 5,000 psi) fresh water wash of all affected surfaces, to remove soluble chlorides and other surface contaminants. Capture, contain, and dispose of wash water for proper disposal in accordance with all Federal, state and local regulations.

3.6 Preservation requirements. The Contractor shall accomplish the following tasks:

3.6.1 System particulars. Prepare and coat 100% of the freeboard surfaces as designated in paragraph 1.1 (Intent) with the system specified for “Freeboard/Superstructure/Mast (Freeboard/Superstructure)” in SFLC Std Spec 6310. Select the following:

- Select “Option I” system, for the applicable metal substrate.
- Black (17038), as the top/finish coat color.

3.6.2 Visual identification markings. The Contractor shall paint all distinctive visual safety and identification markings as follows:

3.6.2.1 Decals. Coast Guard Emblem decals may be substituted for painted emblems. Vinyl adhesive letters and numbers may also be substituted for painted letters and numbers - at the Contractor's discretion.

3.6.2.2 Painted markings. Paint all distinctive visual identification markings, including the Coast Guard diagonal stripes, "U.S. COAST GUARD" legends, hull numbers, and draft marks in accordance with SFLC Std Spec 6310, and Coast Guard Drawings FL 2804-12 and FL 2804-22 as applicable.

NOTES

Surfaces being preserved are considered "critical-coated surfaces".

Although there may be several possible procurement sources for the Coast Guard Emblem decals and vinyl adhesive letters and numbers, one known source is:

Brace Enterprises
10250 SE 138 Terrace
Dunnellon, FL 34431

352-489-4442 / Fax: 352-489-4476
www.braceenterprise.com

3.6.3 Tear drop. Not applicable.

3.7 In-process quality control measures. The Contractor shall abide by all the safety, preservation, and quality control requirements specified in SFLC Std Spec 0000, paragraph 3.2.4.2 (In-process QC measures for "critical-coated surfaces).

4. NOTES

4.1 Definition of freeboard surfaces. For the purposes of this item the freeboard is defined as exterior steel hull surfaces from the upper limit of the boot-topping to the top of the bulwark, as shown on Coast Guard Drawing 175 WLM 601-001.

63150_ESD_0121_FLT
REC_63150_SprstrctrPrsrv_FLT_175' WLM (ALL) (1017)

WORK ITEM 52: Superstructure, Preserve, 100 Percent

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to preserve the steel surfaces.

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 175 WLM 601-001, Rev L, General Arrangement and Inboard and Outboard Profiles

Coast Guard Drawing 175 WLM 635-001, Rev F, Hull, Thermal, & Acoustic Insulation Schedule

COAST GUARD PUBLICATIONS

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2020, General Requirements

Surface Forces Logistics Center Standard Specification 6310 (SFLC Std Spec 6310), 2020, Requirements for Preservation of Ship Structures

OTHER REFERENCES

None

3. REQUIREMENTS

3.1 General.

3.1.1 CIR. The Contractor shall submit a CIR for the inspections listed in the following paragraph(s):

None.

3.1.2 Tech Rep.

Not applicable.

3.1.3 Protective measures. The Contractor shall furnish and install all protective measures in accordance with SFLC Std Spec 0000, paragraph 3.3.3 (Vessel component, space, and equipment protection). Specific equipment and components to be protected include, but are not limited to:

- Life lines.
- Bulkheads.
- Windows.
- Deck surfaces.

3.1.4 Interferences. The Contractor shall handle all interferences in accordance with SFLC Std Spec 0000, paragraph 3.3.5 (Interferences). Known interferences include, but are not limited to the below-listed:

- Electrical/electronic equipment.
- Junction boxes.
- Fire stations.
- Insulation (overhead of air castles)

NOTE

Existing coating system on the Superstructure surfaces may have a nominal thickness in excess of that which was originally installed, as a result of "patch-coats" applied during past availabilities.

3.2 Substrate inspection. After completion surface preparation and before coating application, the Contractor shall perform a visual inspection of the prepared substrate, and submit a CFR.

3.3 Pre-surface preparation wash. The Contractor shall accomplish low-pressure (less than 5,000 psi) fresh water wash of all affected surfaces, to remove soluble chlorides and other surface contaminants. Capture, contain, and dispose of wash water for proper disposal in accordance with all Federal, state and local regulations.

3.4 General preservation requirements. The Contractor shall prepare and coat the superstructure surfaces, using the system specified for "Freeboard/Superstructure/Mast (Freeboard/Superstructure), in SFLC Std

Spec 6310, Appendix A (Cutter and Boat Painting Systems).

3.4.1 The Contractor shall select “Option I” system, for the applicable metal substrate.

3.5 In-process quality control measures. The Contractor shall abide by all the safety, preservation, and quality control requirements specified in SFLC Std Spec 0000 In-process QC measures for critical-coated surfaces. Surfaces being preserved are considered “critical-coated surfaces.”

4. NOTES

4.1 Definition of superstructure. For the purposes of this item, superstructure surfaces are defined as vertical and horizontal surfaces from the main deck level up, excluding decks, as shown in sketch provided below. These surfaces include but are not limited to the following: all handrails and stanchions, including those on forecastle and fantail; bulkheads, doors, underside of overhangs and overheads, inboard surfaces of the bulwark, ladders, piping, stuffing tubes, structural tees, angles, standoffs, brackets and gussets. The six-inch dado where the superstructure joins the deck is not included in the definition of superstructure; it is normally preserved with the deck surfaces.

4.2 Unit's responsibility. Unit crew will install new superstructure damage control (DC) decals, compartment check-off holders, and name plates, after the completion of work.

4.3 The pilot house and handrails mounting joints conditions are illustrated below in PHOTO 1 and PHOTO 2.

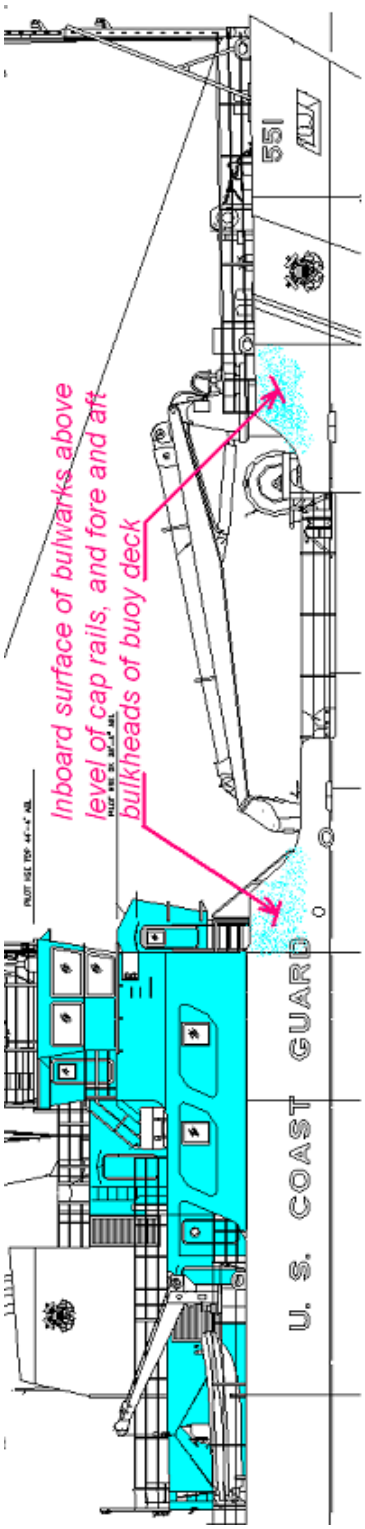


FIGURE 1. COATED SURFACES

PHOTO 1: SUPERSTRUCTURE, PILOT HOUSE

PHOTO 2: HANDRAILS MOUNTS JOINTS

WORK ITEM 53: Small Boat Davit Console Foundation, Renew

1. SCOPE

1.1 Intent. This work item describes the requirements for renewing Small Boat Davit Console Foundation, sides and top section. The console foundation is illustrated in PHOTO 1 and PHOTO 2.

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 175-WLM_601_1, Rev T, General Arrangements, Inboard and Outboard Profiles

COAST GUARD PUBLICATIONS

Surface Forces Logistics Center Standard Specification (SFLC Std Spec) 0000, 2020, General Requirements

Surface Forces Logistics Center Standard Specification (SFLC Std Spec) 0740, 2020, Welding and Allied Processes

Surface Forces Logistics Center Standard Specification 3042 (SFLC Std Spec 3042), 2020, Shipboard Electrical Cable Removal, Relocation, Splice, Repair, and Installation

Surface Forces Logistics Center Standard Specification 6310 (SFLC Std Spec 6310), 2020, Requirements for Preservation of Ship Structures

OTHER REFERENCES

None

3. REQUIREMENTS

3.1 General.

3.1.1 CIR.

- 3.3 Inspection.

3.1.2 Tech Rep.

Not applicable.

3.1.3 Protective measures. Furnish and install suitable covering to seal off and protect all non-affected surfaces/equipment and spaces in the vicinity of the work area against contamination during the performance of work. Upon completion of work, remove protective material and inspect for the presence of contamination. Clean all equipment and spaces, contaminated due to improper protection, to original condition of cleanliness.

3.1.4 Interferences. Be aware that interferences in way of work include, but are not limited to the below-listed. Handle all interferences in accordance with SFLC Std Spec 0000, paragraph 3.3.5 (Interferences):

- Hydraulic system
- Electrical Cables
- Gauge
- Power Control button
- Control system

3.2 Operational test, initial. Prior to commencement of work, the Contractor shall witness Coast Guard Personnel perform an initial operational test of the Small Boat Davit as applicable, to demonstrate existing operational condition. Submit a CFR.

3.3 Inspection. The Contractor shall visually inspect the small boat davit console foundation. Submit a CFR including the following, as applicable:

- Structural condition
- Condition of coating system, including measurements taken, percentage, location, and type of coating failure.

NOTE

Coast Guard personnel will operate all shipboard machinery and equipment.

3.4 Repair particulars. The concerned work areas are the davit console foundation bulwarks and top section due to excessive corrosion and wasted metal, as illustrated in PHOTO 1 and PHOTO 2, shall be cropped out and renewed. The Contractor shall accomplish the following tasks:

3.4.1 The Contractor shall prepare the cited areas of corrosion in accordance with SSPC-SP 11, in accordance with SFLC Std Spec 0740, Appendix C. Use Coast Guard Drawing 175-WLM 162-001 as guidance. Chalk out the boundary of the corroded plating where the remaining thicknesses are less than 75% of the original thickness. Submit a CFR.

3.4.2 Before removing any plating, obtain verification from the Coast Guard Inspector of the chalked out boundary. Provide a sketch of the intended cut and a written report of all nondestructive test findings to the Coast Guard Inspector.

3.4.3 Upon verification from the Coast Guard Inspector, crop and renew the chalked out boundary, approximately 2-square feet of plating in accordance with SFLC Std Spec 0740, use Coast Guard Drawing 175-WLM 162-001 as guidance.

3.4.4 New plating shall be of similar material and mechanical properties as the adjacent material. Submit a CFR to the Coast Guard Inspector if additional repairs are required.

3.5 The Contractor shall perform NDI of the repair welds in accordance with SFLC Std Spec 0740, Appendix C. Submit a CFR.

3.6 Touch-up preservation. The Contractor shall prepare and coat all new and disturbed exterior and interior surfaces, including all adjacent structural members, using the system specified for Smoke Stacks in SFLC Std Spec 6310, Appendix A (Cutter and Boat Exterior Painting Systems). Select finish/top coat color as follows: match existing adjacent surfaces.

3.7 Operational test, post repairs. After completion of work, the Contractor shall thoroughly test, in the presence of the Coast Guard Inspector and demonstrate the bilge sensor(s)/alarm(s) to be in satisfactory operating condition. Submit a CFR.

4. NOTES

4.1 Small Boat Davit Console Foundation conditions are illustrated below in PHOTO 1 and PHOTO 2.

PHOTO 1: SMALL BOAT DAVIT CONSOLE FOUNDATION, WASTED METAL

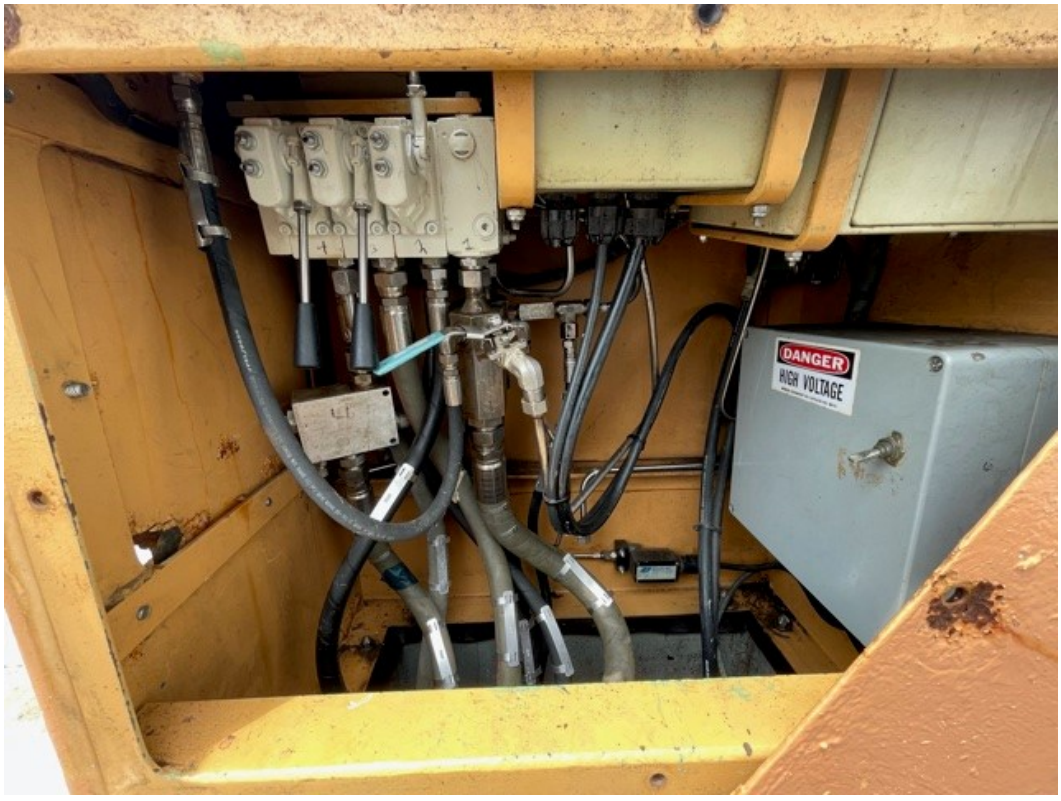


PHOTO 2: SMALL BOAT DAVIT CONSOLE FOUNDATION, INTERFERENCES

WORK ITEM 54: Buoy-Deck Beam, Renew

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to renew two (2) SQFT of deck beam/stiffener steel due to extensive corrosion/wasted metal as illustrated in PHOTO 1.

