USCGC OLIVER BERRY (WPC 1124)

STATEMENT OF WORK FOR DRYDOCK REPAIRS

FY2027

Developed By: James L Ward

(Rev 0, 11May26)

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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

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 154 WPC 079-900, Rev D, Stability and Loading Data Booklet
Coast Guard Drawing 154 WPC 079-902, Rev -, Curves of Form Hydrostatic Analysis
Coast Guard Drawing 154 WPC 085-301, Rev B, Hull Lines and Offsets
Coast Guard Drawing 154 WPC 111-301, Rev B, Shell Expansion
Coast Guard Drawing 154 WPC 127-302, Rev C, Potable Water & Sewage Tank Fabrication Details
Coast Guard Drawing 154 WPC 131-301, Rev D, Scantlings Main Deck
Coast Guard Drawing 154 WPC 161-301, Rev C, Skegs and Stern Tubes Support Structures
Coast Guard Drawing 154 WPC 165-201, Rev B, Transducer Details
Coast Guard Drawing 154 WPC 167-201, Rev F, Schedule of Doors, Manholes, and Hatches
Coast Guard Drawing 154 WPC 168-201, Rev F, Louvers and Covers A&D
Coast Guard Drawing 154 WPC 169-201, Rev C, Structural Closure Stern Gate
Coast Guard Drawing 154 WPC 171-201, Rev D, Mast A&D
Coast Guard Drawing 154 WPC 171-601, Rev D, Mast Prefab
Coast Guard Drawing 154 WPC 204-301, Rev F, Equipment Removal Plan
Coast Guard Drawing 154 WPC 243-201, Rev D, Main Propulsion Shafting A&D
Coast Guard Drawing 154 WPC 245-304, Rev B, Propeller Plans and Data Six Blade Propeller
Coast Guard Drawing 154 WPC 245-901, Rev -, Propeller CAD Model to Support CMM Scan (IGS File)
Coast Guard Drawing 154 WPC 251-301, Rev D, Combustion Air Diagram
Coast Guard Drawing 154 WPC 256-201, Rev C, Main Propulsion Cooling System Arrangement
Coast Guard Drawing 154 WPC 256-301, Rev D, Main and Auxiliary Cooling System Diagram
Coast Guard Drawing 154 WPC 261-201, Rev B, Fuel Oil Service System Arrangement
Coast Guard Drawing 154 WPC 320-301, Rev E, 450V System Deck Plan
Coast Guard Drawing 154 WPC 330-301, Rev G, 120V System Deck Plan
Coast Guard Drawing 154 WPC 405-201, Rev F, Antenna A&D
Coast Guard Drawing 154 WPC 405-202, Rev A, Antenna Arrangement and Installation
Coast Guard Drawing 154 WPC 406-301, Rev G, Schedule of Bonding and Grounding
Coast Guard Drawing 154 WPC 422-301, Rev F, Electrical Navigational Aids
Coast Guard Drawing 154 WPC 506-201, Rev A, Fills, Vents, Sounds, and Overflows Arrangement
Coast Guard Drawing 154 WPC 506-301, Rev -, Fills, Vents, Sounds, Overflows Diagram
Coast Guard Drawing 154 WPC 512-201, Rev -, HVAC Arrangement

Coast Guard Drawing 154 WPC 512-301, Rev B, HVAC System Diagram
Coast Guard Drawing 154 WPC 512-305, Rev -, HVAC Equipment List
Coast Guard Drawing 154 WPC 513-201, Rev C, Machinery Ventilation Arrangement
Coast Guard Drawing 154 WPC 513-301, Rev C, Machinery Ventilation Diagram
Coast Guard Drawing 154 WPC 521-201, Rev G, Firemain System Arrangement
Coast Guard Drawing 154 WPC 521-301, Rev C, Firemain System and Magazine Sprinkler Diagram
Coast Guard Drawing 154 WPC 524-201, Rev D, Auxiliary Cooling System Arrangement
Coast Guard Drawing 154 WPC 528-301, Rev B, Grey Water System Diagram
Coast Guard Drawing 154 WPC 529-301, Rev -, Bilge System Diagram
Coast Guard Drawing 154 WPC 556-202, Rev D, Fin Stabilizer Hydraulic System A&D
Coast Guard Drawing 154 WPC 556-302, Rev D, Fin Stabilizer Hydraulic System Diagram
Coast Guard Drawing 154 WPC 561-202, Rev C, Steering Arrangement & Details
Coast Guard Drawing 154 WPC 562-201, Rev A, Rudder Details
Coast Guard Drawing 154 WPC 562-202, Rev C, Rudder Arrangement & Details
Coast Guard Drawing 154 WPC 565-201, Rev -, Fin Stabilizer System A&D
Coast Guard Drawing 154 WPC 565-301, Rev A, Fin Stabilizer Control System
Coast Guard Drawing 154 WPC 565-302, Rev C, Fin Stabilizer Control System COED
Coast Guard Drawing 154 WPC 568-201, Rev B, Bow Thruster System A&D
Coast Guard Drawing 154 WPC 593-201, Rev F, Sewage System Arrangement
Coast Guard Drawing 154 WPC 593-301, Rev C, Sewage System Diagram
Coast Guard Drawing 154 WPC 593-303, Rev A, Sewage Control System
Coast Guard Drawing 154 WPC 601-302, Rev D, General Arrangement
Coast Guard Drawing 154 WPC 602-305, Rev D, Visual Identification and Draft Marks Plan
Coast Guard Drawing 154 WPC 625-201, Rev B, Window Arrangement
Coast Guard Drawing 154 WPC 633-301, Rev C, Cathodic Protection System
Coast Guard Drawing 154 WPC 634-301, Rev B, Deck Covering Schedule
Coast Guard Drawing 154 WPC 995-900, Rev -, FRC Docking Assembly Details & Construction
Coast Guard Drawing 154 WPC 997-002, Rev A, Alternate Docking Plan Mobile Lift Option
Coast Guard Drawing 154 WPC 997-004, Rev A, Steel Block Towers for Alternate Docking Plan
Coast Guard Drawing 154 WPC 997-302, Rev -, Docking Plan (Supersedes DWGS 154-WPC-997-1, 997-301)
Coast Guard Drawing 154B WPC 167-201, Rev A, Schedule of Doors, Manholes, and Hatches
Coast Guard Drawing 154B WPC 169-201, Rev -, Structural Closure Stern Gate
Coast Guard Drawing 154B WPC 320-301, Rev -, 450V System Deck Plan
Coast Guard Drawing 154B WPC 330-301, Rev B, 120V System Deck Plan
Coast Guard Drawing 154B WPC 506-201, Rev C, Fills, Vents, Sounds, and Overflows Arrangement
Coast Guard Drawing 154B WPC 512-201, Rev C, HVAC Arrangement
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Coast Guard Drawing 154B WPC 513-301, Rev A, Machinery Ventilation Diagram
Coast Guard Drawing 154B WPC 568-201, Rev B, Bow Thruster System A&D

Coast Guard Drawing 154B WPC 593-201, Rev B, Sewage System Arrangement

Coast Guard Drawing 154B WPC 593-301, Rev A, Sewage System Diagram

Coast Guard Drawing 154B WPC 601-302, Rev -, General Arrangement

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

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

COAST GUARD PUBLICATIONS

Coast Guard Maintenance Procedure Card (MPC) B10017.D, B/T Tunnel Anode Conversion (1 Time, Hull 1101-1132

Coast Guard Maintenance Procedure Card (MPC) F14010.D, Probe, INSP/CLN

Coast Guard Technical Publication (TP) 8000, SWBS 256, 04/20/2015, Main Diesel Engine Seawater Strainer, 10 Inch Duplex Basket Strainer

Coast Guard Technical Publication (TP) 8001B, SWBS 633, 09/20/2018, Cathodic Protection System – Model CA44227

Coast Guard Technical Publication (TP) 8010B, SWBS 565, 08/19/2019, Fin Stabilizer System – Model QC-1500 with MPU20 Hydraulic System

Coast Guard Technical Publication (TP) 8026, SWBS 241, 03/01/2024, Marine Transmission – Model ZF 23560 C Series

Coast Guard Technical Publication (TP) 8081A, SWBS 243, 04/16/2018, Stern Tube Seal with Emergency Packing Gland

Coast Guard Technical Publication (TP) 8096A, SWBS 252, 05/08/2019, Bowthruster – Model 60 LK with Operator Panel and Motor Drive – Installation, Service, and Operation Manual

Coast Guard Technical Publication (TP) 8105C, 04/01/2023, Watermaker/Brominator Reverse Osmosis – Model FRC-B 1600 and RB5CMD

Coast Guard Technical Publication (TP) 8123, SWBS 514, 09/25/2019, Heating, Ventilation and Air Conditioning (HVAC) Equipment, Model - FRC-514-P1

Coast Guard Technical Publication (TP) 8153A, SWBS 562, 04/29/2019, Rudderstock Seal Assembly, Type EL + IS, Model H 78525-01

Coast Guard Technical Publication (TP) 8906A, SWBS 244, 03/02/2020, Technical Repair Standard For Use On Fast Response Cutter (FRC-B) Propulsion Shaft - P/N 6205781 – (154' WPC (A) and (B) Class Cutters

Coast Guard Technical Publication (TP) 8907A, SWBS 086, 03/10/2020, Technical Repair Standard For Use On FRC - Rudder And EL + IS Rudderstock Seal Model - H 78525-01

Coast Guard Technical Publication (TP) 8911B, SWBS 086, 04/23/2020, Technical Repair Standard For Use On FRC - Fin Stabilizer System Model QC-1500

Coast Guard Technical Publication (TP) 8913A, SWBS 086, 03/17/2020, Technical Repair Standard For Use On FRC – Propellers, Michigan Type 1 and Type 2

Coast Guard Technical Publication (TP) 8916, SWBS 086, 07/28/2020, Technical Repair Standard For Use On FRC - Flow Adaptive Rudder And EL + IS Rudderstock Seal Model - H 78525-01 (Hulls 1118, 1139 And On)

OTHER REFERENCES

American Society for Nondestructive Testing, SNT-TC-1A: Personnel Qualification and Certification in Nondestructive Testing, 2016