1.2 Government-furnished property.

None

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 175-WLM 601-001, Rev T, General Arr Inboard and Outboard Profiles

COAST GUARD PUBLICATIONS

Surface Forces Logistics Center Standard Specification 0740 (SFLC Std Spec 0740), 2020, Welding and Allied Processes

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2020, General Requirements

Surface Forces Logistics Center Standard Specification 6310 (SFLC Std Spec 6310), 2020, Preserve Ship Structures

OTHER REFERENCES

The Society for Protective Coatings (SSPC) Surface Preparation Specification No.11 (SSPC-SP 11), 2004, Power Tool Cleaning to Bare Metal

3. REQUIREMENTS

3.1. General.

3.1.1 CIR.

- None

3.1.2 Tech Rep.

- Not applicable.

3.1.3 Protective measures. Furnish and install suitable covering to seal off and protect all non-affected surfaces/equipment and spaces in the vicinity of the work area against contamination during the performance of work. Upon completion of work, remove protective material and inspect for the presence of contamination. Clean all equipment and spaces, contaminated due to improper protection, to original condition of cleanliness.

3.1.4 Interferences. The Contractor shall be aware that interferences in way of work include, but are not limited to what is listed in Table I below. Handle all interferences in accordance with SFLC Std Spec 0000, paragraph 3.3.5 (Interferences):

- None

3.2 Work Location. The concerned work areas is the beam in the port aft overhead section of the buoy-deck, underneath the ladder, Frame 50.

3.3. Protective measures. The Contractor shall furnish and install suitable covering to seal off and protect all non-affected surfaces/equipment and spaces in the vicinity of the work area against contamination during the performance of work. Upon completion of work, remove protective material and inspect for the presence of contamination. Clean all equipment and spaces, contaminated due to improper protection, to original condition of cleanliness.

3.4 Inspection and repair particulars. The Contractor shall accomplish the following tasks:

3.4.1 Visual inspect for corrosion damage at the work location described in Para 3.2.

3.4.2 The Contractor shall prepare the cited areas of corrosion in accordance with SSPC-SP 11, in accordance with SFLC Std Spec 0740, Appendix C. Use Coast Guard Drawing 175-WLM 162-001 as guidance. Chalk out the boundary of the corroded plating where the remaining thicknesses are less than 75% of the original thickness. Submit a CFR.

3.4.3 Before removing any plating, obtain verification from the Coast Guard Inspector of the chalked out boundary. Provide a sketch of the intended cut and a written report of all nondestructive test findings to the Coast Guard Inspector.

3.4.4 Upon verification from the Coast Guard Inspector, crop and renew the chalked out boundary, approximately 2-square feet of plating in accordance with SFLC Std Spec 0740, use Coast Guard Drawing 175-WLM 162-001 as guidance.

3.4.5 New plating shall be of similar material and mechanical properties as the adjacent material. Submit a CFR to the Coast Guard Inspector if additional repairs are required.

3.5 The Contractor shall perform NDI of the repair welds in accordance with SFLC Std Spec 0740, Appendix C. Submit a CFR.

3.6 Touch-up preservation. The Contractor shall prepare and coat all new and disturbed exterior and interior surfaces, including all adjacent structural members, using the system specified for Smoke Stacks in SFLC Std Spec 6310, Appendix A (Cutter and Boat Exterior Painting Systems). Select finish/top coat color as follows: match existing adjacent surfaces.

4. NOTES

4.1 The Buoy-Deck Beam, Port Side conditions are illustrated below in PHOTO 1.

PHOTO 1: BUOY-DECK BEAM, PORT SIDE

WORK ITEM 55: Windows Framing and Gaskets, Renew

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to repair framing and spray nozzles and renew weather seals and gaskets of the twenty-nine (29) windows listed in TABLE 1.

TABLE 1. WINDOWS

LOCATION	DESCRIPTION
01 Deck FR 57, 63 P/S	32.25”W X 26.25”H Windows, Fixed (3)
01 Deck FR 52 P/S	26.25”W X 20.25”H Windows, Fixed (2)
01 Deck FR 50 P/S	56.25”W X 33.75”H Windows, Heated, Fixed (2)
01 Deck FR 50	46.25”W X 36.75”H Windows, Heated, Fixed (1)
Pilot House, FR 52, 61 CL, P/S	49.25” x 44.25” Windows, Heated, Fixed (5)
Pilot House, FR 58	62.25” W x 44.25” H Windows, Heated, Hinged (2)
Pilot House, FR 57	55.25”W x 44.25”H Windows, Heated, Fixed (2)
Pilot House, FR 57	55”W x 45.5”H Windows, Heated, Fixed, (2)
Pilot House, FR 57	55”W x 28.50”H Windows, Heated, Fixed, (2)
Pilot House, FR 53 P/S	55.25”W (top) & 51.25 W (bottom) x 26.25H” Windows, Heated, Fixed (2)
Pilot House, FR 53 P/S	63.25”W (top) & 56.25”W (bottom) x 44.25”H Windows, Heated, Hinged (2)
Pilot House, FR 52 P/S	64.25”W (top) & 57.25”W (bottom) x 44.25”H Windows, Heated, Fixed (2)
Pilot House, FR 52 P/S	19.50”W (top) & 14.75” W (bottom) x 28.50”H Windows, Heated, Fixed (2)

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 175-WLM_625_001, Rev K, Windows & Portlights

COAST GUARD PUBLICATIONS

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2020, General Requirements

Surface Forces Logistics Center Standard Specification 0740 (SFLC Std Spec 0740), 2020, Welding and Allied Processes

Surface Forces Logistics Center Standard Specification 6310 (SFLC Std Spec 6310), 2020, Requirements for Preservation of Ship Structures

OTHER REFERENCES

MIL-PRF-1149, Jun 1998, Gasket Materials, Synthetic Rubber, 50 and 65 Durometer Hardness

MIL-A-46106, Jun 1992, Adhesive-Sealants, Silicone, RTV, One-Component

3. REQUIREMENTS

3.1 General.

3.1.1 CIR.

None.

3.1.2 Tech Rep.

Not applicable.

3.1.3 Protective measures - general. The Contractor shall furnish and install all protective coverings to seal off and protect all non-affected vessel's components, equipment, and spaces in the vicinity of the work area against contamination during the performance of work. Upon completion of work, the Contractor shall remove all installed protective measures, inspect for the presence of contamination, and return all contaminated equipment, components, and spaces to original condition of cleanliness.

3.1.4 Interferences. The Contractor shall handle all interferences in accordance with SFLC Std Spec 0000, paragraph 3.3.5 (Interferences). Known interferences include, but are not limited to the below listed:

- Insulation

NOTE

Coast Guard personnel will operate all shipboard machinery and equipment.

3.2 Operational test, initial. Prior to commencement of work, the Contractor shall witness Coast Guard personnel perform an initial operational test of electric window heater that may be disturbed, used, repaired, or altered, to demonstrate existing operational condition. Submit a CFR.

3.3 Renew particulars. The Contractor shall accomplish the following tasks, using Coast Guard Drawing 175-WLM_625_001, Rev K, Windows & Portlights, SFLC Std Spec 6310 and SFLC Std Spec 0740 as guidance:

3.3.1 Remove and disassemble the designated window. If window cannot be cleaned it is to be renewed, Remove all window sealant. Repair all damaged metal framing and spray nozzles. Renew all soft components including but not limited to the felt/sealant strips, gaskets rubber stoppers and any damaged fasteners. Note that window will not be renewed if it can be cleaned. Submit a CFR.

NOTE

Contractor shall use WI071 to install Window Wiper Modifications in lieu of repair window wipers to eleven (11) new straight line window wiper units to Pilothouse windows and Buoy Deck control booth windows IAW WI071.

3.3.2 The contractor shall repair all damaged metal framing, including but not limited to crop out and renew corrosion and wasted metal where the windows mount to the superstructure. The extent of wasted metal where the windows mount can fully be determined when windows are removed. Submit CFR.

3.3.3 The Contractor shall reinstall the cleaned or renewed window at the previously removed location the repaired metal framing, window wipers, spray nozzles and new soft components, new stainless steel mounting hardware, Type 316 and sealing compound in accordance with MIL-A-461, 6.

3.4 Touch-up preservation. The Contractor shall prepare and coat all new and disturbed surfaces to match existing adjacent surfaces in accordance with SFLC Std Spec 6310, paragraph 3.1.13 (Touch-ups and minor coating repairs).

3.5 Boundary testing. Accomplish a water hose test, in accordance with SFLC Std Spec 0740, Appendix C.

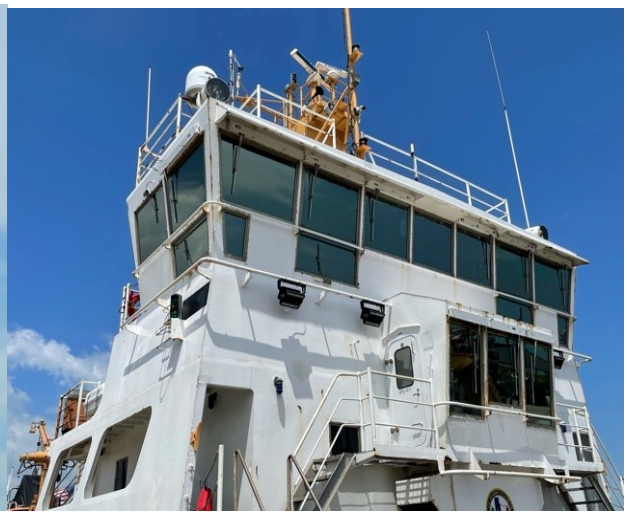
NOTE

Coast Guard personnel will operate all shipboard machinery and equipment.

3.6_ Operational test, post repairs. After completion of work, the Contractor shall thoroughly test, in the presence of the Coast Guard Inspector and demonstrate electric window heater that may have been disturbed, used, repaired, altered, or installed to be in satisfactory operating condition. Submit a CFR.

4. NOTES

4.1 The pilot house and 01 deck windows and frames conditions are illustrated below in PHOTO 1, PHOTO 2 and FIGURE 1A and 1B.



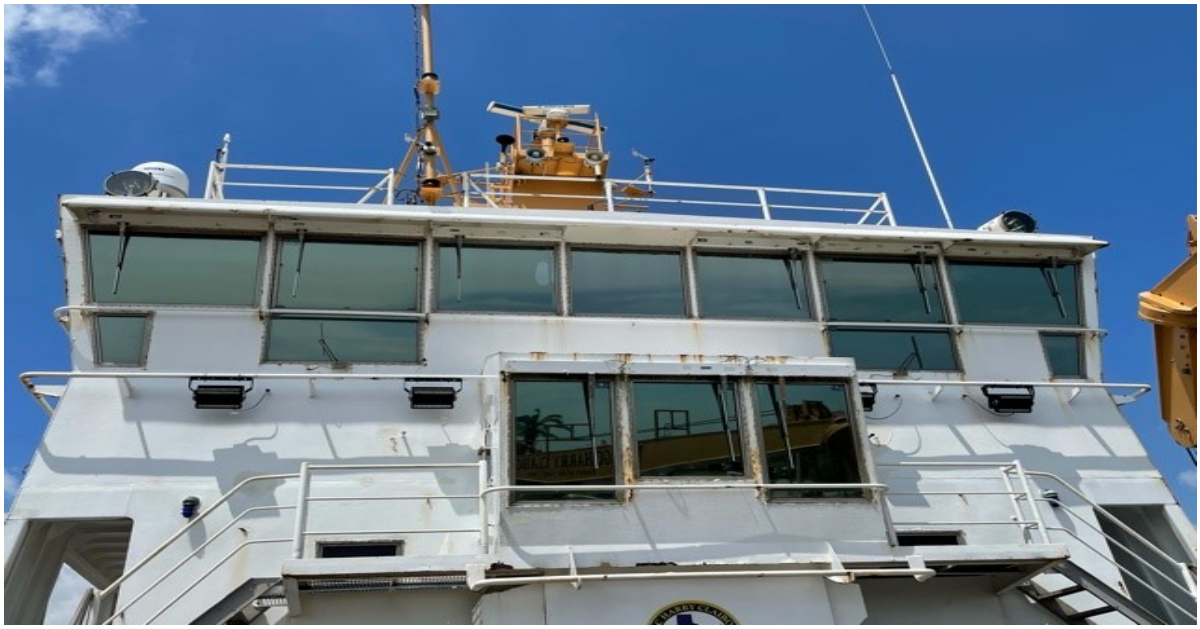


PHOTO 1: PILOT HOUSE WINDOWS


01½-51-2


USCGC HARRY CLAIBORNE
WLM 561


01½-

PHOTO 2: WINDOWS ON THE 01-DECK

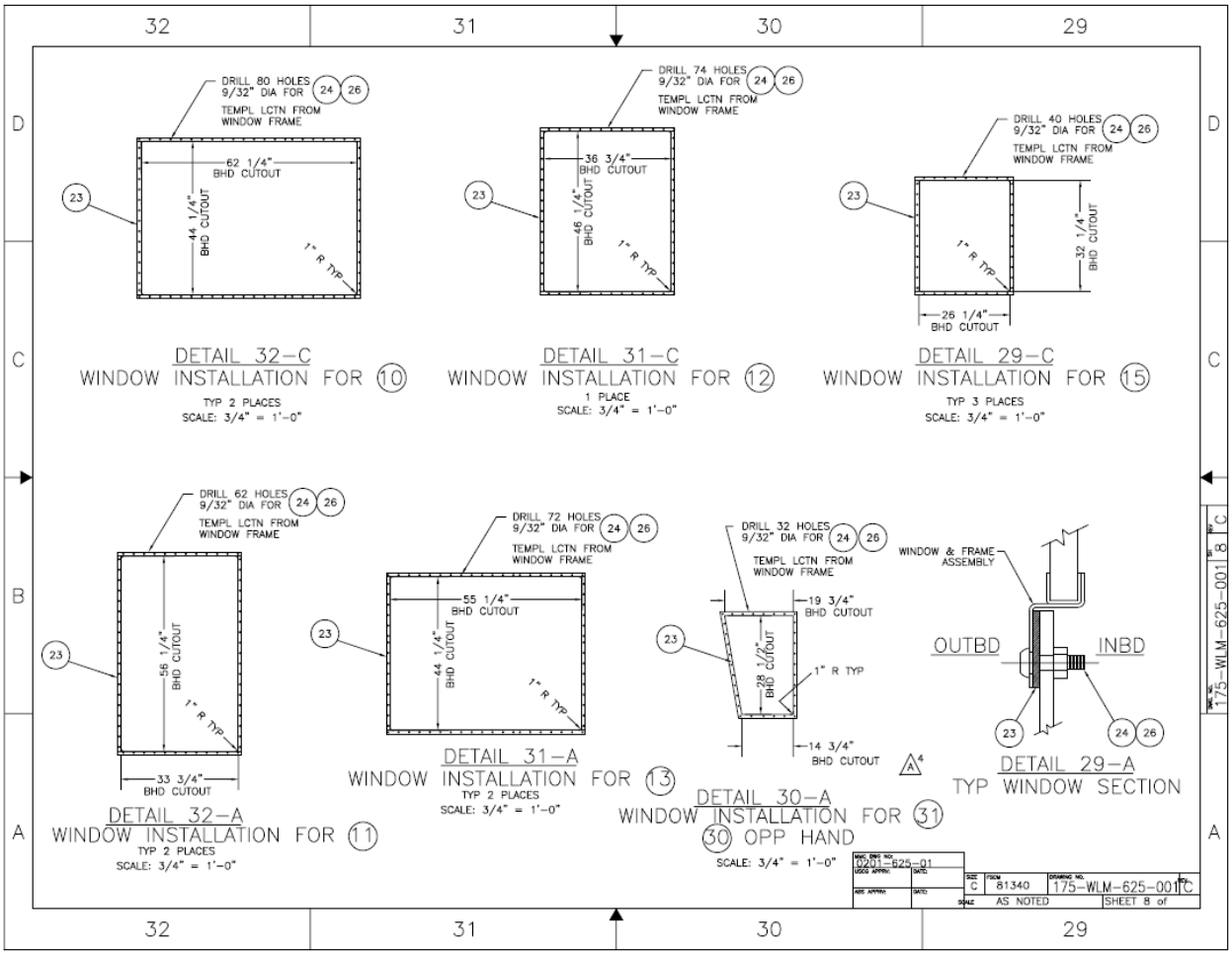


FIGURE 1A: WINDOWS DIMENSION

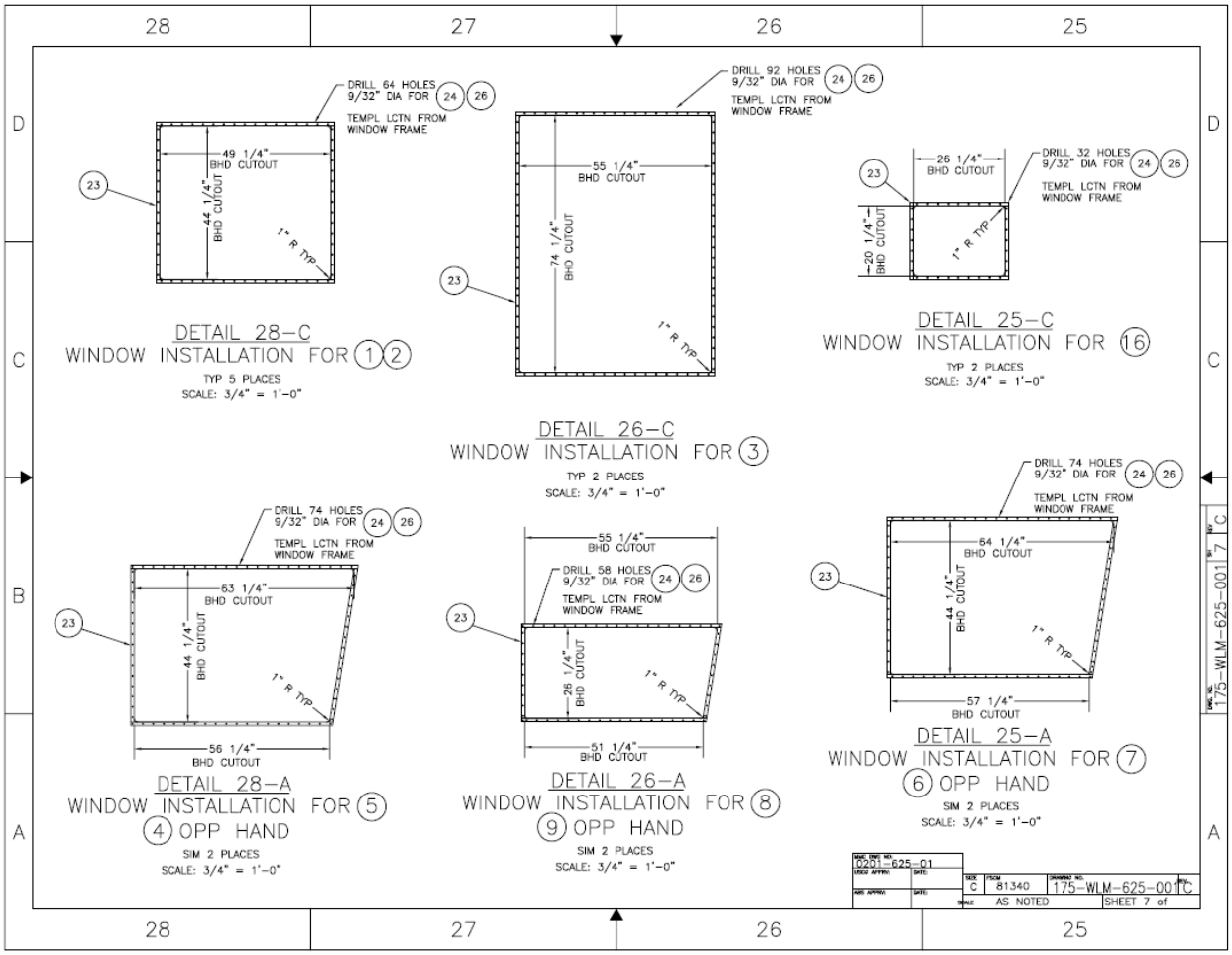


FIGURE 1B: WINDOWS DIMENSION

WORK ITEM 56: Bilges, Preserve

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to preserve the bilge surfaces for the locations and frames identified in Table 1.

TABLE 1 - BILGES

LOCATION	EXTENT OF PRESERVATION	SPACE TOTAL APPROX SQFT	CG DRAWING(S)	INTERFERENCES
Propulsion Thruster Room	100%	490	175 WLM 601-003; 175 WLM 801-019	Deck plates/grating. Machinery.
Pump Room (STBD & Port) 3-79-0-E	100%	418	175 WLM 601-003; 175 WLM 801-019	Deck plates/grating. Piping. Machinery.
Potable Water Equipment Room 3-42-1-E	100%	180	175 WLM 601-003; 175 WLM 801-019	Deck plates/grating. Piping. Machinery.
Engine Room 3-61-0-E	100%	942	175 WLM 601-003; 175 WLM 801-019	Deck plates/grating. Machinery.
Machine Shop/Potable-Water 3-42-0-Q/3-42-1-E	100%	420	175 WLM 601-003; 175 WLM 801-019	Deck plates/grating. Piping. Machinery.
Passageway to Cargo Hold 3-35-0-L	100%	36	175 WLM 601-003; 175 WLM 801-019	Deck plates/grating. Piping. Machinery.
Cargo Hold 3-24-0-AA	100%	500	175 WLM 601-003; 175 WLM 801-019	Deck plates/grating. Piping. Equipment
HPU Room 3-15-0-E	100%	220	175 WLM 601-003; 175 WLM 801-019	Deck Machinery
Bow Thruster (STBD & Port) 3-6-0-E	Partial	220	175 WLM 601-003; 175 WLM 801-019	Deck plates/grating. Machinery
ECC Void 3-52-0-V	Partial	200	175 WLM 601-003; 175 WLM 801-019	Deck plates/grating. Console Box

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 175 WLM 601_003, Rev N, Booklet of General Plans

Coast Guard Drawing 175-WLM_801_019, Rev C, Shell Expansion

COAST GUARD PUBLICATIONS

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2020, General Requirements

Surface Forces Logistics Center Standard Specification 0740 (SFLC Std Spec 0740), 2020, Welding and Allied Processes

Surface Forces Logistics Center Standard Specification 6310 (SFLC Std Spec 6310), 2020, Requirements for Preservation of Ship Structures

OTHER REFERENCES

None

3. REQUIREMENTS

3.1 General.

3.1.1 CIR. The Contractor shall submit a CIR for the inspections listed in the following paragraph(s):

- 3.1.5 (Ultrasonic thickness (UT) measurement).

3.1.2 Tech Rep.

Not applicable.

3.1.3 Protective measures. The Contractor shall furnish and install all protective coverings to seal off and protect all non-affected vessel's components, equipment, and spaces near the work area against contamination during the performance of work. Upon completion of work, the Contractor shall remove all installed protective measures, inspect for the presence of contamination, and return all contaminated equipment, components, and spaces to original condition of cleanliness.

3.1.4 Interferences. The Contractor shall handle all interferences in accordance with SFLC Std Spec 0000, paragraph 3.3.5 (Interferences).

3.2 Ultrasonic thickness (UT) measurement. The Contractor shall take a total of 200 UT measurements in accordance with SFLC Std Spec 0740, Appendix C in locations designated by the Coast Guard Inspector and using Coast Guard Drawing for the applicable vessel class as guidance. Submit a CIR.

3.2 Inspection. The Contractor shall inspect bilges identified in Table 1 in accordance with SFLC Std Spec 0000 and CG Drawings in Section 2 and submit a CFR for the following:

- Corrosion,
- Paint defects and failing,
- Failing structure surfaces and welds,

- Any bilge conditions beyond original design or condition.

3.3 Surface preservation. The Contractor shall clean, prepare, and coat the designated bilge surfaces, including all adjacent structural members, using the system specified for "Bilges, Cofferdams, and Forepeaks, Steel", in SFLC Std Spec 6310, Appendix B (Cutter and Boat Interior Painting Systems). Select the following:

- Option II system.
- Top /finish coat color: Red (20152)
- Top /finish coat color: Light gray (26622) or haze gray (26270). (20152)

WARNING

Abrasive-blasting is not permissible in a machinery spaces.

3.3.1 Remove and dispose of all bilge contaminants from the identified surfaces in accordance with all federal, state, and local regulations.

3.4 In-process quality control measures. The Contractor shall abide by all the safety, preservation, and quality control requirements specified in SFLC Std Spec 0000, paragraph 3.2.4.2 (In-process QC measures for "critical-coated surfaces).

NOTE

Surfaces being preserved are considered "critical-coated surfaces".

4. NOTES

This section is not applicable to this work item.

WORK ITEM 57: Compartment Insulation, General, Renew

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to renew insulation as described in Table 1.

TABLE 1 - INSULATION RENEWAL

DESCRIPTION	LOCATION	APPROXIMATE AREA (SQFT)
Bulkhead	01 Deck Passageway	247
Bulkhead and Overhead	01.5 Deck (to Bridge)	35
Ducting Insulation	Bridge	78
Ducting Insulation	#5 Heat Pump	109
Ducting Insulation	#6 Heat Pump	68
Ducting Insulation	Main Passage outside S/O	6
Ducting Insulation	Log Office	42
Bulkhead	Z-Drive Space	272
Bulkhead	Cargo Hold	573
Bulkhead	HPU Space	486
Bulkhead	Bow Thruster Space	300
Bulkhead	#5 HP room	138
Bulkhead	#6 HP room	138
Bulkhead and Overhead	Paint Locker	40
Bulkhead and Overhead	ATON Shop	40
Bulkhead and Overhead	DC Shop	60

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

NAVSEA Drawing 804-5773931, Rev A, Acoustic & Thermal Insulation For Compartments Installation Details

COAST GUARD PUBLICATIONS

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2020, General Requirements

Surface Forces Logistics Center Standard Specification 6310 (SFLC Std Spec 6310), 2020, Requirements for Preservation of Ship Structures

OTHER REFERENCES

None.

3. REQUIREMENTS

3.1 General.

3.1.1 CIR. The Contractor shall submit a CIR for the inspections listed in the following paragraph(s):

None.

3.1.2 Tech Rep.

Not applicable.

3.1.3 Protective measures. The Contractor shall furnish and install all protective measures in accordance with SFLC Std Spec 0000, paragraph 3.3.3 (Vessel component, space, and equipment protection).

3.1.4 Interferences. The Contractor shall handle all interferences in accordance with SFLC Std Spec 0000, paragraph 3.3.5 (Interferences).

3.2 Renewal. The Contractor shall renew all insulation identified in Table 1. Refer to the drawing listed in Section 2 for guidance.

3.2.1 Removal. Remove all existing insulation material.

3.2.2 Disposal. Dispose of all removed materials, in accordance with all applicable Federal, state, and local regulations.

3.2.3 Surface preservation. Prepare and coat all designated/exposed surfaces, including adjacent structural members, using the system specified for “Bulkheads and Overheads, Un-insulated Steel

(Appearance not a factor, i..e., voids) and Insulated Steel, Option II", in SFLC Std Spec 6310 in Appendix B (Cutter and Boat Interior Painting Systems).

NOTE

Power-tool cleaning to "Bare Metal", in accordance with SSLC-SP 11, may be used as the surface preparation method, for the following situations:

1. Abrasive blasting is not permitted in location of work.

2. Surfaces being preserved are considered too small to merit abrasive-blasting.

3.2.4 Substrate inspection - visual inspection. Upon completion of surface preparation and prior to application of primer coat, the Contractor shall visually inspect the prepared surfaces; submit a CFR.

3.2.5 New thermal and acoustic insulation installation. Install new faced thermal and acoustic insulation material, over plating surfaces and structural members identified in Table 1, as shown on NAVSEA Drawing 804-5773931. Coat the newly installed insulation using the system specified for "Insulation Surfaces, Fiberglass Sheet/Closed Cell PVC Foam" in SFLC Std Spec 6310, Appendix B (Cutter and Boat Interior Painting Systems).