ASTM International (ASTM) D1330, 2010, Standard Specification for Rubber Sheet Gaskets

American Bureau of Shipbuilding (ABS) Rules for Survey After Construction, Part 7

ASTM International (ASTM) D1330, 2010, Standard Specification for Rubber Sheet Gaskets

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	TY	ITEM DESCRIPTION	NSN/PN	QTY	ESTIMATED COST ($/UNIT)
4	Y	**	Propeller Shaft	NIIN: 016057516	2 ea	102,651.61
4	Y	**	LH Propeller	NIIN: 016280276	1 ea	140,083.99
4	Y	**	RH Propeller	NIIN: 016279761	1 ea	136,819.52
4	N	**	Stave Kit (each kit contains 8 reg. Romor staves, 2 rubber locking staves, 2 Romor staves w/keeper slot)	NIIN: 016057400	4 kt	6,681.99
4	N	**	FWD Bearing Split External Retaining Ring Kit (contains 1ea retaining ring, 10ea socket head cap screws)	NIIN: 016057345	2 kt	3,794.37
4	N	**	AFT Bearing Split External Retaining Ring Kit (contains 1ea retaining ring, 10ea socket head cap screws)	NIIN: 016057510	2 kt	6,211.52
4	N	**	Kit, Installation Part-Replacement (see 2.1a for kit contents)	NIIN: 016294693	2 kt	2,341.68
4	N	**	Propulsion Shaft Seal Overhaul Kit (see table 7-4 of TP-8081, pg 7-8, **Service Kit B** – "Non-Split" Use when shaft is pulled)	NIIN: 016185248	2 kt	11,586.94
4	N	**	Propulsion Shaft Seal Overhaul Kit (see table 7-5 of TP-8081, pg 7-9, **Service Kit C** – "Split" Use when shaft is not pulled)	NIIN: 016185276	2 kt	12,389.18
4	N	**	Anodes, Zinc (stern tube)	NIIN: 016445483	28 ea	15.27
4	N	**	Anodes, Zinc (stern tube)	NIIN: 016445457	2 ea	111.95
4	N	**	NUT, SELF LOCKING (shaft to gear box coupling hub)	NIIN: 017222196	40 ea	24.18
4	N	**	BOLT, MACHINE (shaft to gear box coupling hub)	NIIN: 017222178	40 ea	35.77
4	Y	*	Kit, Propeller – Removal/Installation Tools and Equipment (see 2.1b for kit contents)	NIIN: 016322198	1 kt	34,289.32
5	N	***	EDG Remote Fuel Cutout Valve	N/A	1 ea	5000.00
8	Y	**	Port Rudder	NIIN: 016905509	1 ea	120,359.68
8	Y	**	Stbd Rudder	NIIN: 016905507	1 ea	120,359.68
8	N		Rudder Stock Seal (Seal Assembly from TP-8153, pg 7-2, Table 7-1)	NIIN: 015976204	2 ea	30,798.97
8	N		Shaft Seal Overhaul Kit (Upper Parts, **Service Kit A** from TP-8153, pg 7-5, Table 7-2)	NIIN: 015954647	2 ea	23,210.23

WORK ITEM	MTI	TY	ITEM DESCRIPTION	NSN/PN	QTY	ESTIMATED COST ($/UNIT)
8	N		Shaft Seal Overhaul Kit (Lower Parts, **Service Kit B** from TP-8153, pg 7-5, Table 7-3)	NIIN: 015967760	2 ea	10,845.30
8	N		Locknut PC5 154WPC 562-002	NIIN: 332016431	4 ea	175.26
8	N		Lock Washer PC6 154WPC 562-002	NIIN: 332015247	2 ea	25.12
8	N		Upper Roller Bearing PC7 154WPC 562-002	NIIN: 015973537	2 ea	1,207.75
8	N		Oil Seal PC8 154WPC 562-002	NIIN: 016185091	2 ea	85.73
8	N		Lower Bearing PC9 154WPC 562-002	NSN: 016314104	2 ea	1,139.71
9	Y	**	Fin Blade	NIIN: 015988181	2 ea.	29,628.50
9	N	**	Hydraulic Cylinder	NIIN: 016823497	4 ea.	7,529.67
9	Y	**	Shaft, Shouldered	NIIN: 016590358	2 ea.	14,840.57
10	N	**	Set of bevel gears (19:28, Mfr: Schottel)	NSN: 016181133	1 st.	12,274.39
10	Y	**	Propeller (Mfr: Schottel)	NSN: 01F206086	1 ea.	9,254.59
12	N	**	Sewage Tank Zinc Anode	NIIN: 014474686	2 ea.	131.39
14	N	**	Depth Sounder Transducer	NIIN: 015867921	1 ea.	1,038.60
14	Y	**	Speed Log Transducer	NIIN: 998393629	1 ea.	13,968.12
14	N		Parts Kit, Gate Valve (Doppler Speed Log)	NIIN: 993745925	1 ea.	7,684.08
14	N		Zinc Anodes	NIIN: 016476179	4 ea.	25.12
15	N	**	Anode, Corrosion, Elliptical	NIIN: 994002561	2 ea.	2,489.75
15	N	**	Silver/Silver Chloride Reference Electrode Cell	NIIN: 995535405	2 ea.	1,828.66
15	N		Copper Anode, Anti-Fouling	NIIN: 991335325	3 ea.	352.33

***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 C5ISC ServiceCenter**

CONSOLIDATED LIST OF REPORTS

The following is a list of reports due, indexed by work item. Critical Inspection reports must be submitted within the first 25% of the contract performance period unless otherwise designated herein or by the KO:

Work Item 64 total specified 47 mandatory reports 12 conditional reports 5 "if designated" reports 3 "reminders" (17 of them are CIRs)	**Reports** In this context "(*conditional*)" means "if necessary to complete this contract's requirements" (may vary contract to contract), pending post-award, unknown post-award vessel conditions. "*(if designated)"* means if optionally activated using a designator inside this particular contract, pre-award.
General Requirements (All Contracts) 10 Total 6 mandatory 4 conditional 3 are "reminders" to always submit initial/final reports for each work item	2.1a - **CFR** (*conditional*) - report a contract language discrepancy i.e. latent ambiguity 2.1.1 - **ENVIRONMENTAL PROTECTION PLAN (000c)** 2.2.2 - **ELECTRICAL PLAN (000c)** 2.2.3 - **SEVERE WEATHER PLAN (000e)** 2.2.4 - **PRESERVATION PLAN (631b)** 2.2.5 - **FIRE PREVENTION AND RESPONSE PLAN (000c)** 2.2.6 - **PLANNING DOCUMENT (000c)** 2.3.8 - **PROPOSAL FOR TEMPORARY HULL ACCESS CUTS (863b)** (*conditional*) 2.3.16 - A "General Requirement" for always submitting 1) a CIR for the pre-work initial inspection/test in every work item, 2) a CFR (*conditional*) for any discrepancy discovered during the job, post disassembly, etc. 3) a CFR certifying that all tasks in a work item have been completed satisfactorily, work complete. 2.5.3.1 - **SAFE ENTRY AND HOT WORK CERTIFICATION SERVICES (864b)** (*conditional*) 2.5.3.4 - **RESTRICTED INTERFERENCE REMOVAL PLAN (000d)** (*conditional*)
General Requirements (This Contract) 6 Total 6 conditional	2.1.1 - **TEMPORARY SERVICES PLAN (863a)** (*conditional*) 2.1.2b - **CFR** for questions on coatings systems and colors (*conditional*) 2.1.6 - **SEA TRIAL AGENDA (868a)** (*conditional*) 2.1.6 - **CIR** for discrepancies found during sea trials *(conditional)* 2.1.6 - Final **CFR** (*conditional*) for sea trial 2.1.7 - **WELDING PLAN (074a)** (*conditional*) See 2.2.1 for amendments to CIR submission requirements
1 Hull Plating 2 Total 2 mandatory	2.2.1 - **CIR** for initial inspections/tests 2.4.1 - **CFR** final certification for job complete
2 Tanks and Voids 3 Total 2 mandatory 1 conditional	2.2.1 - **CIR** for initial inspections/tests 2.2.2.1 **PLUG LOG (123a)** (*conditional*) 2.4.1 - **CFR** final certification for job complete, including **PLUG LOG (123a)**

3 Watertight Closures 2 Total 2 mandatory	2.2.1 - **CIR** for initial inspections/tests 2.4.1 - **CFR** final certification for job complete, door report
4 Propulsion Shafting System 3 Total 3 mandatory	2.2.1 - **CIR** for initial inspections/tests, including **3-D Scan** Report for the props 2.2.4.2 - **CFR** for shaft inspection forms 2.4.1 - **CFR** final certification for job complete
5 MSW/ASW/Firemain System 2 Total 2 mandatory	2.2.1 - **CIR** for initial inspections/tests 2.4.1 - **CFR** final certification for job complete
6 Electrical Power Distribution System 3 Total 3 mandatory	2.2.1 - **CIR** for initial inspections/tests 2.2.2 - **THERMOGRAPHIC INSPECTION/REPORT (300a)** 2.4.1 - **CFR** final certification for job complete
7 Ventilation Systems 2 Total 2 mandatory	2.2.1 - **CIR** for initial inspections/tests 2.4.1 - **CFR** final certification for job complete
8 Rudder System 2 Total 2 mandatory	2.2.1 - **CIR** for initial inspections/tests 2.4.1 - **CFR** final certification for job complete
9 Fin Stabilizer System 2 Total 2 mandatory	2.2.1 - **CIR** for initial inspections/tests 2.4.1 - **CFR** final certification for job complete
10 Bow Thruster System 2 Total 2 mandatory	2.2.1 - **CIR** for initial inspections/tests 2.4.1 - **CFR** final certification for job complete
11 Stern Launch Door System 3 Total 2 mandatory 1 if designated	2.2.1 - **CIR** for initial inspections/tests 2.2.2 - **COATINGS QA FORMS (631b)** *(if designated)* 2.4.1 - **CFR** final certification for job complete
12 Sewage and Grey Water System 5 Total 3 mandatory 1 if designated 1 conditional	2.2.1 - **CIR** for initial inspections/tests 2.2.2 - **CLEANING PLAN (593a)** 2.2.2.1 - **PLUG LOG (123a)** *(conditional)* 2.2.6.1 - **COATINGS QA FORMS (631b)** *(if designated)* 2.4.1 - **CFR** final certification for job complete
13 Topside Structure and Coating Systems 4 Total 2 mandatory 2 if designated	2.2.1 - **CIR** for initial inspections/tests, including inspections from 2.3.3.1, 2.2.3.2 2.2.2 - **COATINGS QA FORMS (631b)** *(if designated) for Freeboard, Weather Decks, Superstructure,* with final **CFR** 2.2.3e - FM-200 Tech Rep's name and résumé, confirm FM-200 System Cert *(if designated)* 2.4.1 - **CFR** final certification for job complete
14 Underwater Body 3 Total 2 mandatory 1 if designated	2.2.1 - **CIR** for initial inspections/tests 2.2.2. **COATINGS QA FORMS (631b)** *(if designated)* 2.4.1 - **CFR** final certification for job complete

15 ICCP/Antifouling System 2 Total 2 mandatory	2.2.1 - **CIR** for initial inspections/tests 2.4.1 - **CFR** final certification for job complete
16 Drydocking 6 Total 6 mandatory	2.2.1 - **DOCKING CALCULATIONS (863c)** 2.2.2 - **DRY DOCKING PROCEDURE DOCUMENTATION (863e)** 2.2.3.4 - **UNDOCKING CALCULATIONS (863c)** 2.2.3.6 - **SATISFACTORY UNDOCKING CONDITIONS REPORT (863e)** 2.2.3.7 - **DOCUMENTATION OF DRY DOCKING SIGNIFICANT EVENTS (863e)** 2.4.1 - **CFR** final certification for job complete
18 Interior Deck Coverings 2 Total 2 mandatory	2.2.1 - **CIR** for initial inspections/tests 2.4.1 - **CFR** final certification for job complete

PRINCIPAL CHARACTERISTICS

154' WPC (SENTINEL CLASS)	
PHYSICAL	
Anchor	ROCNA, anchor, 150 KG/ 331 LB, Stainless Steel
Bulkheads	(7), Watertight Bulkheads located below the Main Deck
Displacement, delivery, light ship	302 Metric Tons
Draft, full load	2.58 Meters (8.46 Feet)
End of service life displacement	353 Metric Tons
Framing	Longitudinal
Full load displacement	353 Metric Tons
Height of highest projection	17.22 Meters (56.5 Feet)
Length overall (loa)	46.80 Meters (153.5 Feet)
Maximum beam	7.75 Meters (25.43 Feet)
Minimum operating displacement	314 Metric Tons
Waterline length (lwl)	44.35 Meters (145.5 Feet)
HULL	
Hull/main weatherdeck material	AH-36 Steel
Superstructure	5456-H1111 Aluminum
MACHINERY	
Bow thruster	Schottel STT 60 LK
Diameter of propeller	1900 mm
Emergency service generator (edg)	Cummins 6BTA5.9-DM Diesel with Stanford 93KW Generator
Fin stabilizer	(2), Quantum QC1500
Main propulsion	(2), MTU 20V4000 M93L, Sequential Turbo-Charged Diesels
Number of blades	6
Number of propellers	(2) Michigan Wheel Marine
Propeller pitch capability	Fixed
Propulsion shafts	(2), Electralloy Nitronic 50HS (9430mm) Shafts
Reduction gears	(2), ZF 23560C/D Series
Rudders	(2), 316L Stainless Steel
Shaft rotations per minute	478
Shaft(s) bearing, aft	(2), Duramax Bearings
Shaft(s) bearing, intermediate	(2), Duramax Bearings
Shaft(s) diameter	8 Inches
Shaft(s) Seal	(2), Wartsila Mechanical Seals
Ship service generators	(2), Cummins QSM11-DM Diesels with Stanford 317KW Generator
TANK CAPACITIES AT 95% LIQUID LOAD (22,958 TOTAL GALLONS)	
Fresh water tank, port (3-38-2-W)	708 gal
Fresh water tank, stbd (3-38-1-W)	756 gal
Fuel oil edg day tank (1-10-1-F)	134 gal
Fuel oil gen. ovrflw tnk, ctr. (3-40-0-F)	1,159 gal
Fuel oil overflow tank, center (3-10-0-F)	616 gal
Fuel oil service tank, #1 port (3-17-2-F)	1,750 gal
Fuel oil service tank, #1 stbd (3-17-1-F)	1,750 gal
Fuel oil service tank, #2 port (3-40-2-F)	890 gal
Fuel oil service tank, #2 stbd (3-40-1-F)	890 gal
Fuel oil storage tank, #1 center (3-11-0-F)	5,040 gal
Fuel oil storage tank, #2 center (3-23-0-F)	5,350 gal
TANK CAPACITIES AT 95% LIQUID LOAD (22,958 TOTAL GALLONS)	
Grey water tank, (3-17-0-W)	2,668 gal.
Lube oil storage tank, (2-35-2-F)	146 gal.
Oily water tank, (3-34-1-W)	336 gal.
Sewage collection tank, (3-6-0-W)	429 gal.
Waste oil tank, (3-34-2-F)	336 gal.

General Requirements (All Contracts)

1. REFERENCES

COAST GUARD DRAWINGS

None

COAST GUARD PUBLICATIONS

SFLC Work Item Standards and Specifications (WISS), version cited in *"General Requirements (This Contract)"* below, furnished with solicitation on SAM.gov

Coast Guard Vessel Coatings Specifications (VCS), version cited in *"General Requirements (This Contract)"* below, furnished with solicitation on SAM.gov

QA FORMS, v1.0, version cited in *"General Requirements (This Contract)"* below, furnished with solicitation on SAM.gov

OTHER REFERENCES

None

2. REQUIREMENTS

HOW TO READ AND COMPLY WITH SOW/WISS

2.1. General guidance for complying with requirements: The Contractor must:

- Read GUIDANCE FOR UNDERSTANDING REQUIREMENTS DOCUMENTS (000a) in the WISS document included with this solicitation.
- Read all of this solicitation's SOW and WISS (i.e., assume these documents differ significantly from all other versions, the applicable version of WISS to this contract is posted to SAM with the solicitation, all other versions are not applicable) prior to submitting a bid/quote/proposal. Language in need of clarification such as omissions, discrepancies, apparent errors, or conflicting requirements must be identified and reported by the Contractor, and subsequently addressed and resolved prior to bid/quote/proposal submission. No requests for clarification are received pre-quote means acknowledgement that the requirements are clear and completely understood by the contractor, with the intent to completely meet all requirements. Download a description of WISS revisions at Standard Specifications (uscg.mil). These documents below are referenced herein, must be read, and can also be downloaded at the above link or are posted with the SOW/WISS as part of the solicitation.
    - Coast Guard Vessel Coatings Specifications (VCS). This document specifies the required coating systems and lists brands of paint that have been pre-approved for use in creating the coating systems. The version of VCS applicable to this contract is posted to SAM with the solicitation, all other versions are not applicable.
    - Applicable WISS, VCS and QA FORMS versions are cited in General Requirements

(This Contract) below.

- **Conform** to all SOW requirements, and all WISS requirements as they apply to this SOW.
- **Provide** all supplies and **Perform** all services required to complete each work item unless otherwise specified (i.e. assume the Government will not furnish any supply or service unless explicitly described in the SOW, if an item does not appear in a GFP list in a work item the Government will not furnish that item, the Contractor must furnish those items).
- **Conform** to the version of a reference document designated by the issue date or revision specified in the Consolidated List of References.
- only **Perform** maintenance and repairs that have been authorized by the KO (e.g., already described in or invoked by the SOW or WISS, or described in a Change Request and subsequently authorized by the KO, etc.)

2.1a Hierarchy of requirements documents. Unless a different hierarchy is explicitly described herein or in WISS, **Conform** to the order of precedence between the types of requirements documents established below, where the SOW ranks the highest. Whenever conflicting language exists between two documents, the language in the higher-ranking document must take precedence. SOW and WISS language may be used by the Coast Guard to supplement, amend, or correct lower tier documents. None of the documents below supersede laws and regulations.

1. SOW
2. WISS (unless otherwise specified therein)
3. Documents invoked from within the SOW and WISS
4. All other unreferenced documents that may be applicable (e.g., vender drawings and manuals, military standards/specifications, commercial/industry standards/specifications/best-practices, F-718s and other product data sheets, etc.)

2.1b Discrepancies between configuration descriptions and actual configuration. Minor discrepancies between written descriptions (e.g., drawings, technical publications, etc.) and actual vessel configuration must be accommodated when preparing offers/quotes; ship checks should be performed prior to submitting an offer/quote. **Submit** a CFR if such a discrepancy significantly impacts the cost of complying with requirements (e.g., causes a significant increase or decrease in cost, or may result in a loss of performance/strength/safety, etc.).

2.2 Administrative tasks. The Contractor must:

SUBMISSIONS/PROPOSALS, MEETINGS (contract admin)

This section below describes a series of administrative (quality-assurance) submissions used to help verify alignment of the Government's and the Contractor's intent.

Below cross-references the submissions to the names for those submissions described in ARRIVAL CONFERENCE AGENDA (SFLCINST 4330.lA).

ENVIRONMENTAL PROTECTION PLAN (000c) – This is "*VOC Compliance Plan, Plan for Oil/Fuel Spills", "SDS's for All Hazardous Materials*", "*Hazardous Waste Management Plan and non-hazardous and hazardous waste generator ID number(s)*", "*Transportation Manifests for Disposal of HAZMAT*", "*Paint conformance documents, per the Appendix A of SFLC 0000_STD.*"

ELECTRICAL PLAN (000c) – New.