4. NOTES

This section is not applicable to this work item.

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WORK ITEM 58: Deck Covering, Interior, Wet and Dry, Renew

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to renew deck covering system(s).

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 175-WLM-801-015, Rev C, Scantlings, Decks, Platforms

COAST GUARD PUBLICATIONS

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2020, General Requirements

Surface Forces Logistics Center Standard Specification 6310 (SFLC Std Spec 6310), 2020, Requirements for Preservation of Ship Structures

Surface Forces Logistics Center Standard Specification 6341 (SFLC Std Spec 6341), 2020, Install Interior Deck Covering Systems

Surface Forces Logistics Center Standard Specification 0740 (SFLC Std Spec 0740), 2020, Welding and Allied Processes

OTHER REFERENCES

The Society for Protective Coatings (SSPC) Surface Preparation Specification No. 11 (SSPC-SP 11), 2013, Power Tool Cleaning to Bare Metal

3. REQUIREMENTS

3.1 General.

3.1.1 CIR. The Contractor shall submit a CIR for the inspections listed in the following paragraph(s):

None.

3.1.2 Tech Rep.

Not applicable.

3.1.3 Protective measures. The Contractor shall furnish and install all protective measures in accordance with SFLC Std Spec 0000, paragraph 3.3.3 (Vessel component, space, and equipment protection).

3.1.3.1 Protective measures, specific. Apply protective measures as specified in SFLC Std Spec 0000, paragraph 3.3.3 (Vessel component, space, and equipment protection) to the components and equipment in the designated locations, TABLE 1.

3.1.4 Interferences. The Contractor shall handle all interferences in accordance with SFLC Std Spec 0000, paragraph 3.3.5 (Interferences).

3.2 Deck covering installation particulars. The Contractor shall perform all tasks specified in SFLC Std Spec 6341 and herein, to install a new covering system in the location(s) specified in Table 1 below.

NOTES

1. The exposed deck surfaces are prepared and coated in accordance with SFLC Std Spec 6310. Refer to SFLC Std Spec 6341, Para 3.2.1.2 for additional information.

2. Ensure the final surface condition of the deck is made "slip resistant" in accordance with manufacturer's installation procedures. Refer to SFLC Std Spec 6341, Para A2.1.2.2.

TABLE 1 - DECKING SYSTEM

LOCATION	AREA (*SQFT)	DECK MTL (A/S**)	SYSTEM/ APPENDIX (SFLC STD SPEC 6341)	COVE BASE (***Y/N)	SYSTEM COLOR	UNDERLAYMENT REQUIREMENT
Passageway between ships office and engineering office main deck	71	S	Cosmetic Polymeric Epoxy Resin, Type III (One-Step Epoxy System)/Appendix A	Y	See paragraph 3.4 (Deck covering color)	Renew existing underlayment.
MESSDECK	515	S	Cosmetic Polymeric Epoxy Resin, Type III (One-Step Epoxy System)/Appendix A	Y	See paragraph 3.4 (Deck covering color)	Renew existing underlayment.
ATON Shop Deck	140	S	High Build Epoxy	N	See paragraph 3.4 (Deck covering color)	No underlayment required

DC Shop Deck	202	S	High Build Epoxy	N	See paragraph 3.4 (Deck covering color)	No underlayment required
Pump Room Deck	395	S	High Build Epoxy	N	See paragraph 3.4 (Deck covering color)	No underlayment required
Upper Z-drive Deck	394	S	High Build Epoxy	N	See paragraph 3.4 (Deck covering color)	No underlayment required

***Approximated.**
****Note: A = Aluminum; S = Steel.**
*****See SFLC Std Spec 6341 for definition of cove base.**

3.3 Visual inspection. The Contractor shall perform a visual inspection of all exposed deck surfaces, prior to priming deck surfaces. Submit a CFR.

3.4 Preservation particulars. The Contractor shall prepare and coat the designated deck surfaces including all adjacent structural members,", if applicable, using the system specified for "Decks, Metal Interior and Non-Skid Areas in SFLC Std Spec 6310, Appendix B (Cutter and Boat Interior Painting Systems). Select finish/top coat color to match existing adjacent surfaces.

3.5 Deck covering color. The Contractor shall submit a deck covering color chart to Coast Guard Inspector, for the purpose of color selection.

4. NOTES

This section is not applicable to this work item.

WORK ITEM 59: Deck Drains, Renew (Various Compartments)

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to renew the deck drains (11 total) located in the following compartments:

TABLE 1 - DECK DRAINS TO BE RENEWED

DECK	LOCATION	SIZE (INCHES)
01	Port, Fr 52	2
01	Port, Fr 67	3
01	Stbd, Fr 51	2
01	Port, Fr 51	2
01	Stbd, Fr 52	2
01	Stbd, Fr67	3
02	Port, Fr 68	2
02	Stbd, Fr 68	2
02	Port, Fr 86	2
02	Stbd, Fr 86	2
03	Off Centerline, Fr 70	2

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 175-WLM 528-001, Rev E, Plumbing & Interior Deck Drains Diagram

Coast Guard Drawing 175-WLM 528-006, Rev G, Plumbing & Deck Drains A&D – Hull Block 910, 930, 940, & 950

Coast Guard Drawing 175-WLM 528-007, Rev E, Plumbing & Deck Drains A&D – Hull Block 960

Coast Guard Drawing 175-WLM 528-008, Rev E, Plumbing & Deck Drains A&D – Hull Block 970

Coast Guard Drawing 175-WLM 528-009, Rev H, Weather Deck Drains A&D – Hull Block 910, 920, 930, 940, 960, & 970

Coast Guard Drawing 175-WLM 601-003, Rev N, Booklet of General Plans

COAST GUARD PUBLICATIONS

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2020, General Requirements

Surface Forces Logistics Center Standard Specification 6310 (SFLC Std Spec 6310), 2020, Requirements for Preservation of Ship Structures

Surface Forces Logistics Center Standard Specification 6341 (SFLC Std Spec 6341), 2020, Install Interior Deck Covering Systems

OTHER REFERENCES

None

3. REQUIREMENTS

3.1 General.

3.1.1 CIR.

None.

3.1.2 Tech Rep.

Not applicable.

3.1.3 Protective measures. The Contractor shall furnish and install all protective coverings to seal off and protect all non-affected vessel's components, equipment, and spaces near the work area against contamination during the performance of work. Upon completion of work, the Contractor shall remove all installed protective measures, inspect for the presence of contamination, and return all contaminated equipment, components, and spaces to original condition of cleanliness.

3.1.4 Interferences. The Contractor shall handle all interferences in accordance with SFLC Std Spec 0000, paragraph 3.3.5 (Interferences). Known interferences include, but are not limited, to the following:

- One-step epoxy deck covering.
- Galley overhead.
- Insulation.
- Piping.
- Electrical cabling.
- Deck equipment.
- Berthing racks.

3.2 Renewal. The Contractor shall inspect drains connecting piping to the eleven (11) deck drains and renew (11) deck drains listed in Table 1, referring to the references listed in Section 2 “References” for guidance. Submit CFR

3.2.1 The Contractor shall prepare and coat all new and disturbed surfaces to match existing adjacent surfaces in accordance with SFLC Std Spec 6310, paragraph 3.1.13 (Touch-ups and minor coating repairs.)

3.3 Operational testing. The Contractor shall accomplish the following:

3.3.1 Leak test. Prior to deck covering installation, perform an operational test of the deck drain using water to ensure there is no visible leakage of the deck drain and associated piping. Repair all leaks and discrepancies found. Submit a CFR.

3.3.2 Drain/deck test. After deck covering installation, perform an operational test of the deck drain using water to ensure there is no visible leakage of the deck drain. Additionally, ensure that the surrounding deck covering system was adequately installed (i.e. sloped) to support deck drainage towards the drain. Submit a CFR.

3.4 Touch-up preservation, general. The Contractor shall prepare and coat all new and disturbed, as applicable, to match existing adjacent surfaces in accordance with SFLC Std Spec 6310, paragraph 3.1.13 (Touch-ups and minor coating repairs.)

3.4.1 Deck covering. The Contractor shall renew the affected deck covering to match surrounding area in accordance with SFLC Std Spec 6341.

4. NOTES

This section is not applicable to this work item.

WORK ITEM 60: Exhaust Stack Inspection Cover Studs, Renew

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to renew the broken studs on one (1) exhaust stack inspection cover.

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 175-WLM_601_1, Rev T-, Outbd, Inbd Profiles & Gen Arrg

Coast Guard Drawing 175-WLM_167_1, Rev L, Structural Closures

COAST GUARD PUBLICATIONS

Coast Guard Commandant Instruction (COMDTINST) M10360.3 (series), Coatings and Color Manual

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2020, General Requirements

Surface Forces Logistics Center Standard Specification 0740 (SFLC Std Spec 0740), 2020, Welding and Allied Processes

Surface Forces Logistics Center Standard Specification 6310 (SFLC Std Spec 6310), 2020, Requirements for Preservation of Ship Structures

OTHER REFERENCES

None.

3. REQUIREMENTS

3.1 General.

3.1.1 CIR.

None.

3.1.2 Tech Rep.

Not applicable.

3.1.3 Protective measures. The Contractor shall furnish and install all protective coverings to seal off and protect all non-affected vessel's components, equipment, and spaces near the work area against contamination during the performance of work. Upon completion of work, the Contractor shall remove all installed protective measures, inspect for the presence of contamination, and return all contaminated equipment, components, and spaces to original condition of cleanliness.

3.1.4 Interferences.

- Stud Bolts
- Exhaust Stack Inspection Cover

3.2 Inspection. Before any work is begun, the Contractor shall visually inspect all exhaust stack inspection cover, the mountings studs as well as the associate hardware for excessive deterioration and any other defects. Submit a CFR.

3.3 Removal. The Contractor shall remove broken studs and clear holes and taps for (4) missing studs on the exhaust stack in accordance with CG Dwgs 175-WLM_167_1.

3.4 Reinstallation. Renew studs with four (4) new studs and new bolts in accordance with CG Dwgs 175-WLM_167_1.

3.5 Restore all interferences to their original condition in accordance with the General Requirements.

3.6 Surface preservation. The Contractor shall prepare and coat all new and disturbed surfaces using the system specified for Freeboard/Superstructure/Mast (Freeboard/Superstructure) in SFLC Std Spec 6310, Appendix A (Cutter and Boat Exterior Painting Systems). Apply finish/top coat color to match existing surfaces.

4. NOTES

4.1 The cover holes for studs and exhaust stack inspection cover are illustrated below in FIGURE 1 and PHOTO 1.

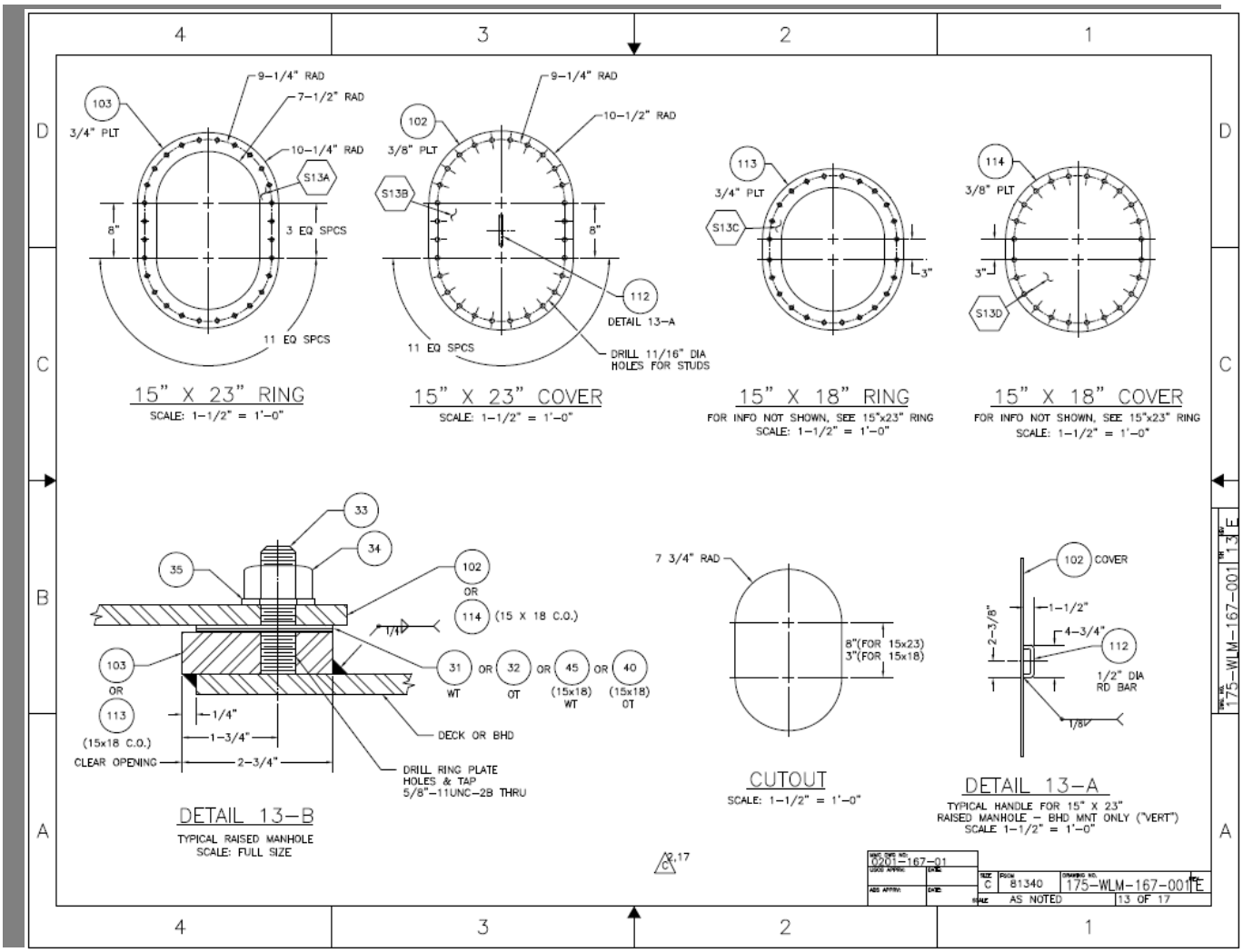

FIGURE 1: COVER HOLES FOR STUDS

PHOTO 1: EXHAUST STACK INSPECTION COVER

S_51220_ESD_0121_SWIT
SYY_NNN_51220_AUT_MMYY_HULL#
S20_001_51200_BAF_0820_558

WORK ITEM 61: Vents, Preserve and Closures, Renew

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to preserve internal and external surfaces and renew closure covers to weather deck vents identified by the Coast Guard inspector and listed below in Table 1.