SEVERE WEATHER PLAN (000e) – This is Heavy Weather or Disaster Preparedness Contingency Plan in 4330.1A

PRESERVATION PLAN (631b) – This is *"Preservation Plan", "SSPC QP1 or NACE Coating Inspector Certification", "Quality Assurance Inspection Form (QA-1 through QA-5)"* in 4330.1A

FIRE PREVENTION AND RESPONSE PLAN (000c) – New

PLANNING DOCUMENT (000c) – This is Initial version of the *"Planning Chart", "List of Key Personnel", "List of Emergency Numbers"* in 4330.1A

WELDING PLAN (000c) – This *"Welders Qualifications, including welder's name, type of qualifications, and date of last qualification test", "List of Qualified Sil-brazers and supporting documentation"* in 4330.1A

2.2.1 **Submit** an ENVIRONMENTAL PROTECTION PLAN (000c) at the ARRIVAL CONFERENCE (000c). Revise and resubmit the plan whenever a change impacts its accuracy (e.g., spill has occurred, etc.). **Comply** with all Federal, state, and local regulations. The *General Requirements (This Contract)* work item below will specify the necessary facility data when the contract will be executed at a Coast Guard or other government host facility.

2.2.1.1 When work will be executed at a Government Facility, as soon as practicable after contract award, **Notify** the COR so that a conversation between the COR, the Contractor, and the Facility Environmental Protection Specialist (FEPS) or Unit Environmental Coordinator (UEC) can be coordinated/scheduled to ensure all facility-specific requirements are addressed in the *ENVIRONMENTAL PROTECTION PLAN* prior to submission.

2.2.1.2 **Notify** the COR 24 hours prior to performing an "*Abate"* task that may be specified in a work item.

2.2.2 **Submit** an ELECTRICAL PLAN (000c) at the ARRIVAL CONFERENCE (000c); the plan must be maintained for the duration of the contract.

2.2.3 **Submit** a SEVERE WEATHER PLAN (000e) at the ARRIVAL CONFERENCE (000c); the plan must be maintained for the duration of the contract, and executed when appropriate.

2.2.4 **Submit** a PRESERVATION PLAN (631b) at the ARRIVAL CONFERENCE (000c); the plan must be maintained for the duration of the contract.

WHEN AT A CONTRACTOR's FACILITY - A complete plan is required, as described in WISS - FIRE PREVENTION AND RESPONSE PLAN (000c).

WHEN AT A COAST GUARD FACILITY - A simple/abridged written statement is adequate, in lieu of a complete fire plan, based on and limited to the scope of work described herein, provided the statement adequately describes how applicable fire risks will be addressed. Address non-applicable bullets listed in FIRE PREVENTION AND RESPONSE PLAN (000c) with "N/A".

2.2.5 **Submit** a FIRE PREVENTION AND RESPONSE PLAN (000c) with the pre-award quote; the plan must be maintained for the duration of the contract, and executed when appropriate. Revise and resubmit the plan whenever a change impacts its accuracy (e.g., growth work requires a new access cut into a "Fire Protection Boundary" (000d), work on a "Fitting" (100a) is complete and is now fully operational, etc.). See the *General Requirements (This Contract)* work item for any fire prevention related requirements particular to this contract.

2.2.6 **Submit** a preliminary PLANNING DOCUMENT (000c) with the pre-award quote, **Submit** the preliminary PLANNING DOCUMENT (000c) at the ARRIVAL CONFERENCE (000c), and **Submit** the PLANNING DOCUMENT at each Weekly Progress Meeting, update the plan to reflect current project status. The PLANNING DOCUMENT (000c) must be maintained for the duration of the contract.

2.2.6.1 See habitability requirements in the *General Requirements (This Contract)* work item. If maintenance work will require the disabling of required habitability services then **Submit** a TEMPORARY SERVICES PLAN (863d) at the ARRIVAL CONFERENCE (000c)

2.2.7 See the welding/brazing/soldering submissions section/paragraph in the *General Requirements (This Contract)* work item. If the contract scope requires welding to be performed **Conform** to the requirements specified in the *General Requirements (This Contract)* work item or in the applicable maintenance work item.

2.2.8 **Attend** the ARRIVAL CONFERENCE (000c).

QUALITY CONTROL/ASSURANCE

2.2.9 **Perform** all quality-control work required to complete all contract requirements (i.e., the Coast Guard will not supervise contract workers, but will notify the KO when supplies or services are deficient).

2.2.10 Whenever requesting a contract extension, **Notify** the KO with complete written justification.

2.3 Ancillary/collateral work tasks. The Contractor must (000d):

MATERIAL HANDLING AND DISPOSITION

2.3.1 **Provide** GFP AND MTI STORAGE/PACKAGING/HANDLING SERVICES (000d) to support the GFP and MTI designated herein; **Notify** the COR prior to closing/shipping MTI packaging containers so that the COR can verify quality standards for packaging have been met. MTI items should be returned using the same packaging (packing materials and containers) in which the GFP was received if practicable. If provided container requires significant cost to support reuse or a new container is required, **Submit** a CFR. GFP must be handled as described in the Master Solicitation document. Return all Government-loaned items in the same condition as received, excluding normal wear and tear. When an item is lost or damaged, compensate the Government for up to the value specified in the corresponding "Cost ($/UNIT)" column of the GFP list in the work item, as appropriate.

2.3.2 **Dispose** of, as scrap, all items or materials removed from the vessel that are not designated to be 1) reinstalled, 2) retained and shipped by the Contractor to a Coast Guard authorized facility, or 3) turned over to the COR. Disposals must be in accordance with the approved ENVIRONMENTAL PROTECTION PLAN (000c) and all applicable Federal, state, and local regulations.

INTERFERENCES

2.3.3 **Perform** IDENTIFICATION/REMOVAL/RESTORATION OF INTERFERENCES (000d) as necessary to complete each work item; the location and condition of areas that will be used to store "Interferences" (000d) must be approved by the COR. Do not disturb a "Restricted Interference" (000d) without prior approval from the COR; S**ubmit** a RESTRICTED INTERFERENCE REMOVAL PLAN (000d) to the COR at least 48 hours prior to removal.

PREVENTING/CORRECTING DAMAGE CAUSED BY THE CONTRACTOR

2.3.4 **Perform** INSTALLATION/REMOVAL OF PROTECTIVE MEASURES (000d). **Inspect** the integrity of affected protective coverings prior to accomplishing contamination-producing operations; verify that equipment and machinery have not been contaminated. Immediately **Notify** the COR if contamination or damage to Coast Guard property has occurred, take action to prevent all further contamination/damage; do not disturb the contamination/damage until the COR has inspected the contamination/damage.

2.3.5 Restore to their original condition (i.e., **Renew**, **Repair**, etc. as appropriate) all Government owned items (e.g., machinery, piping, wiring, insulation, coatings, deck coverings, etc.) damaged or

contaminated by the Contractor or its subcontractor prior to performing the work item's **Inspect/Op Test (Final)** task. Restoration of those items must be at the Contractor's expense or otherwise included in the contract's pre-award quote.

2.3.6 **Repair** all coating systems (631a) damaged (e.g., scuffed, scraped, scratched, chipped, etc.) by the Contractor. **Install** a new/equivalent coating system onto a new uncoated item if the old item being renewed possesses a coating system (631a). **Conform** to VCS or the vessel's paint schedule (i.e. [vessel class] 631-XXX drawing) if referenced herein.

2.3.7 Prior to installing a new or disturbed hydraulic component into a system, **Clean** all exposed internal surfaces of that component that will come in contact with working system fluid to Cleanliness Grade A.

INCIDENTAL TASKS

(associated with 1) interference removals, 2) workmanship, 3) pre/post-disassembly inspections and tests, 4) other various general requirements, etc.)

2.3.8 **Submit** a PROPOSAL FOR TEMPORARY HULL ACCESS CUTS (863b) to the KO in advance of performing any access cut through primary hull structure. Do not cut a temporary access into a structural member without prior written authorization from the KO.

2.3.9 **Renew** all "Disturbed Consumables" (000d) (e.g., seals, gaskets, o-rings, packing, bearings, bushings, self-locking fasteners, etc.) unless otherwise specified a work item. **Renew** all system fluids (e.g. hydraulic fluid, gear case lube oil, fuel, etc.) that are lost or contaminated during disassembly/reassembly unless otherwise specified a work item.

2.3.10 **Perform** INCIDENTAL CORRECTION OF LABEL, TAG, MARKING DISCREPANCIES (000d) whenever a discrepant label/tag/plate/marking is discovered on a component (e.g., valve, junction box, pipe, etc.) that has been inspected, or disturbed, or is otherwise within the scope of work.

2.3.11 **Align** all new and disturbed shaft coupling assemblies (e.g., electric motor to pump coupling, etc.). Unless otherwise specified in the work item or in the system specifications, verify that each hub is round to within 0.002 inches total indicator run-out, and then align both hubs to within 0.005 inches total indicator run-out radial and peripheral per inch of shaft radius.

2.3.12 **NDE** and **Pull Test** all pad eyes and tie downs that have been weld-repaired.

2.3.13 **Inspect/Op Test (Final)** a Deck Machinery System whenever a mechanical load bearing or mechanical power transmission component belonging to that system has been disturbed (i.e., disassembled, repaired, renewed, removed/replaced as an interference, etc. disturbed incidentally.).

2.3.14 **Comply** with INDUSTRY STANDARD WORKMANSHIP REQUIREMENTS (000d).

2.3.14.1 All surfaces incidentally or directly impacted by contracted work must, at a minimum, be restored to their original condition or better (e.g. cleaned, residual dust/fluids/debris/etc. caused by the work completely removed, etc.) in conjunction with performing, and prior to completion and Coast Guard acceptance of, the work specified herein.

UNFORSEEN TEMPORARY HOTEL SERVICES

2.3.15 Regardless of the scope of work described herein, if a post-award change in scope precipitates the need for additional hotel services (e.g. power, HVAC, sewage/grey water disposal, temporary heads/showers, etc.), **Provide** those services. A scope/price will be settled at that time by CR/mod.

2.3.15.1 Whenever required to furnish TEMPORARY EXTERNAL SANITARY FACILITIES AND JANITORIAL SERVICES (000d), **Provide** the COR two keys for each lock furnished with each facility. These facilities are for Coast Guard use only (i.e. the Contractor must not use these facilities).

INSPECTIONS AND TESTS

2.3.16 **Perform** the following inspection/test tasks as part of ***each work item*** unless otherwise specified in the work item, and in conjunction with all other inspection and testing requirements specified in the work item. Reports (e.g., CIRs, CFRs, special/specific reports, etc.) within a work item may be combined if it will improve efficiency and relieve administrative burden while still meeting the intent of all reports. Coast Guard personnel must operate all Coast Guard-owned equipment; do not operate Coast Guard-owned equipment without prior written authorization from the KO.

- Prior to performing intrusive/disassembly work, **Inspect-Op Test (Initial)** all items that may be impacted by contract work (e.g., the equipment and systems being repaired, "Interferences" that will be removed, etc.) in the presence of the COR or the COR's designated Coast Guard Inspector, then **Submit** a CIR that either 1) describes new discrepancies (i.e., not specifically addressed by the SOW), or that 2) certifies no new discrepancies exist. The work item may specify post-disassembly inspections that must be included in the report.
- **Inspect** all items/surfaces that will be exposed after any type of disassembly occurs if they were previously inaccessible or uninspected (e.g. after interference removals, during overhauls, etc.). If previously unidentified discrepancies are revealed, then **Submit** a CFR that describes the new discrepancies; "no new discrepancies found" has been communicated if no CFR is submitted prior to reassembly.
- **Inspect/Op Test (Final)** all disturbed items after contracted work is complete, in the presence of the COR or the COR's designated Coast Guard Inspector. **Notify** the COR prior to performing the inspections/tests so that they can be witnessed by Coast Guard personnel. After final inspections/testing has been satisfactorily completed, **Submit** a final CFR/report certifying that all discrepancies have been properly addressed and all requirements have been met, and certification that all weld joints that were accomplished during the performance of the work item passed all non-destructive testing requirements.

2.3.17 **Perform** DOCK AND SEA TRIALS (868a) whenever:

- completion of a maintenance task can only be proven by, or is most economically proven by, dock and sea trials, or;
- specified in a work item or CR.
- See the work item titled "General Requirements (This Contract)" for additional requirements.

2.3.18 **Comply** with all the following system/process-specific general requirements.

- WELDING AND BRAZING GENERAL REQUIREMENTS (074a) whenever welding or brazing is performed.
    - **Notify** the COR prior to performing welding or brazing work.
- GENERAL REQUIREMENTS FOR POTABLE WATER SYSTEMS (503a) whenever a potable water system is disturbed.

WHEN THE VESSEL IS DOCKED AT A CONTRACTOR'S FACILITY

2.4 <u>Tasks/requirements when the vessel is docked a contractor's facility</u>. The Contractor must:

2.4.1 **Provide** PIER-SIDE SUPPLIES/SERVICES (000d) whenever the vessel must be docked at a "Contractor's Facility" (000d).

2.4.2 **Perform** a SHORE-TIE ELECTRICAL POWER TEST PROCEDURE (863a), in the presence of the COR, and prior to initial connection, and whenever the Contractor's shore tie is disconnected for more than 8 hours, and whenever the cutter is relocated to a different berth or drydock, and whenever a shore tie cable is repaired, replaced, or modified. **Notify** the COR prior to conducting the test.

2.4.3 **Perform** INSTALLATION/REMOVAL OF TEMPORARY VESSEL ACCESSES (000e) whenever the vessel is docked at a "Contractor's Facility" (000d). Do not pass loads or cargo over vessel accesses while personnel are using the access for ingress/egress. If installing a brow/gangway is not practicable submit a CFR proposing alternatives to the COR.

2.4.4 **Perform** TEMPORARY INSTALLATION AND REMOVAL OF HULL GROUNDING STRAPS (863a) whenever the vessel is dry docked; this must be completed immediately after successfully drydocking the vessel and prior to connecting an electrical shore tie cable.

2.4.5 If the Coast Guard procures any items that must be onloaded to the vessel (e.g., fuel, stores, maintenance supplies, etc.), **Provide** access to the vessel and temporary pier-side space for delivery trucks.

SAFETY, ENVIRONMENTAL, HABITABILITY

2.5 Safety, environmental, and habitability tasks. The Contractor must:

2.5.1 **Comply** with all sections of the Code of Federal Regulations (e.g. 29 CFR 1910 Occupational Safety and Health Standards, 29 CFR 1915 Occupational Safety and Health Standards for Shipyard Employment, etc.) and all other applicable Federal, state, and local laws, codes, ordinances, and regulations.

2.5.2 **Provide** TEMPORARY VENTILATION INCIDENTAL TO CONTRACT WORK (000e)

2.5.3 **Provide** TEMPORARY FIRE SAFETY SUPPLIES/SERVICES (000e). **Submit** revisions of the FIRE PREVENTION AND RESPONSE PLAN (000e), as required. Installation of temporary safety items (e.g. fire curtains, fume-tight enclosures, quick-disconnect fittings, etc.) at breached/weakened/compromised "Fire Boundaries" (000e) requires inspection/verification by the Contractor's designated "Fire Prevention Supervisor" and the COR before they are left unattended; **Notify** the COR of the time/location of these inspections.

2.5.3.1 **Provide** SAFE ENTRY AND HOT WORK CERTIFICATION SERVICES (864b). **Submit** a copy of each Gas Free Certificate to the COR.

2.5.3.2 **Provide** FIRE WATCH SUPPLIES/SERVICES (865a) in the quantities/types specified in the *General Requirements (This Contract)* work item below. **Notify** the COR prior to commencing hot-work. **Notify** the COR upon completion of hot-work. **Notify** the COR whenever the Coast Guard must provide a fire watch for forthcoming hot work.

2.5.3.3 Do not pump or transfer liquid fuel without full firefighting capability; **Notify** the COR prior to pumping/transferring liquid fuel.

2.5.3.4 All components integral to a functioning "Fire Detection/Alarm System" (000e), "Fire Fighting/Dewatering System" (000e), and a "Fire Zone Boundary" (000d) are classified as

"Restricted Interferences" (000d); S**ubmit** a RESTRICTED INTERFERENCE REMOVAL PLAN (000d) to the COR at least 48 hours prior to removal.

2.5.4 **Comply** with LOCKOUT/TAGS-PLUS SYSTEM AND LOGS REQUIREMENTS (000e). The Contractor's "Lockout/Tags-Plus Coordinator" must establish written programs/procedures with and for Coast Guard representatives prior to the start of work.

2.5.5 **Provide** VARIOUS SAFETY-RELATED AND HOUSEKEEPING SUPPLIES/SERVICES (000e).

2.5.6 **Provide** a temporary berm around temporary tanks containing hazardous liquids, fuels, lubricants, etc. whenever temporarily storing these liquids at a Government facility.

2.5.6a Berms for hazardous liquids must contain the contents of the tank(s), plus 10 percent freeboard for precipitation, must be impervious to the tank contents for 72 hours, and must be constructed so that any discharge will not permeate, drain, infiltrate, or otherwise escape before cleanup occurs.

2.5.6b Petroleum products and lubricants required to sustain up to 30 days of activity may be stored on Government property. Storage and refilling practices must comply with 40 CFR Part 112, and must provide secondary containment no less than 110 percent of the tank volume plus five inches of freeboard. If a secondary berm is used for containment, it must be impervious to oil for 72 hours and be constructed so that any discharge will not permeate, drain, infiltrate, or otherwise escape before cleanup occurs. Drips pans must be used and tanks must be covered during inclement weather.

General Requirements (This Contract)

1. REFERENCES

COAST GUARD DRAWINGS

None

COAST GUARD PUBLICATIONS

SFLC Work Item Standards and Specifications (WISS), v1.0 (furnished with solicitation on SAM)

Coast Guard Vessel Coatings Specifications (VCS), v1.0 (furnished with solicitation on SAM)

QA FORMS, v1.0 (furnished with solicitation on SAM)

OTHER REFERENCES

None

2. REQUIREMENTS

INTENT: This item provides data that must be used to determine 1) potential hotel service needs, 2) various general/ancillary requirements that may pertain to one or more work items.

See ESTIMATING AND QUOTING (862a). Contractors should price "Direct Production Labor (DPL)", "Direct Material/Items (DMI)", and "Subcontracted Services" for maintenance tasks into their respective work items. All other costs should be treated as overhead and priced as an aggerate into the Composite Labor Rate and spread across all work items/CLINs in proportion to the DPL labor expended therein.

2.1 Tasks. The Contractor must **Perform/Provide/Submit/**etc. the following:

VESSEL HABITABILITY SVCS FOR CG PERSONNEL LIVING OR WORKING ABOARD THE VESSEL

2.1.1 **Provide** TEMPORARY VESSEL HABITABILITY SERVICES (863d) whenever contract work will negatively impact crew habitability in the designated compartments below, for the Coast Guard personnel who will be living and or working onboard the vessel during the contract performance period (quantities and locations are specified below). **Submit** a TEMPORARY SERVICES PLAN (863d) at the ARRIVAL CONFERENCE (000c) that details how the necessary accommodations for Coast Guard personnel will be met. See the "UNFORSEEN TEMPORARY HOTEL SERVICES" section of the *General Requirements (All Contracts)* work item for additional requirements.

Compartments that will be in use and may require temporary services after work begins.

(Compartments that have not been listed, or have been marked No Work, or that do not require a specific service, may receive these services incidentally, but they are not explicitly required to receive them.)

Compartment	No Work	HVAC	Power	Cold Potable Water	Hot Potable Water	Sewage and/or Grey Water Disposal
Pilot House (01-19-0-C)	X					
Mess Deck (1-17-0-Q)	X					
Galley (1-18-2-Q)	X					
CO Cabin (1-12-1-L)	X					
XO Stateroom (1-12-2-L)	X					
OPS CPO Stateroom (1-15-2-L)	X					
ENG CPO Stateroom (2-32-2-L)	X					
2 Person Stateroom (2-21-2-L)	X					
4 Person Stateroom (2-20-1-L)	X					
4 Person Stateroom (2-17-2-L)	X					
2 Person Stateroom (2-17-1-L)	X					
2 Person Stateroom (2-15-2-L)	X					
2 Person Stateroom (2-15-1-L)	X					
1 Person Stateroom (2-10-2-L)	X					
1 Person Stateroom (2-10-1-L)	X					
Head (1-12-0-L)	X					
Head (1-15-1-L)	X					
Head (1-23-1-L)	X					
Shower (2-12-1-L)	X					
Head (2-12-2-L)	X					
Shower (2-13-1-L)	X					
Head (2-13-2-L)	X					
Shower (2-14-1-L)	X					
Head (2-14-2-L)	X					
Head (2-23-1-L)	X					
Climate Controlled Store Room (2-23-4-A)	X					
C4ISR Equipment RM (2-23-3-Q)	X					
Office (1-16-1-A)	X					

Notes and Additional Requirements

PERIOD BEFORE ENTERING DRYDOCK

After the vessel reaches the Contractor's facility, and until the crew leaves the vessel before entering dry dock, shore-tie electrical power may be required; **Provide** this service as necessary.