TABLE 1

VENT	COVER P/N (REF CG DWG 175 WLM 512-13)	NOTE	EXTENT OF WORK
1-15-2 Buoy Deck Vent	512-13-AL1	AL#: Air lift with 1/8" THK Gasket cover. Duct 1-15-2: 14" wide x 19" tall x 12" deep	Including but not limited to crop and renew wasted metal
1-51-1 Buoy Deck Vent	512-13-AL8	AL#: Air lift with coaming & WT cover. Vent 1-15-1: ~48" tall x 22 ½" wide x 16 ½" deep	Including but not limited to crop and renew wasted metal
1-51-2 Buoy Deck Vent	512-13-AL8	AL#: Air lift with coaming & WT cover. Vent 1-51-2: ~48" tall x 22 ½" wide x 16 ½" deep	Including but not limited to crop and renew wasted metal
1-51-5 Buoy Deck Vent	512-13-AL8	AL#: Air lift with coaming & WT cover. Vent 1-51-5: ~48" tall x 22 ½" wide x 16 ½" deep	Including but not limited to crop and renew wasted metal
01-86-2 Fantail Vent	512-13-AL7	AL#: Air lift with coaming & WT cover. Vent 01-86-2: ~48" tall x 42 ½" wide x 20" deep	Including but not limited to crop and renew wasted metal
Storage Locker Fantail Vent	VF5	Outside dimensions: 9" wide x 9" deep x 9" tall. Inside dimensions: ~6" diameter tube w/ 9" diameter flange	Including but not limited to crop and renew wasted metal

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 175 WLM 512-1, Rev E, HVAC Diagram

Coast Guard Drawing 175 WLM 512-5, Rev A, HVAC A & D FR 6-FWD Hull Block 901

Coast Guard Drawing 175 WLM 512-6, Rev D, HVAC A & D FR 24-6 Hull Block 910

Coast Guard Drawing 175 WLM 512-8, Rev C, HVAC A & D, FR 61-42, Hull Block 930

Coast Guard Drawing 175 WLM 512-11, Rev E, HVAC A & D FR 70-50 Main Deck & Above Hull Block 960

Coast Guard Drawing 175 WLM 512-13, Rev C, HVAC Standard Details and General Instructions

COAST GUARD PUBLICATIONS

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2020, General Requirements

Surface Forces Logistics Center Standard Specification 0740 (SFLC Std Spec 0740), 2020, Welding and Allied Processes

Surface Forces Logistics Center Standard Specification 6310 (SFLC Std Spec 6310), 2020, Requirements for Preservation of Ship Structures

OTHER REFERENCES

None.

3. REQUIREMENTS

3.1 General.

3.1.1 CIR.

None.

3.1.2 Tech Rep.

Not applicable.

3.1.3 Protective measures. The Contractor shall furnish and install all protective coverings to seal off and protect all non-affected vessel's components, equipment, and spaces near the work area against contamination during the performance of work. Upon completion of work, the Contractor shall remove all installed protective measures, inspect for the presence of contamination, and return all contaminated equipment, components, and spaces to original condition of cleanliness.

3.1.4 Interferences. The Contractor shall handle all interferences in accordance with SFLC Std Spec 0000, paragraph 3.3.5 (Interferences).

3.2 Ventilation Inspection. In the presence of the Coast Guard inspector, the contractor shall perform an inspection of the weather deck ventilation listed in 1.1 Intent, Table 1. Submit a CFR

3.2.1 Renew vent covers. The Contractor shall fabricate new vent cover assemblies, including hinges and securing tabs for vents identified by the Coast Guard inspector and as listed in Table 1 in accordance with Coast Guard Drawing 175 WLM 512-13 and Std Spec 0740. Provide all new hardware and install new covers on vents.

3.2.2 Vent preservation. The Contractor shall preserve the internal and external surfaces of the vents identified by the Coast Guard inspector and as listed in 1.1 Intent Table 1 in accordance with Std Spec 6310, Appendix A (Cutter and Boat Exterior Painting Systems).

3.3 Watertight enclosures inspections and assessments. For all covers designated as watertight per references listed in section 2 (References), the Contractor shall accomplish the following in the presence of the Coast Guard Inspector:

3.3.1 Inspect the structural/material conditions of each watertight enclosure.

3.3.2 Demonstrate the smooth operation of all opening/closing and locking mechanisms.

3.3.3 Conduct chalk tests of all knife-edge/rubber gaskets for each enclosure as applicable to demonstrate continuous contact between gasket and knife-edge.

3.3.4 Perform a water hose test of all watertight enclosure boundaries in accordance with SFLC Std Spec 0740, Appendix C (C2.2.2 Water hose test). Submit a CFR detailing results of inspection.

3.4 Non-watertight enclosures inspections and assessments. For all covers designated as non-watertight per references listed in section 2 (References), the Contractor shall accomplish the following in the presence of the Coast Guard Inspector:

3.4.1 Inspect the structural/material conditions of each watertight enclosure.

3.4.2 Demonstrate smooth operation of all opening/closing and locking mechanisms.

3.4.3 Demonstrate full range of closure from fully-open to fully-closed. Show that closure makes contact with vent in the fully closed position. Submit a CFR detailing results of inspection.

3.5 Substrate visual inspection. Upon completion of surface preparation and prior to application of primer coat (see 3.6 (Surface preservation)), the Contractor shall perform a visual inspection of the prepared surfaces; submit a CFR.

3.6 Surface preservation. The Contractor shall prepare and coat all new and disturbed surfaces and all vent surfaces exposed to the weather for vents identified in 1.1 Intent Table 1 using the system specified for Freeboard/Superstructure/Mast (Freeboard/Superstructure) in SFLC Std Spec 6310, Appendix A (Cutter and Boat Exterior Painting Systems). Apply finish/top coat color to match existing surfaces.

4. NOTES

4.1 The Buoy Deck Vent, Fantail Vent and Storage Locker Fantail are illustrated below in PHOTO 1, PHOTO 2 and PHOTO 3.


1-15-2
Z


Z
15-1

PHOTO 1: BUOY-DECK VENT DUCTS

PHOTO 2: FANTAIL VENTS

PHOTO 3: STORAGE LOCKER FANTAIL VENT

WORK ITEM 62: Port Button Roller Chock, Renew

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to renew two (2) 16" button roller chock on the forecastle port and Stbd.

1.2 Government-furnished property.

MTI	ITEM DESCRIPTION	NSN/PN	QTY	ESTIMATED COST ($/UNIT)
N	Chock, Roller Button, 16"	Part No. 89188 Nashville Bridge Co. Model No, DF-511-5	2 ea.	

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 175-WLM-582-001, Rev D, Mooring &Towing. A & D

COAST GUARD PUBLICATIONS

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2020, General Requirements

Surface Forces Logistics Center Standard Specification 6310 (SFLC Std Spec 6310), 2020, Requirements for Preservation of Ship Structures

OTHER REFERENCES

None.

3. REQUIREMENTS

3.1 General.

3.1.1 CIR

None.

3.1.2 Tech Rep.

Not Applicable.

3.1.3 Protective measures - general. The Contractor shall furnish and install all protective coverings to seal off and protect all non-affected vessel's components, equipment, and spaces in the vicinity of the work area against contamination during the performance of work. Upon completion of work, the Contractor shall remove all installed protective measures, inspect for the presence of contamination, and return all contaminated equipment, components, and spaces to original condition of cleanliness.

3.1.4 Interferences. The Contractor shall handle all interferences in accordance with SFLC Std Spec 0000, paragraph 3.3.5 (Interferences).

3.2 Chock Renewal. The Contractor shall renew the port and stbd 16" button roller chock on the forecastle as shown in Coast Guard Drawing 175-WLM-582-001.

3.3 Touch-up preservation, general. The Contractor shall prepare and coat all new and disturbed exterior and interior surfaces, as applicable, to match existing adjacent surfaces in accordance with SFLC Std Spec 6310, paragraph 3.1.13 (Touch-ups and minor coating repairs.)

4. NOTES

4.1 Small Boat Davit Console Foundation conditions are illustrated below in PHOTO 1.

PHOTO 1: BUTTON ROLLER

WORK ITEM 63: Sounding Tube, Renew

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to renew the sounding tube assembly.

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 175 WLM 506-003, Rev D, Vents & Sounding Tubes A & D Frame 6 Forward, Hull Block 901

Coast Guard Drawing 175 WLM 506-001, Rev G, Overflows, Air Escapes & Sounding Tubes Diagrams

COAST GUARD PUBLICATIONS

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2020, General Requirements

Surface Forces Logistics Center Standard Specification 0740 (SFLC Std Spec 0740), 2020, Welding and Allied Processes

Surface Forces Logistics Center Standard Specification 6310 (SFLC Std Spec 6310), 2020, Requirements for Preservation of Ship Structures

OTHER REFERENCES

None

3. REQUIREMENTS

3.1 General.

3.1.1 CIR.

None.

3.1.2 Tech Rep.

Not applicable.

3.1.2 Protective measures. The Contractor shall furnish and install suitable covering to seal off and protect all non-affected surfaces/equipment and spaces in the vicinity of the work area against contamination during the performance of work. Upon completion of work, remove protective material and inspect for the presence of contamination. Clean all equipment and spaces, contaminated due to improper protection, to original condition of cleanliness.

3.1.3 Interferences. The Contractor shall handle all interferences in accordance with SFLC Std Spec 0000, paragraph 3.3.5 (Interferences). Known interferences include, but are not limited to the below-listed:

- Tank top.
- Bulkhead.

3.2 Sounding tube renewal particulars. Using Coast Guard Drawing 175 WLM 506-3 as guidance, the Contractor shall crop and renew the exiting sounding tube for the following systems, from and including the deck/tank top penetration down – and also including associated brackets.

SOUNDING TUBE	LOCATION/SPACE/TANK
3-0-0-V	Fwd Ballast Tank / Main Deck

3.3 Surface preservation.

3.3.1 New sounding tube and disturbed tank interior surfaces. Prepare and coat new sounding tube surfaces, including all disturbed tank interior surfaces, using the system specified for "Tanks and Voids" in SFLC Std Spec 6310, Appendix B (Cutter and Boat Interior Painting Systems), to match existing adjacent areas. Power tool clean all affected surfaces to "bare metal", in lieu of using abrasive blasting; and feather edges of existing intact coating to the prepared areas, in order to provide a smooth transition with the new paint. Select finish/top coat color to match existing adjacent surfaces.

3.3.2 Disturbed tank exterior surfaces. Prepare and coat all disturbed tank exterior surfaces, as applicable, to match existing adjacent surfaces in accordance with SFLC Std Spec 6310, paragraph 3.1.13 (Touch-ups and minor coating repairs.)

3.4 Boundary test. The Contractor shall verify the integrity of all boundaries affected by this work item using one of the methods described in SFLC Std Spec 0740, Appendix C. Submit a CFR.

4. NOTES

This section is not applicable to this work item.

WORK ITEM 64: Accessible Void(s), Preserve, Partial

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to prepare and coat the following:

TABLE 1 – VOIDS

TYPE OF STRUCTURE	LOCATION	CAPACITY - 95% (GALLONS)	LOW SUCTION (GALLONS)
Void	3-18-0-T	2,000	100
Void	3-52-0-V	5,000	100

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 175 WLM 601-003, Rev N, Booklet Of General Plans

COAST GUARD PUBLICATIONS

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2020, General Requirements

Surface Forces Logistics Center Standard Specification 0740 (SFLC Std Spec 0740), 2020, Welding and Allied Processes

Surface Forces Logistics Center Standard Specification 6310 (SFLC Std Spec 6310), 2020, Requirements for Preservation of Ship Structures

Surface Forces Logistics Center Standard Specification 8636 (SFLC Std Spec 8636), 2020, Temporary Hull Accesses

OTHER REFERENCES

ASTM International (ASTM) D1330, 2015, Standard Specification for Rubber Sheet Gaskets

3. REQUIREMENTS

3.1 General. The Contractor shall accomplish the following for the tanks designated in paragraph 1.1 (Intent). The Contractor shall refer to Coast Guard Drawing 175 WLM 601-003 for guidance..

3.1.1 CIR.

None.

3.1.2 Tech Rep.

Not Applicable.

3.1.3 Protective measures. The Contractor shall furnish and install all protective coverings to seal off and protect all non-affected vessel's components, equipment, and spaces near the work area against contamination during the performance of work. Upon completion of work, the Contractor shall remove all installed protective measures, inspect for the presence of contamination, and return all contaminated equipment, components, and spaces to original condition of cleanliness.

3.1.4 Interferences. The Contractor shall handle all interferences in accordance with SFLC Std Spec 0000, paragraph 3.3.5 (Interferences).

3.1.5 Temporary access openings. Due to limited access to work areas, the Contractor may, with express permission of the KO (via submission of a CFR), cut access holes to facilitate accomplishment of the work specified herein. Perform all work required to open and close the access openings in accordance with SFLC Std Spec 8636.

3.1.6 Tank content removal. The Contractor shall remove and dispose of all tank contents in accordance with all applicable Federal, State, and local regulations.

3.2 Surface preservation. The Contractor shall remove and retain the manhole covers. Prepare and coat designated tank (see paragraph 1.1 (Intent)) interior surfaces using the system specified in SFLC Std Spec 6310, Appendix B (Cutter and Boat Interior Paint Systems) and as follows:

- For voids use the system specified for “Tanks and Voids, General, Option I”.
- Power tool clean all affected surfaces to “bare metal”, in lieu of using abrasive blasting; and feather edges of existing intact coating to the prepared areas in order to provide a smooth transition with the new paint.
- Select finish/top coat color to match existing adjacent surfaces.

3.3 In-process quality control measures. The Contractor shall abide by all the safety, preservation, and quality control requirements specified in SFLC Std Spec 0000, paragraph 3.2.4.2 (In-process QC measures for “critical-coated surfaces). Surfaces being preserved are considered “critical-coated surfaces”.

3.4 Inspection. After surface preparation and before coating application, the Contractor shall visually inspect all interior surfaces; including, but not limited to bulkheads, floor and overhead plating, structural members, manhole cover surfaces, fasteners and gasket seating surfaces. Submit a CFR including the following, as applicable:

- Structural condition.