WHILE IN DRYDOCK

Vessel crew may require power for tools and equipment to perform incidental maintenance; **Provide** this service as necessary.

PERIOD AFTER LEAVING DRYDOCK

After the vessel is re-floated, and until the vessel leaves the Contractor's facility, electrical shore-tie power may be required; **Provide** this service as necessary.

Coast Guard personnel who will be living and/or working onboard the vessel during the contract performance period.			
	QTY	**Locations/compartments**	**Dates/periods**
Male	0		
Female	0		
Notes and additional requirements.	No Coast Guard personnel will be living onboard the vessel. Vessel crew may perform minor maintenance onboard the vessel, out of the way of contracted work.		

COATINGS QA REQUIREMENTS
COATINGS INSPECTOR (CI) DUTY REQUIREMENTS

Even though the CI is only explicitly required to sign-off on proper application procedures for the designated critically coated surfaces, the CI should reasonably "oversee" coatings application on all other minor surfaces, that are being coated at the same time as coating the critical surfaces (i.e. special trips to the vessel to observe non-critical preservation not required).

2.1.2 **Perform** COATINGS QUALITY CONTROL CHECKPOINTS (631b) whenever renewing the coating system on the CRITICAL COATED SURFACES listed below. Submit all COATINGS QA FORMS (631b) associated with those designated surfaces with the work item's final CFR. "Coatings Inspector" (CI) duties must be performed by one of the designated parties described below. A work item may designate other surfaces that must be treated as CRITICAL COATED SURFACES. The CI must perform cursory quality assurance (i.e. surfaces are properly cleaned, verify coatings manufacturing instructions are being followed, etc.) on all other non-critical surfaces being prepared and coated, in conjunction with the particular surfaces that are subject to COATINGS QUALITY CONTROL CHECKPOINTS (631b) (i.e. keep an eye on all preservation work being accomplished, in conjunction, to the greatest practicable extent, when the CI is reasonably near those preservation jobs); report any discrepancies to the COR.

Who must perform CI Duties	
X	If the prime contractor, or the prime's subcontractor (who will be performing the coatings application work), hold an up-to-date "AMPP QP1- Field Coating Application" certification then CI duties may be performed by a qualified employee of the Prime Contractor, or a qualified employee of the prime's subcontracted painter.
X	A subcontracted AMPP CIP Level 3 coatings inspector, when the prime/sub is not QP1 certified (this individual must not be a direct employee of the prime, nor a direct employee of the paint subcontractor performing the work)
	A subcontracted AMPP CIP Level 2 coatings inspector, when the prime/sub is not QP1 certified (this individual must not be a direct employee of the prime, nor a direct employee of the paint subcontractor performing the work)
	A subcontracted AMPP CIP Level 1 coatings inspector, when the prime/sub is not QP1 certified (this individual must not be a direct employee of the prime, nor a direct employee of the paint subcontractor performing the work)
	N/A – Coast Guard personnel will perform CI duties, or Coast Guard will furnish a CI via separate contract
	An employee of the Prime Contractor or any subcontractor may perform CI duties.

2.1.2a These are the "Critical-Coated Surfaces" (600a) associated with the work items contained herein, 1) the QA forms designated for completion/submission, and 2) when abrasive blast equipment testing is a prerequisite of blasting services that may be performed.

QA1	QA2	QA3	ABRASIVE BLAST EQUIPMENT TESTING	SURFACE/COMPONENT
X	X	X		Underwater Body
X	X	X		Freeboard
X	X	X		Weather Decks
X	X	X		Superstructure
X	X	X		Stern Launch Door
X	X	X		Tanks/Voids coated with paint

2.1.2b INCIDENTAL COATING SPECIFICATIONS – When repairing incidentally damaged coatings (e.g., not already specified in a work item, correcting damage caused by the Contractor, or by Change Request, in conjunction with performing interference removals/reinstallations, etc.) **Conform** to the following.

PC #	Surface/Component Description	CoatingSysName (VCS)	Colors, Notes, and Additional Requirements
1	Any general exterior surface that is aluminum	PolySLXN2a	Top coat color must match the existing or surrounding color, generally Insignia White (17925), or OSHA Black (17038), or OSHA Safety Red (11105), or Spar Buff (10371)
2	Any general exterior surface that is steel	PolySLXN3b	Top coat color must match the existing or surrounding color, generally Insignia White (17925), or OSHA Black (17038), or OSHA Safety Red (11105), or Spar Buff (10371)
3	Interior bulkheads, in staffed compartments	BHD3a or BHD3b	Top coat color must match the existing or surrounding color, generally Soft White (27880)
4	Interior piping	SlcnAlkyd2 or PolySLXN2a	Top coat color must match the existing or adjacent/connecting pipe color or surrounding surfaces, generally one of the colors specified below.

Piping Type/Contents	Top Coat Color
Cleaning Fluid	Seal Brown (10080)
Firemain & Plugs	OSHA Safety Red (11105)
Fuel Oil/Gasoline	Orange Yellow (13538)
Hydraulic Fluid	OSHA Safety Orange (12246)
JP-5	OSHA Safety Purple (17142)
L.P. Air	Brown (10324)
Lube Oil	Striped Orange Yellow/OSHA Black (13538)/(17038)
Potable Water	Insignia Blue (15044)
Refrigerants	Purple (17100)
Salt Water	Dark Green (14062)
Sewage	Gold (17043)
Fire Quenching Water, Foam, CO2, FM-200, Halon	OSHA Safety Red (11105), with Misc - White (27880) Letters

If any discrepancies are identified (e.g., existing vessel coating colors may be discrepant, coating color descriptions may be discrepant, etc.) **Submit** a CFR to obtain clarification prior to procuring/applying coatings.

ENVIROMENTAL - WHEN AT A GOVERNMENT FACILITY

2.1.4 When all or part of a contract will be executed at a Government facility, **Comply** with all Federal, state, and local laws and regulations, using the following data (see the *General Requirements (All Contracts)* work item above for reporting requirements):

The Government facility is this type of Hazardous Waste Generator	
X	N/A (i.e., the contract will not be executed at a Government facility).
	Very Small
	Small
	Large

WHO PROVIDES FIREWATCH SUPPLIES/SERVICES

2.1.5 **Provide** FIRE WATCH SUPPLIES/SERVICES (865a) as designated below. **Notify** the COR prior to commencing hot-work. **Notify** the COR upon completion of hot-work. **Notify** the COR whenever the Coast Guard must provide a fire watch for forthcoming hot work.

Fire Watch Service Types	
X	**All Services** The Contractor must provide all fire watch services and all associated equipment and gear. The Coast Guard provides no supplies/services.
	Extinguishers Only The Contractor must provide portable fire extinguishers to Coast Guard fire watch personnel for their use during the execution of this contract; these extinguishers will then be returned to the Contractor after work is complete. The Coast Guard will provide all fire watch services and other associated gear.
	Combination The Coast Guard will provide [2] ea. fire watch personnel between the hours of [0800-1600 Monday thru Friday]. The Contractor must provide all necessary equipment and gear. The Contractor must provide other fire watch services/equipment/gear.

DOCK AND SEA TRIAL REQUIREMENTS

2.1.6 **Perform** DOCK AND SEA TRIALS (868a) when designated in work items below that require testing that is most appropriately performed while the vessel is underway, **Conform** to the following requirements:

Pre-Dry Docking	**Submit** a SEA TRIAL AGENDA (868a) to the COR two days prior to the scheduled trials. Upon completion of the Pre-Dry Docking sea trial, **Submit** a CIR that includes a description of all previously unidentified discrepancies found during the pre-docking sea trial and recommended repairs. Coordinate with the COR to schedule the performance of a short pre-docking sea trial (of approx. 2-4 hrs.) so that inspections and assessments may be conducted, while underway, to identify all operational discrepancies that may prevent final acceptance of all other work specified herein, or that may not otherwise be identified in a timely manner through the performance of all other inspections and tests specified herein.

	Preform these pre-docking sea trial inspections and assessments in the presence of the COR while underway on the pre-docking sea trial. Examples of systems to assess/inspect during the pre-docking sea trial include: • Shafting System and MDEs (e.g. verify no unusual vibrations that may indicate prop damage, verify no shaft seal leaks, etc.) • Steering Gear & Fin Stabilizers (e.g. verify no hydraulic system leaks, verify no grooming/adjustment discrepancies, verify function of all repeaters, etc.) • Speed log, depth sounder, and SSDGs • ASW & Firemain System (e.g. verify no pre-existing leaks, etc.) • Stern Launch Door (e.g. verify no hydraulic system leaks, verify no grooming/adjustment discrepancies, etc.)
Dock trials	After completion of maintenance work, the vessel will conduct dock trials to demonstrate the material readiness of the ship for sea trials. All post maintenance testing must be conducted prior to sea trials to prove proper installation and satisfactory operation of equipment as specified in the work items. Ensure that the dock trials start no later than 12 hours prior to the scheduled sea trials. Provide a pier facility (or allow the cutter to move to a Coast Guard pier) to support dock trials. Dock trials may not be conducted while the cutter remains floating inside the drydock (not touching the blocks). During dock trials, observe tests and make adjustments and repairs, as required in preparation of sea trials.
Post-Dry Docking	**Submit** a SEA TRIAL AGENDA (868a) to the COR two days prior to the scheduled trials. As soon as practicable after completion of the dock trials, coordinate performance of the seal trials, based on tests described in work items, for the following purpose: • Performing tests that could not be performed while the ship was moored/docked. • 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. Contractor representatives must be on board the cutter to observe the trials for the purpose of observing whether or not the repairs are satisfactory. Sea trials are be carried out in free route, away from other shipping, as designated by the COR. After the completion of the sea trial, **Perform** a careful and thorough examination repaired machinery. 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. **Submit** a final CFR confirming satisfactory completion of all tests and inspections specified for the post docking sea trial.