- Inaccessible areas.
- Tank level indicator (TLI) and/or float switch condition.
- Sounding tube and striker plate condition.
- Suction and discharge piping.
- Fastener condition.

3.5 Tank closing. The Contractor shall ensure that the tank(s) remain open for at least 24 hours after completion of the tasks specified above. Notify the COR at least 24 hours prior to closing the tank(s). After satisfactory inspection by the Coast Guard Inspector and after all authorized repairs, accomplish the following:

- Reinspect all TLIs, as applicable, to verify proper operation. Submit CFR.
- Close tank manhole cover(s) with new gasket material conforming to ASTM D1330 and new cotton stud grommets (as applicable).
- Renew up to 10% of missing or damaged nuts and washers.

3.6 Ultrasonic thickness (UT) measurement. If a Change Request has been authorized and released by the KO, the Contractor shall take a total of 100 UT measurements of the exposed void plating in locations designated by the Coast Guard Inspector, in accordance with SFLC Std Spec 0740, Appendix C. Submit a CFR.

4. NOTES

This section is not applicable to this work item.

WORK ITEM 65: Weather Deck Kickpipes, Renew.

1. SCOPE

1.1 Intent. This work item describes the requirements to crop and renew eleven (11) kickpipes stuffing tubes on the flying bridge.

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 175 WLM 320-001, Rev AJ, Electrical One-Line diagram

Coast Guard Drawing 175 WLM 320-007, Rev R, Power Sys. DK Plan 01 Level & Above Hull Block 906 & 970 Partial Elementary & Block Wiring Diagrams.

Coast Guard Drawing 175 WLM 432-005, Rev. E, Primary and Secondary PWR Telephone CKTS.

Coast Guard Drawing 175 WLM 432-007, Rev B, SP. Telephone List of Outlets

Coast Guard Drawing 175 WLM 635-001, Rev F, Hull Thermal and Acoustic Insulation Schedule.

COAST GUARD PUBLICATIONS

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2020, General Requirements

Surface Forces Logistics Center Standard Specification 0740 (SFLC Std Spec 0740), 2020, Welding and Allied Processes

Surface Forces Logistics Center Standard Specification 3041 (SFLC Std Spec 3041), 2020, Shipboard Electrical Cable Test

Surface Forces Logistics Center Standard Specification 3042 (SFLC Std Spec 3042), 2020, Shipboard Electrical Cable Removal, Relocation, Splice, Repair, and Installation

Surface Forces Logistics Center Standard Specification 6310 (SFLC Std Spec 6310), 2020, Requirements for Preservation of Ship Structures

OTHER REFERENCES

MIL-STD-2003-3A, Sep 2009, Electric Plant Installation Standard Methods for Surface Ships & Submarines (Penetrations)

Mil-S-24235/9E, 1992, Stuffing Tubes, Metal, and Packing Assemblies for Electric Cables, Brass and Steel, for Decks and Bulkhead with Pipe Protection.

MIL-I-3064, Mar 1991, Insulation, Electrical, Plastic-Sealer

MIL-DTL-24643/15, Power and Lighting, Watertight, Circuit Integrity

3. REQUIREMENTS

3.1 General.

3.1.1 CIR.

None.

3.1.2 Tech Rep.

Not applicable.

3.1.3 Protective measures. Furnish and install suitable covering to seal off and protect all non-affected surfaces/equipment and spaces in the vicinity of the work area against contamination during the performance of work. Upon completion of work, remove protective material and inspect for the presence of contamination. Clean all equipment and spaces, contaminated due to improper protection, to original condition of cleanliness.

3.1.4 Interferences. Be aware that interferences in way of work include, but are not limited to the below-listed. Handle all interferences in accordance with SFLC Std Spec 0000, paragraph 3.3.5 (Interferences):

- Combings and interior insulation
- Electrical Cables through Stuffing Tubes

3.1.5 Welding. Perform all welding and nondestructive inspections in accordance with SFLC Std Spec 0740. The patched welding plate shall be the same material and thickness of the deck.

3.2 Cable removal. Disconnect the cables at connection points as per Section 3.3 of SFLC Std Spec 3042. The affected circuits are shown on Coast Guard Drawings 175 WLM_320_(1_7), _432_(5 _7). Pull each disconnected cable listed in through the stuffing tube and coil out of the way. Protect exposed cable ends, jacks, receptacles, and connectors from water and foreign material intrusion

3.3 Insulation removal. As needed to accommodate hot work, remove and scrap thermal insulation from the overhead of the compartment below the stuffing tubes.

3.4 Stuffing tube removal. Perform all blanking, welding and quality assurance inspections per SFLC Std Spec 0000. Crop out the stuffing tubes, refer to paragraph 3.12 of SFLC Std Spec 0740 for plug welding and insert plate requirements.

3.5 Stuffing tube renewal. Prepare the deck plating to receive a new steel kickpipe or swage tube of standard or extra heavy wall thickness. Select, space, and install tubes in accordance with MIL-STD-2003-3. Use the installation method of Figure 3D1 (kickpipe and stuffing tube) or 3D2 (swage tube) in Appendix D, welding both sides of the deck plating.

3.6 Cable reinstallation. Reinstall and reconnect the cables as per Section 3.3 of SFLC Std Spec 3042. All stuffing tube packing materials shall be new and not older than manufacturer's recommended shelf life. Defer any installation of plastic sealer until after testing of Section 3.7 below is completed.

3.7 Testing. For each stuffing tube and associated circuit, ensure that the following tests are performed

3.7.1 The cable insulation resistance test of SFLC Std Spec 3041, as directed by SFLC Std Spec 3042, paragraph 3.3.9.

3.7.2 The water hose test of Appendix C of SFLC Std Spec 0740, as directed by SFLC Std Spec 3042, paragraph 3.3.10, to verify that the cable packing and stuffing tube welds are watertight.

3.7.3 The post installation operational test, as directed by SFLC Std Spec 0000, paragraph 3.3.5.1.

3.8 Plastic sealer. After satisfactory completion of testing, apply plastic sealer electrical insulation (MIL-I-3064, Type HF) if required by the installation method of MIL-STD-2003-3 used to install the stuffing tube.

3.9. Touch-up preservation. Prepare and coat all new and disturbed exterior and interior surfaces to match existing adjacent surfaces in accordance with SFLC Std Spec 6310, Appendix A (Cutter and Boat Exterior Painting Systems) and Appendix B (Cutter and Boat Interior Painting Systems), respectively in compliance with COMDTINST M10360.3 . Abide by all touch-up requirements outlined in SFLC Std Spec 0000, Appendix A (Requirements for Preservation of Ship Structures).

3.10 Insulation installation. Renew existing insulation material as shown on Coast Guard Drawing 175 WLM_635_1. Coat the newly installed insulation, using the system specified for "Insulation Surfaces, Fiberglass Sheet/Closed Cell PVC Foam" per SFLC Std Spec 6310, Appendix B (Cutter and Boat Interior Painting Systems).

4. NOTES

4.1 The following stuffing and swage tube data is provided for information:

TABLE I – STUFFING TUBE DATA

CABLE		KICKPIPE SIZE	MILITARY PART NUMBER		
TYPE	MAXIMUM DIAMETER (MILS)		STEEL STUFFING TUBE ASSEMBLY*	STEEL DECK [BULKHEAD] SWAGE TUBE ASSEMBLY*	PREFORMED PACKING ASSEMBLY
LS2SWU-1	255	3/8–18 NPT	M24235/9-121	M24235/17-061 [M24235/17-001]	M16685-2IIA
LSTPNW-1 1/2	235	3/8–18 NPT	M24235/9-121	M24235/17-061 [M24235/17-001]	M16685-2IIA
LSTNM-4	449	½-14 NPT	M24235/9-122	M24235/17-062 [M24235/17-002	M16685-2IIB

* A tube assembly consists of the tube body, gland nut, and gland ring. Order packing separately.

4.2 The stuffing tubes conditions are illustrated below, PHOTO 1.

PHOTO 1: STUFFING TUBES CONDITIONS

WORK ITEM 66: Portable Davit Brackets and Liner Sleeve, Renew

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to renew four (4) portable davit brackets and two (2) portable davit liner sleeves on port and starboard side.

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 175-WLM_601_1, Rev T, General Arrangements, Inboard and Outboard Profiles

COAST GUARD PUBLICATIONS

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2020 General Requirements

Surface Forces Logistics Center Standard Specification 0740 (SFLC Std Spec 0740), 2020 Welding and Allied Processes

Surface Forces Logistics Center Standard Specification 6310 (SFLC Std Spec 6310), 2020, Requirements for Preservation of Ship Structures

OTHER REFERENCES

None.

3. REQUIREMENTS

3.1 General.

3.1.1 CIR.

None.

3.1.2 Tech Rep

Not Applicable.

3.1.3 Protective measures - general. The Contractor shall furnish and install all protective coverings to seal off and protect all non-affected vessel's components, equipment, and spaces in the vicinity of the work area against contamination during the performance of work. Upon completion of work, the Contractor shall remove all installed protective measures, inspect for the presence of contamination, and return all contaminated equipment, components, and spaces to original condition of cleanliness.

3.1.4 Interferences. The Contractor shall handle all interferences in accordance with SFLC Std Spec 0000, paragraph 3.3.5 (Interferences). Known interferences include, but are not limited to, the below-listed:

- None

3.2 Removal and reinstallation.

3.2.1 The Contractor shall crop and renew two (2) brackets for davit pins on the port and starboard portable davit and preserve adjacent surfaces.

3.2.2 The Contractor shall crop and renew the port and starboard portable davit liner sleeve that sits inside the post due to failing welds and deteriorated condition.

3.3 Boundary test, generic. The Contractor shall verify the integrity of all boundaries affected by this work item using one of the methods described in SFLC Std Spec 0740, Appendix C. Submit a CFR.

3.4 Touch-up preservation, general. The Contractor shall prepare and coat all new and disturbed exterior and interior surfaces, as applicable, to match existing adjacent surfaces in accordance with SFLC Std Spec 6310, paragraph 3.1.13 (Touch-ups and minor coating repairs).

4. NOTES

4.1 The Portable Davit Brackets and Liner Sleeve conditions are illustrated below in PHOTO 1 and PHOTO 2.

PHOTO 1: PORTABLE HOISTS BRACKETS, RENEW

PHOTO 2: LINER SLEEVE RENEW

WORK ITEM 67: 175' WLM H2S Gas Detector, Replace.

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to replace the existing H2S Gas Detection Alarm with the new model (Detcon Model X40-08-N4X) on the 175-Foot WLM Keeper Class.

1.2 Government-furnished property.

MTI	ITEM DESCRIPTION	NSN/PN	QTY	ESTIMATED COST ($/UNIT)
N	Model X40-08-N4X, Gas Detection & Alarm Control System	NSN: 6320-01-F19-5650 DETCON PN: 954-X08000-024	1 ea.	1,250.00
N	Electraray® rotating warning light, amber, 120VAC	NSN: 6210-01-454-4748 Federal Signal PN: 225-120A	1 ea.	176.69
N	SONALERT 120VAC 80 – 95dB, D Case Style, Type SC110N	NSN: 6350-01-196-0142 Newark PN: 64F276	1 ea.	48.77

***Government-loaned property, which shall be returned to the vessel upon completion of the availability.**
****New or refurbished equipment that the Government may provide for installation in place of existing equipment.**
*****Government-furnished property, which is to be supplied by either the vessel or the C4IT Service Center.**

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 175-WLM-436-004, Rev. F, C02 Release & H2S Alarm System Block, ISO & Elementary Wiring Diagram

COAST GUARD PUBLICATIONS

Coast Guard Technical Publication (TP) Coast Guard Technical Publication (TP) 3622, SWBS 436, Section C, Nov. 2, 2018, H2S Alarm System

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2020, General Requirements

OTHER REFERENCES

IEEE-STD-45, 11 Oct 2002, Recommended Practice for Electrical Installations on Shipboard

Naval Ships Technical Manual (NSTM) Chapter 074 Volume 3, 01 Aug 2011, Gas Free Engineering, Appendix G, PERMISSIBLE EXPOSURE LIMITS (PEL)

3. REQUIREMENTS

3.1 General.

3.1.1 CIR.

None.

3.1.2 Tech Rep.

Not applicable.

3.1.3 Protective measures - general. The Contractor shall furnish and install all protective coverings to seal off and protect all non-affected vessel's components, equipment, and spaces in the vicinity of the work area against contamination during the performance of work. Upon completion of work, the Contractor shall remove all installed protective measures, inspect for the presence of contamination, and return all contaminated equipment, components, and spaces to original condition of cleanliness.

3.1.4 Interferences. The Contractor shall handle all interferences in accordance with SFLC Std Spec 0000, paragraph 3.3.5 (Interferences). Known interferences include, but are not limited to the following:

- Sheathing
- Bulkhead insulation
- Piping
- Electrical wiring

3.2 Equipment Removal. The Contractor shall:

3.2.1 Remove the Sonalert annunciator from the existing H2S Control System and retain for reinstallation.

3.2.2 Disconnect the cables (K-MPC-R425, C-3AV1, C-3AV2, & C-3AV) from the existing H2S Control System (110A-FB or 140-N4X) that connect to the MPCMS, remote alarm station, the sensor assembly, and the power supply respectively. See CG DWG 175-WLM-436-004, sheet 5. Coil cables back for reuse in replacement X40 Control System.

3.2.3 Remove the nylon stuffing tubes from the existing H2S Control System and retain for reinstallation.

3.2.4 Disconnect, remove and retain the existing H2S Control System.

3.3 Equipment Installation. The Contractor shall:

3.3.1 Drill the required mounting holes in the X40 Control System housing to attach the beacon, Sonalert annunciator and the terminal strip, using the 110A-FB Control System housing as a template.

3.3.2 Drill the required holes for the stuffing tubes (removed in Paragraph 3.2.3) using the existing 110AFB Control System as a template. The stuffing tube for K-MPC-R425 should be closest to the door hinge. Install stuffing tubes in holes to maintain watertight integrity in accordance with IEEE-STD-45.

3.3.3 After using the obsolete 110A-FB Control System as a template in Paragraphs 3.3.1 and 3.3.2, dispose of in accordance with SFLC Standard Spec 0000 and local procedures.

3.3.4 Attach the beacon, Sonalert annunciator (from paragraph 3.2.1) and terminal strip to the enclosure. Seal openings to maintain the watertight integrity in accordance with IEEE-STD-45. See Figure 1.

3.3.5 Install the internal wiring in accordance with CG DWG 175-WLM-436-004. See Figure 2.

3.3.6 Mount the X40 Control System in the same location of the obsolete H2S Control System. Mounting dimensions are shown in Figure 3.

3.3.7 Install the cables (disconnected in step 3.2.2) in the bottom of the enclosure thru the stuffing tubes (installed in step 3.3.2). Reconnect the cable wires in accordance with CG DWG 175-WLM-436-004, Rev. F, sheet 5, Model X40-08-N4x Elementary Wiring Diagram and Block Diagram.

3.3.8 Verify that switches SWI-I and SWI-4 on the control board (door of the enclosure) are in the off position. See IEEE-STD-45 paragraph 6.1.

3.3.9 Verify that switch SWI (VAC power) on the motherboard (back of the enclosure) is on, and that switches SW3 (Battery) and SW4 (VDC power) are off. Set switch V-SELECT to appropriate input AC voltage (115 V). See IEEE-STD-45 paragraph 5.

3.3.10 Energize equipment in accordance with SFLC Standard Spec 0000.

3.4 Software Setup. The setup of the controller is critical for proper operation. The Contractor shall refer to the TP 3622_C, Chapter IIA. Model X40-08-N4X, Section 1.8, System Operation and the Menu Flow Chart in Section 1.9, Operator Interface to navigate the program menu setup and make changes.

3.4.1 There are four internal magnetic switches located above the Controller's backlit LCD display necessary to configure the X40 controller:

- PROG,
- Up Arrow,
- Down Arrow
- ENTER (and RESET/ACK from Main Display)

3.4.2 Use a Magnetic Programming Tool (provided with the X40 H2S Controller package) to swipe over the magnetic switches. When the PROG switch is entered from the Main Display, it allows the operator to get into the Main Menu to complete for configuration of the X40 controller.

3.4.3 Operational test. Refer to the Menu Flow Chart specified in Section 3.4 above to run through the Inhibit & Alarm Test and the System Diagnostics procedures.

3.5 Operational test post repairs. The post installation operational test, as directed by SFLC Std Spec 0000, paragraph 3.3.5.1. The Contractor shall witness an operational test post repairs (by Coast Guard personnel) to prove the operating condition of the new X40 H2S Alarm and Detection Control System is satisfactorily functioning. Submit CFR.

FIGURE 1. E ROOM

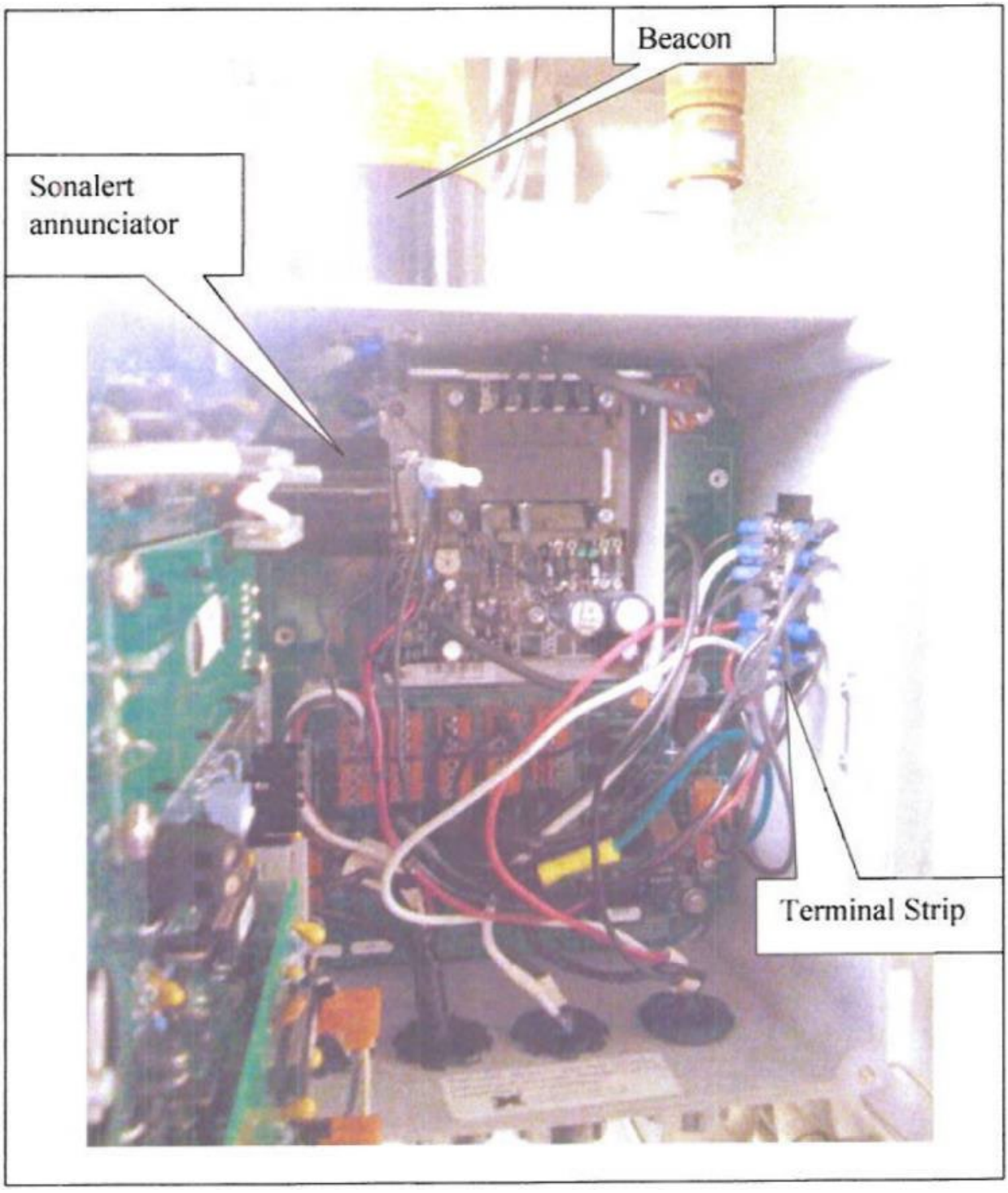

FIGURE 2. COMPONENT ARRANGEMENT

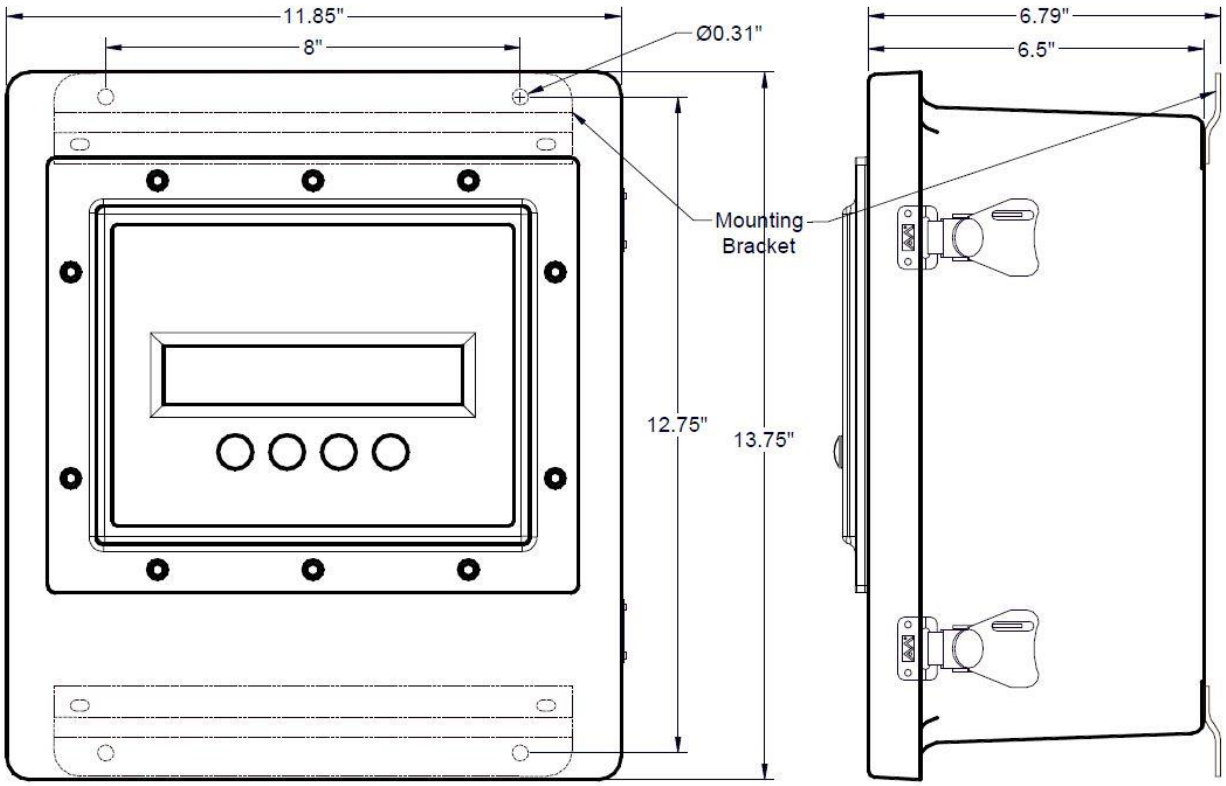

FIGURE 3. X40-08-N4X MOUNTING AND DIMENSIONS

4. NOTES

This section is not applicable to this work item.

WORK ITEM 68: Weather Deck Non-Skid, MIL-SPEC Coating

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to preserve the following exterior deck surfaces:

- 01 Deck – Forecastle.
- 02 Deck - Port and Starboard Air Castles
- 04 Deck – Pilot House Top

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 175 WLM 601-001, Rev T, General Arrangement and Inboard and Outboard Profiles

COAST GUARD PUBLICATIONS

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2020, General Requirements

Surface Forces Logistics Center Standard Specification 6310 (SFLC Std Spec 6310), 2020, Requirements for Preservation of Ship Structures

OTHER REFERENCES

None.

3. REQUIREMENTS

3.1 General.

3.1.1 CIR.

None.

3.1.2 Tech Rep.

Not applicable.

3.1.3 Protective measures. The Contractor shall protect non-affected vessel's equipment, components, and spaces during surface preparation and coating application procedures, as specified in SFLC Std Spec 0000, paragraph 3.3.3 (Vessel component, space, and equipment protection). Specific areas/ equipment/ components to be protected include, but are not limited to:

- Adjacent vertical (beyond what is specified in paragraph 3.2.1 (System particulars)).
- Deck fittings.
- Deck equipment.

3.1.4 Interferences. The Contractor shall handle all interferences in accordance with SFLC Std Spec 0000, paragraph 3.3.5 (Interferences). Known interferences include, but are not limited to the below-listed:

- Life rafts.
- Pump cans.
- Locker.
- SCBA air pump.
- Small boat.
- Flat box.

3.2 Preservation requirements particulars. The Contractor shall accomplish the following tasks. Use Coast Guard Drawing 175 WLM 601-001 as guidance.

3.2.1 Pre-surface preparation wash. Prior to accomplishing surface preparation, accomplish low-pressure (less than 5,000 psi) fresh water wash of all affected surfaces, to remove soluble chlorides and other surface contaminants. Capture, contain, and dispose of wash water for proper disposal in accordance with all Federal, state and local regulations.

3.2.2 Surface preparation and coating application. Prepare and coat the weather deck surfaces designated in paragraph 1.1 (Intent), including bitt and chock foundations, machinery rack guards and machinery foundations, hatches and hatch guards, stanchion sockets, vent pipes, angle coaming area, and approximately six inches up all adjacent vertical surfaces (as applicable); select and use the system specified for "Weather Deck Non-Skid, MIL-SPEC Coating for Steel or Aluminum, Steel: SSPC-SP 10/NACE NO. 2 using grit conforming to MIL-A-22262 /(1.5-3.5)" in SFLC Std Spec 6310, Appendix A (Cutter and Boat Exterior Painting Systems).

3.2.2.1 Surface preparation optional methods. The Contractor shall have the option of using either high/ultrahigh pressure water Jetting, abrasive blasting, or a combination of the two, to achieve the required surface preparation. The Contractor may add abrasives to the waterjet stream, for one or both of the following reasons:

- Achieving greater productivity.
- Achieving the required surface profile.

NOTE

Waterjetting without abrasive addition does not provide any additional anchor profile to the surface, beyond what was present after the previous surface preparation.

3.2.2.2 Substrate inspection. After completion surface preparation and before coating application, perform a visual inspection of the prepared substrate, and submit a CFR.

3.2.2.3 Color selection. Select and use authorized paint as specified in SFLC Std Spec 6310, Appendix A, note 28. Use Gray as the finish/top coat color.

3.2.2.4 Nonskid exclusion. Do not apply non-skid aggregate over vertical surfaces, and the following areas:

- Within two inches of deck fittings, hatches, welds, and protrusions.
- Within six inches of deck coaming, bulkheads, and deck edges.
- Within six inches of all deck edges and bulkheads.
- Within two inches of deck foundations (two inches measured from outermost portion of foundation, for example, foundation brackets on anchor windlass).
- Over deck fittings.
- Over waterways.
- Over welds.

NOTES

1. Surfaces being preserved are considered "critical-coated surfaces".

2. Unless a containment system is used to contain surface preparation dust and debris and coating application overspray during pier side/dockside preservation, the following shall be adhered to:

a. All surface preparation tools/equipment shall vacuum-shrouded.

b. Coatings shall be applied by brushing or rolling.

3.2.2.5 Non-skid surface appearance and texture. Ensure that the non-skid surface shall show continuous and reasonably uniform profile. Aggregate shall present a rough uniformly coarse appearance over the entire surface with no loosely bound clumps of particles.

3.3 In-process quality control measures. The Contractor shall abide by all the safety, preservation, and quality control requirements specified in SFLC Std Spec 0000, paragraph 3.2.4.2 (In-process QC measures for "critical-coated surfaces).

4. NOTES

4.1 Definition of coaming. Vertical raised sections of deck plating around an opening that provide a frame and/or deflect water, such as around a hatch or gooseneck.

WORK ITEM 69: Window Wiper Modifications, Install

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to install modifications to the window wiper system.