WELDING/BRAZING/SOLDERING SUBMISSIONS

2.1.7 **Submit** a WELDING BRAZING/SOLDERING PLAN (074a) with the quote/offer (pre-award); this document must be maintained throughout the contract performance period (i.e. re-submitted whenever amended) and must include EVIDENCE OF COMPETENT WELDERS (074a). Include the following optional information/reports as designated in the "Req'd" column.

N/A	Req'd	Items that must be included in the WELDING PLAN (0740a)
X		WELD JOINT SPECIFIC WPSs AND PQRs (074a). Specific needs will be described in particular work items.
X		WELD JOINT SPECIFIC QUALITY ASSURANCE REPORTS (074a). Specific needs will be described in particular work items.

AMENDMENTS TO WISS

2.2 Amendments. The Contractor must **Perform** the following as applicable.

2.2.1 If it is not possible/practicable to submit a CIR within the first 25% of the contract performance period then **Submit** a CFR designating each CIR that cannot submitted as specified, proposing alternate due date(s) with justification/rationale. **Conform** to the new due dates after agreed upon by the COR.

VARIOUS TASKS THAT WILL BE COAST GUARD RESPONSIBILITY

Incidental tasks described in this note will be the responsibility of the Coast Guard to perform, and not the Contractor; i.e. these tasks are not part of this contract. Additional, more specific notes may be found in individual work items herein that provide detail and amplify the items described below.

Various items that are not easily procured

1. Ship's Force will renew various stickers and labels currently installed on the ammo box and pyro box, as needed.

2. ALL Ready for Ops (RFO) compliance items, Compartment Checkoff Lists (CCOL)

WORK ITEM 1: Hull Plating

1. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 154 WPC 085-301, (series), Hull Lines and Offsets

Coast Guard Drawing 154 WPC 111-301, (series), Shell Expansion

Coast Guard Drawing 154 WPC 997-302, (series), Docking Plan (Supersedes DWGS 154-WPC-997-1, 997-301)

COAST GUARD PUBLICATIONS

Coast Guard Technical Publication (TP) 8105C, (series), Watermaker/Brominator Reverse Osmosis – Model FRC-B 1600 and RB5CMD

OTHER REFERENCES

None

2. REQUIREMENTS

INTENT: Clean and inspect to identify and report all previously unidentified discrepancies (e.g., failed coatings, excessive corrosion, pits, etc.) related to 1) hull plating and stiffeners, 2) inaccessible voids attached directly to the hull, 3) bilge areas on the inboard side of the hull (tank hull plate discrepancies covered under the "Tanks and Voids" item). Correction of discrepancies found here will be authorized/funded by CR if not already identified 2.3 Corrective/Repair Tasks.

Perform all the specified repairs beneath the Corrective/Repair Tasks section. These should be included in the pre-award quote.

NOTES:

1. ELEVATED INSPECTIONS of the hull may be designated; perform an Automated Ultrasonic Plate Thickness Inspection (SIDESCAN) and/or a 3-D CMM Scan (3-D SCAN) as designated below.

2. Generally, bilges should not be abrasive blasted to prepare the surfaces for coating (to prevent dust/grit from contaminating machinery space equipment), they should be mechanically prepped (e.g., SSPC SP 11, etc.) Propose in the Preservation Plan (631b) the appropriate preparation method.

See WISS sections 110a, 123a and 631a for additional standards for performing the work.

SIDESCAN and 3-D SCAN QUALIFICATIONS – Contractors should be fully qualified/experienced in operating their scanning equipment, and should not be "learning how" to use the equipment in this contract. Whenever requested by the KO/COR, submit evidence that at least one on-site technician 1) has successfully operated the scanning equipment during at least one prior similar contract, and 2) has prior experience performing all tasks specified below.

2.1 **Government-furnished property**. None.

2.2 Preventive/Recurring Tasks. The Contractor must:

2.2.1 **Inspect-Op Test (Initial)** all freeboard exterior surfaces, all underwater body exterior surfaces, all hull void exteriors, and all associated drainage openings/plugs (110a, 123a). **Submit** a CIR for all initial inspections and tests. Include in the report a description of structural or coatings discrepancies in the bilges designated below.

ELEVATED SHELL PLATE INSPECTIONS Perform the designated inspections, include inspection reports with the CIR above.		
No Work	**Perform**	
	X	a SIDESCAN (110a) that covers the entire freeboard shell plate exterior surface and the entire underwater-body shell plate exterior surface.
X		**3-D Scan** (110a)the entire freeboard, underwater-body shell plate exterior surface, and all associated appendages. Mail a cover letter and the 3-D Scan report to the following address: Commanding Officer (SFLC-ESD-NAME) USCG Surface Forces Logistics Center (Mail Stop 25) 2401 Hawkins Point Road Baltimore, MD 21226-5000

2.2.1.1 **Inspect** the inaccessible voids that can only be accessed from the dry dock floor. **Renew** all void drain threaded plugs at reassembly. The voids to be inspected are 4ea Fairing Plates at FR44 P/S and the Skeg at FR 38-42 on the CL.

2.2.1.1a Remove and dispose of void drain plugs. Verify that no liquids drain from the voids, indicating a hull leak. Upon completion of all work chase all female threads for each corresponding drain plug removed, renew all drain plugs (using either 316 stainless steel or Monel, as applicable), and coat new drain plugs prior to reinstallation with a commercial sealing and locking compound or a flexible joint compound. A VOID AIR TEST (123a) is required if weld repairs are performed.

2.2.2 **Perform** the bilge interior surface work designated below.

NO WORK	CLEAN, INSPECT	BILGE SURFACES IN THE DESIGNATED COMPARTMENT	
	X	1	PORT STEERING GEAR ROOM(3-40-2-E)
	X	2	STBD STEERING GEAR ROOM (3-40-1-E)
	X	3	GENERATOR ROOM (3-36-0-E) **See 2.2.2b below.**
	X	4	ENGINE ROOM(3-27-0-E)
	X	5	FWD AUX SPACE (3-3-0-E)

2.2.2a Clean (e.g. pressure wash, hand wash, wipe down, vacuum, etc.) all bilge surfaces in the compartments designated below to remove all foreign materials (e.g., dirt, oil, sediment, sludge, etc.). Remove all persistent residues, taking care not to damage the coating system or to allow any contamination to enter the machinery. Remove fluids, 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 fluids, wash media, residues, and cleaning materials in accordance with all Federal, state, and local regulations. Inspect all associated/adjacent surfaces (e.g., bilge surfaces, machinery fdn surfaces, cofferdams, stiffeners, catch pans, etc.) for discrepancies and coatings failures and detail all findings and all recommended repairs in the CIR described above.

2.2.2b The RO equipment in the GENERATOR ROOM (3-36-0-E) must be removed from its foundation as an interference (and reinstalled) to gain access to all associated bilge and foundation structure beneath. **Inspect/Op Test (Final)** all disturbed equipment in conjunction with 2.4 below.

2.3 **Corrective/Repair and Alterative Tasks**. The Contractor must:

2.3.1 **Perform** repairs/alterations whenever the KO releases a Change Request authorizing new post-inspection repairs/alterations, or whenever pre-existing discrepancies/tasks/alterations are described below (price these tasks below into the pre-award quote).

CSMP # FOR INTERNAL USE ONLY	PRE-EXISTING DISCREPANCIES/TASKS OR ALTERATIONS
N/A	DISCREPANCY: N/A TASK(S): N/A

2.3.1.1 **Perform** bilge coating system repairs as specified below.

NO WORK	REPAIR (631a)	REPAIR and OVERCOAT (631a)	the coating system in the bilge of the designated COMPARTMENT		DISCREPANCIES, SPECIFICATIONS AND ADDITIONAL TASKS
X			1	PORT STEERING GEAR ROOM(3-40-2-E)	N/A
X			2	STBD STEERING GEAR ROOM (3-40-1-E)	N/A
X			3	GENERATOR ROOM (3-36-0-E)	N/A
X			4	ENGINE ROOM (3-27-0-E)	N/A
X			5	FWD AUX SPACE (3-3-0-E)	N/A

2.3.1.1a Coating system for bilge interiors:

COATING SYSTEM (VCS)	Colors
BILGE2b or BILGE2c	PRIMER: Brown (20152) TOPCOAT: Light Gray #37 (26373)

2.4 **Final Inspection/Testing Tasks**. The Contractor must:

2.4.1 **Inspect/Op Test (Final)** all affected surfaces/equipment/etc. and then **Submit** a final CFR attesting to satisfactory completion of the work item.

WORK ITEM 2: Tanks and Voids

1. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 154 WPC 111-301, (series), Shell Expansion

Coast Guard Drawing 154 WPC 261-201, (series), Fuel Oil Service System Arrangement

Coast Guard Drawing 154 WPC 506-201, (series), Fills, Vents, Sounds, and Overflows Arrangement

Coast Guard Drawing 154 WPC 506-301, (series), Fills, Vents, Sounds, Overflows Diagram

Coast Guard Drawing 154 WPC 601-302, (series), General Arrangement

COAST GUARD PUBLICATIONS

None

OTHER REFERENCES

None

2. REQUIREMENTS

INTENT: Remove and dispose of all residual fluids in the designated tanks/voids, as necessary, to perform the specified work. Visually inspect each designated tank/void, etc. Identify and report all discrepancies (e.g., failed coatings, excessive corrosion, pits, etc.). Correction of discrepancies found here will be authorized/funded by CR, if not already specified in 2.3 Corrective/Repair Tasks. When specified, repair/renew the entire coating system inside the designated tanks/voids.

See WISS sections 100a and 123a for additional standards for performing the work.

Contents of each designated tank should be offloaded to the greatest extent practicable prior to the start of the contract unless designated for "**No-Work**".

2.1 **Government-furnished property**. None.

2.2 **Preventive/Recurring Tasks**. The Contractor must:

2.2.1 **Inspect-Op Test (Initial)** all designated tanks and associated equipment (e.g., tank level indicators, hatches, manholes, all associated fasteners, etc.). (100a, 123a, 631a). **Submit** a CIR for all initial inspections and tests. Also include in the report a description of structural or coatings discrepancies in the tanks designated for inspection below.