1.2 Government-furnished property.

MTI	ITEM DESCRIPTION	NSN/PN	QTY	ESTIMATED COST ($/UNIT)
N	Wynn Window Wiper Assemblies, Straight Line, Type C	ACN: 2090-01-LG9-1208, -1209, -1210, -1211, -1212, -1213, -1214, -1215, -1216, -1217, -1218	11 ea.	1,000.00
N	Controllers	#1000 Model 1001	11 ea.	2,000.00

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 175 WLM 320-001, Rev AJ, Electrical One-line Diagram

Coast Guard Drawing 175 WLM 320-007, Rev R, Power System Deck Plan 01 Level and Above

Coast Guard Drawing 175 WLM 625-001, Rev K, Windows and Portlights

COAST GUARD PUBLICATIONS

Coast Guard Technical Publication (TP) 4609, July 2006, Wynn Installation and Operation Manual for STRAIGHT-LINE WIPER - TYPE "C"

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2020, General Requirements

Surface Forces Logistics Center Standard Specification 6310 (SFLC Std Spec 6310), 2020, Requirements for Preservation of Ship Structures

OTHER REFERENCES

None.

3. REQUIREMENTS

3.1 General.

3.1.1 CIR.

None.

3.1.2 Tech Rep.

Not applicable.

3.1.3 Protective measures - general. The Contractor shall furnish and install all protective coverings to seal off and protect all non-affected vessel's components, equipment, and spaces in the vicinity of the work area against contamination during the performance of work. Upon completion of work, the Contractor shall remove all installed protective measures, inspect for the presence of contamination, and return all contaminated equipment, components, and spaces to original condition of cleanliness.

3.1.4 Interferences. The Contractor shall handle all interferences in accordance with SFLC Std Spec 0000, paragraph 3.3.5 (Interferences). Known interferences include, but are not limited to the below-listed:

- Stuffing tubes.
- Insulation.
- Sheathing and framing.
- Bulkheads.
- Windows.

3.2 Requirements. The Contractor shall install eleven new straight line window wiper units to Pilothouse windows and Buoy Deck control booth windows as shown on Coast Guard Drawings 175 WLM 320-001, 175 WLM 320-007 and 175 WLM 625-001 and as follows:

3.2.1 Remove six existing pantograph style window wipers and associated cabling and control circuits installed across the front of the Pilothouse, two forward outboard pantograph style window wipers installed on hinged windows on Pilothouse bridge wings, and three existing pantograph style window wipers installed in the Buoy Deck control room.

3.2.2 Disconnect and remove the cabling from the junction wiring boxes. Retain the junction boxes for later use. Dispose of all removed wipers, cables and controllers in accordance with all Federal, state and local regulations.

3.2.3 Install eleven (eight in the Pilothouse and three in the Buoy Deck control booth) straight line Type C window wiper motors, straight line tracks with de-icing heaters, controllers and associated cabling as shown on Coast Guard Drawings 175 WLM 320-007 and 175 WLM 625-001; and in accordance with TP 4609.

3.2.4 Install additional junction boxes as required to facilitate connections between the park switches and de-icing heater units and the controllers. Mount each wiper controller between the windows at a height no greater than six feet above the deck. For the Wynn 1000 controller, use as NEMA 4x stainless box 8” x 6” x 4”. Cut the hole for the controller into the side of the box using the manufacturer’s template.

3.2.5 Connect the existing water washing system to the new straight-line wiper units.

3.2.6 Install new label plates matching existing label plate size and type at each affected junction box and adjacent to new controllers indicating new and revised circuits as shown on Coast Guard Drawing 175 WLM 320-007.

3.3 Touch-up preservation, general. The Contractor shall prepare and coat all new and disturbed exterior and interior surfaces, as applicable, to match existing adjacent surfaces in accordance with SFLC Std Spec 6310, paragraph 3.1.13 (Touch-ups and minor coating repairs.)

3.4 Operational test – post repairs. After completion of work, the Contractor shall thoroughly test, in the presence of the Coast Guard Inspector and demonstrate the installed wiper system to be in satisfactory operating condition. Submit a CFR.

4. NOTES

This section is not applicable to this work item.

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S15_007_63000_EqpmntFndtns_PWB_0515_564

WORK ITEM 70: Equipment Foundations, Renew

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to renew the existing foundations for the following equipment:

LOCATIONS/DESCRIPTIONS	EXTENT OF PRESERVATION
Port Searchlight Estimated Dimensions: 19" diameter, 3" in height, and the metal is 3/8" thick	The contractor shall crop, renew searchlight foundation. Port searchlight foundation is severely corroded/deteriorated. Refer to PHOTO 1 for illustration
STBD Searchlight Estimated Dimensions: 19" diameter, 3" in height, and the metal is 3/8" thick	The contractor shall crop, renew searchlight foundation. Stbd searchlight foundation is severely corroded/deteriorated. Refer to PHOTO 1 for illustration

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 175-WLM_601_1, Rev T, General Arrangements, Inboard and Outboard Profiles

COAST GUARD PUBLICATIONS

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2020, General Requirements

Surface Forces Logistics Center Standard Specification 0740 (SFLC Std Spec 0740), 2020, Welding and Allied Processes

Surface Forces Logistics Center Standard Specification 6310 (SFLC Std Spec 6310), 2020, Requirements for Preservation of Ship Structures

OTHER REFERENCES

The Society for Protective Coatings (SSPC) Surface Preparation Specification No.11 (SSPC-SP 11), 2012, Power Tool Cleaning to Bare Metal

3. REQUIREMENTS

3.1 General.

3.1.1 CIR.

None.

3.1.2 Tech Rep.

Not applicable.

3.1.3 Protective measures - general. The Contractor shall furnish and install all protective coverings to seal off and protect all non-affected vessel's components, equipment, and spaces in the vicinity of the work area against contamination during the performance of work. Upon completion of work, the Contractor shall remove all installed protective measures, inspect for the presence of contamination, and return all contaminated equipment, components, and spaces to original condition of cleanliness.

3.1.4 Interferences. The Contractor shall handle all interferences in accordance with SFLC Std Spec 0000, paragraph 3.3.5 (Interferences). Known interferences include, but are not limited to the below-listed:

- Foundation-associated equipment.
- Electrical Cable

3.2 Renewal. The contractor shall crop and renew two searchlight foundations.

3.2.1 The Contractor shall perform NDI of the repair welds in accordance with SFLC Std Spec 0740, Appendix C. Submit a CFR

3.3 Surface preservation.

3.3.1 The Contractor shall prepare and coat all new and disturbed surfaces to match existing adjacent surfaces in accordance with SFLC Std Spec 6310, paragraph 3.1.13 (Touch-ups and minor coating repairs.) Power tool clean all affected surfaces to “bare metal”, in lieu of using abrasive blasting; and feather edges of existing intact coating to the prepared areas, in order to provide a smooth transition with the new paint. Select finish/top coat color to match existing adjacent surfaces.

4. NOTES

4.1 The condition of the Searchlight Foundations is illustrated in the photos below.

PHOTO 1: PORT AND STBD SEARCHLIGHT FOUNDATIONS

WORK ITEM 71: Heat Pump System, Overhaul

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to perform overhaul to Air Conditioning (AC) Heat Pump System.

1.2 Government-furnished property.

MTI	ITEM DESCRIPTION	NSN/PN	QTY	ESTIMATED COST ($/UNIT)
Y	Condensing Unit, Heat Pump	Model HP-5 NSN: 0C 0000-XF-C03-6003	1 ea.	
Y	Condensing Unit, Heat Pump	Model HP-6 NSN: 0C 0000-XF-C03-6004	1 ea.	

2. REFERENCES

COAST GUARD DRAWINGS

175-WLM 512-1, Rev E, HVAC Diagram
175-WLM_516-1, Rev F, HVAC Refrigeration System Piping Diagram
175-WLM_516-3, Rev D, HVAC Refrigeration System Piping A & D
175-WLM_516-4, Rev A, HVAC Refrigeration Piping Arrangement & Details
175-WLM 601-1, Rev T, General Arrangement, Inboard & Outboard Profile

COAST GUARD PUBLICATIONS

CG Tech Pub 3626, 12/16/1996; Manufacturers Instruction Book-SWBS Group(s) 516-533
Coast Guard Commandant Instruction (COMDTINST) M10360.3 (series), Coatings and Color Manual
Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2020, General Requirements
Surface Forces Logistics Center Standard Specification (SFLC Std Spec) 3041, 2020, Shipboard Electric Cable Test
Surface Forces Logistics Center Standard Specification (SFLC Std Spec) 3042, 2020, Shipboard Electrical Cable Removal, Relocation, Splice, Repair and Installation

OTHER REFERENCES

None.

3. REQUIREMENTS

3.1 General.

3.1.1 CIR.

None.

3.1.2 The Contractor shall inspect the ship's air conditioning and heating system from HP5 to HP6, and submit a CFR.

3.1.3 Personnel qualification. The Contractor shall ensure that all personnel servicing Air Conditioning and Refrigeration (AC&R) equipment that uses CFC or HCFC refrigerant hold a current Environmental Protection Agency (EPA) Technician Certification, Type IV (Universal Certification), and meet all State and local regulations and licensing requirements.

3.1.4 Refrigerant draining and recovery. The Contractor shall drain, recover and dispose of all existing refrigerant from the vessel's AC unit into a suitable external container in accordance with all Federal, state and local environmental regulations.

3.1.5 Protective measures. The Contractor shall furnish and install suitable covering to seal off and protect all non-affected surfaces/equipment and spaces in the vicinity of the work area against contamination during the performance of work. Upon completion of work, remove protective material and inspect for the presence of contamination. Clean all equipment and spaces, contaminated due to improper protection, to original condition of cleanliness.

3.1.6 Interferences. The Contractor shall be aware that interferences in way of work include, but are not limited to the below-listed. Handle all interferences in accordance with SFLC Std Spec 0000, paragraph 3.3.5 (Interferences):

- Insulation.
- Piping.
- Lagging.
- Electric cables.

3.1.7 Work locations. The Contractor shall be aware that work areas shall primarily include but not be limited to the following:

- Engine Room
- 01 deck heat pump space
- A/C Flats.
- Pump Room.

3.2 Modification particulars. The contractor shall complete overhaul the AC/Heat pump systems and accomplish the following tasks, using the Coast Guard Drawings 175-WLM-512-001 and 175-WLM-601-1 and Tech Pub 3626 as guidance:

3.2.1 Rip-outs and Reinstall. Rip-out of old equipment and ducting/piping shall be done in accordance with this specification and drawings and attachments referenced in this specification. Equipment to be ripped out includes but is not limited to:

- Relief valves.

- ASW valves.
- Freon (R-22) piping.
- All associated wiring and solenoid valves.

3.2.2 New installations. Install all new components, to include but not be limited to the following:

- Heat Pump
- Compressor.
- Condenser.

3.2.3 Piping installation. Ensure the following for all piping installations:

- Piping shall be adequately supported by hangers.
- Piping shall be suitably tagged for machinery and piping designation and marking.

3.2.4 Electrical requirements. Accomplish all electrical work in accordance with SFLC Std Spec 3042, and test cables in accordance with SFLC Std Spec 3041.

3.3.5 Insulation. Using CG Drawings 175 WLM 516-1, 3, and 4 as a guide, renew ASW and refrigerant piping insulation on all heat pump system. Approximately 100 linear ft to be insulated, size from ½ to 1 ¼ in.

3.3 Operational test – post repairs. After completion of work, the Contractor shall witness an operational test (by Coast Guard personnel) of all items or shipboard devices that have been disturbed, used, repaired, altered, or installed, to prove that they are in satisfactory operating condition in according to Tech Pub 3626. Ensure the following:

- Modified supply, exhaust and recirculation system piping shall be visually inspected to demonstrate that there is no leakage.
- Testing and balancing shall be conducted on all impacted systems and all air handling units.
- Thermostats in the fan coil, air handling and heat pump units shall be set, tested at 70ºF for winter operation, and 80ºF for summer operations.
- Piping shall be visually inspected and hydrostatically tested before insulating. Cooling water piping insulation shall be visually inspected after installation.

4. NOTES

This section is not applicable to this work item.

REF. EC004_25610_RAK_0914_175WLM

WORK ITEM 72: Sea Bay / Sea Chest Piping, Modify

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to modify the Sea Bay/Sea Chest vent piping and the Sea Bay Waster Piece.

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 175 WLM 256-012, Rev A, ASW System Piping Modifications

NAVSEA Drawing 804-1385781, Rev E, Hangers, Pipe, for Surface Ships

COAST GUARD PUBLICATIONS

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2020, General Requirements

Surface Forces Logistics Center Standard Specification 0740 (SFLC Std Spec 0740), 2020, Welding and Allied Processes

Surface Forces Logistics Center Standard Specification 6310 (SFLC Std Spec 6310), 2020, Requirements for Preservation of Ship Structures

OTHER REFERENCES

None.

3. REQUIREMENTS

3.1 General.

3.1.1 CIR.

None.

3.1.2 Tech Rep.

Not applicable.

3.1.3 Protective measures - general. The Contractor shall furnish and install all protective coverings to seal off and protect all non-affected vessel's components, equipment, and spaces in the vicinity of the work area against contamination during the performance of work. Upon completion of work, the Contractor shall remove all installed protective measures, inspect for the presence of contamination, and return all contaminated equipment, components, and spaces to original condition of cleanliness.

3.1.4 Interferences. The Contractor shall handle all interferences in accordance with SFLC Std Spec 0000, paragraph 3.3.5 (Interferences). Known interferences include, but are not limited to the below-listed:

- Sea Bay, 3-52-0-V.

3.2 Sea Bay Modification Tasks. After completing the Sea Bay clean and inspect work item, and the Sea Bay Preserve work item (if applicable), the Contractor shall accomplish the following:

3.2.1 Sea Bay/Sea Chest vent pipe modifications. The Contractor shall modify the sea bay and the port and stbd sea chest vents as shown in Coast Guard Drawing 175 WLB 256-012 to allow overflow sea water to dump to weather.

3.2.2 Sea Bay Waster Piece Modifications. The Contractor shall modify existing waster pieces and install in the sea bay as shown in Coast Guard Drawing 175 WLB 256-012, to help prevent air from entering the sea water piping.

3.3 Hydrostatic test. After all authorized repairs, the Contractor shall hydrostatically test all new and disturbed piping and components of the ASW system in accordance with SFLC Std Spec 0740, Appendix C, “Hydrostatic Test”. Ensure zero leakage from or permanent deformation of pressure-containing parts by repairing all leaks, deformations, and discrepancies. Submit a CFR.

4. NOTES

This section is not applicable to this work item.