2.2.2 **Perform** the designated actions on the tanks/voids listed below. In conjunction with cleaning/inspections, create and maintain a PLUG LOG (123a) for submission later.

2.2.2a ELEVATED COATINGS NDT - If designated below, and the tank/void coating system is being renewed, then **Perform** COATINGS QUALITY CONTROL CHECKPOINTS (631b) and **Submit** completed COATINGS QA FORMS (631b) with the final CFR below; otherwise, these elevated QA tasks are not required.

2.2.2b Fuel tanks currently coated with oil (versus an epoxy coating) must be recoated with oil after cleaning.

No Work	**Inspect**	**Clean, Inspect**	**Clean, Inspect**, and then **Renew** the interior coating system on the designated tank/void (100a, 123a, 631a, VCS)	2.2.2a ELEVATED COATINGS NDT		Designated tank/void	Capacity @95% in gallons
			X	N/A	1	Fuel Oil Service Tank 1S (3-17-1-F)	1750
			X	N/A	2	Fuel Oil Service Tank 1P (3-17-2-F)	1750
			X	N/A	3	Fuel Oil Service Tank 2S (3-41-1-F)	840
			X	N/A	4	Fuel Oil Service Tank 2P (3-41-2-F)	840
			X	N/A	5	Emer Gen Fuel Tank (1-10-1-F)	93
			X	N/A	6	Fuel Oil Storage 1 Tank (3-11-0-F)	5040
			X	N/A	7	Fuel Oil Storage 2 Tank (3-23-0-F)	5350
		X			8	Fuel Oil Overflow 1 Tank (3-10-0-F)	606
		X			9	Fuel Oil Overflow 2 Tank (3-40-0-F)	1159
			X	N/A	10	FWD Void (3-0-0-V)	N/A
			X	X	11	Oily Water Tank (3-34-1-W)	336
		X			12	Dirty Oil Tank (3-34-2-F)	336
		X			13	AFT Void (3-43-0-V)	N/A

2.2.2c COATINGS CONFIGURATION DESCRIPTION

Coatings Configuration Description				
	Surface	**Substrate**	**CoatingSysName (VCS)**	**Topcoat Color**
1	Fuel Oil Service Tank 1S (3-17-1-F)	Steel	FO1a (oil)	N/A
2	Fuel Oil Service Tank 1P (3-17-2-F).	Steel	FO1a (oil)	N/A
3	Fuel Oil Service Tank 2S (3-41-1-F)	Steel	FO1a (oil)	N/A
4	Fuel Oil Service Tank 2P (3-41-2-F)	Steel	FO1a (oil)	N/A
5	Emer Gen Fuel Tank (1-10-1-F)	Steel	FO1a (oil)	N/A
6	Fuel Oil Storage 1 Tank (3-11-0-F)	Steel	FO1a (oil)	N/A
7	Fuel Oil Storage 2 Tank (3-23-0-F)	Steel	FO1a (oil)	N/A

Coatings Configuration Description				
	Surface	Substrate	CoatingSysName (VCS)	Topcoat Color
8	Fuel Oil Overflow 1 Tank (3-10-0-F)	Steel	FO2	Soft White (27880)
9	Fuel Oil Overflow 2 Tank (3-40-0-F)	Steel	FO2	Soft White (27880)
10	FWD Void (3-0-0-V)	Steel	IAV1	N/A
11	Oily Water Tank (3-34-1-W)	Steel	FO2	Soft White (27880)
12	Dirty Oil Tank (3-34-2-F)	Steel	FO2	Soft White (27880)
13	AFT Void (3-43-0-V)	Steel	FO2	Soft White (27880)

2.2.2.1 **Submit** an up-to-date copy of the PLUG LOG (123a) whenever requested by the KO/COR, and include a completed copy in the final CFR below.

2.3 **Corrective/Repair and Alterative Tasks**. The Contractor must:

2.3.1 **Perform** repairs/alterations whenever the KO releases a Change Request authorizing new post-inspection repairs/alterations, or whenever pre-existing discrepancies/tasks/alterations are described below (price these tasks below into the pre-award quote).

CSMP # FOR INTERNAL USE ONLY	PRE-EXISTING DISCREPANCIES/TASKS OR ALTERATIONS
N/A	DISCREPANCY: N/A TASK(S): N/A

2.4 **Final Inspection/Testing Tasks**. The Contractor must **Perform** the following:

2.4.1 **Inspect/Op Test (Final)** all affected surfaces/equipment/etc. and then **Submit** the final PLUG LOG (123a) and a final CFR attesting to satisfactory completion of the work item.

WORK ITEM 3: Watertight Closures

1. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 154 WPC 167-201, (series), Schedule of Doors, Manholes, and Hatches

Coast Guard Drawing 154B WPC 167-201, (series), Schedule of Doors, Manholes, and Hatches

COAST GUARD PUBLICATIONS

None

OTHER REFERENCES

None

2. REQUIREMENTS

INTENT: Visually inspect and operate each designated door, hatch, scuttle, etc. Identify and report all discrepancies (e.g., poor fit-up, leaks, excessive corrosion, damaged or missing components, etc.). Perform chalk and water tests to verify they seal properly.

2.1 **Government-furnished property**.

MTI	TY	ITEM DESCRIPTION	NSN/PN	QTY
N/A	N/A	N/A	N/A	N/A
*	Government-loaned property, which must 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 C5ISC Service Center.			

2.2 **Preventive/Recurring Tasks**. The Contractor must:

2.2.1 **Inspect/Op Test (Initial)** all affected surfaces/equipment/etc. and then **Submit** a CIR.

2.2.2 **Operate and Inspect** (167a) each watertight closure designated below.

2.2.2a When renewing a door, if the new door is uncoated or coated improperly, new doors and surrounding structure must be coated as follows. Door COATING SYSTEM: PolySLXN3b, TOP-COAT COLOR: Insignia White (17925). Superstructure exterior COATING SYSTEM: PolySLXN3b, TOP-COAT COLOR: Insignia White (17925). Superstructure interior COATING SYSTEM: BHD3a or BHD3b, TOP-COAT COLOR: Soft White (27880).

2.2.2.1 **Perform** a CHALK TEST (167a) of all inspected/repaired/renewed closures.

2.2.2.2 **Perform** a WATER HOSE TEST (167a) of all exterior watertight closure boundaries. Interior watertight closures do not require a water hose test.

NO WORK	OPERATE AND INSPECT, TEST		WATERTIGHT DOORS/LOCATIONS (11)
	X	1	Mid-Main Deck Stbd 1-27-1 (Passage 1-17-0-L)
	X	2	Mid-Main Deck Port 1-27-2 (Passage 1-17-0-L)
	X	3	FWD DC Locker 1-11-2
	X	4	Aft DC Locker 1-35-1
	X	5	Magazine Room 1-8-1
	X	6	Emergency Generator Room 1-10-1
	X	7	Generator Room 3-35.5-1
	X	8	Passage 2-25.5-0
	X	9	Passage 2-17-0
	X	10	Main Engine Room 3-27-1
	X	11	FWD Aux. Space 2-10-0
NO WORK	**OPERATE AND INSPECT, TEST**		**WEATHERTIGHT DOORS/LOCATIONS (3)**
	X	12	Mid "01" Weather Deck Starboard (Pilot House) 01-22-1
	X	13	Mid "01" Weather Deck Port (Pilot House) 01-22-2
	X	14	Aft "01" Weather Deck (Pilot House) 01-27-0
NO WORK	**OPERATE AND INSPECT, TEST**		**HATCHS/LOCATIONS (13)**
	X	15	Forward "01" Weather Deck 1-15-1
	X	16	Pilot House Fwd Lockers 01-19-1
	X	17	Pilot House Fwd Lockers 01-19-2
	X	18	Pilot House Fwd Lockers 01-19-3
	X	19	Pilot House Fwd Lockers 01-19-4
	X	20	Fwd Main Deck Boatswain Storage
	X	21	Fwd Aux. Space 1-6-1
	X	22	Aft Main Deck Main Engine Room 1-34-2
	X	23	Aft Main Deck Generator Room 1-39-2
	X	24	Aft Main Deck Port Steering Gear Room 1-41-1
	X	25	Aft Main Deck Stbd Steering Gear Room 1-41-2
	X	26	Passage 1-16-1
	X	27	Mess Deck 1-17-1
NO WORK	**OPERATE AND INSPECT, TEST**		**MANHOLES/LOCATIONS (2)**
	X	28	Boatswain Storage (Void Space) 1-2-2
	X	29	Gun Foundation

2.3 **Corrective/Repair and Alterative Tasks**. The Contractor must:

2.3.1 **Perform** repairs/alterations whenever the KO releases a Change Request authorizing new post-inspection repairs/alterations, or whenever pre-existing discrepancies/tasks/alterations are described below (price these tasks below into the pre-award quote).

CSMP # FOR INTERNAL USE ONLY	PRE-EXISTING DISCREPANCIES/TASKS OR ALTERATIONS
N/A	DISCREPANCY: N/A TASK(S): N/A

2.4 **Final Inspection/Testing Tasks**. The Contractor must:

2.4.1 **Inspect/Op Test (Final)** each watertight closure designated above and all affected surfaces/equipment/etc. and then **Submit** a final CFR attesting to satisfactory completion of the work item.

2.4.1a Within seven (7) days after the completion of the assessment and follow-on repairs, include a final report with the CFR above. The final reports must include:

- Complete list of watertight closures assessed.
- List of closures not assessed and the reasons for non-assessment.
- Condition found on all assessed closures.
- List of repairs accomplished.
- List of additional recommended repairs.

WORK ITEM 4: Propulsion Shafting System

1. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 154 WPC 161-301, (series), Skegs and Stern Tubes Support Structures

Coast Guard Drawing 154BWPC 161-301, (series), Skegs and Stern Tubes Support Structures

Coast Guard Drawing 154 WPC 204-301, (series), Equipment Removal Plan

Coast Guard Drawing 154B WPC 204-301, (series), Equipment Removal Plans

Coast Guard Drawing 154 WPC 243-201, (series), Main Propulsion Shafting A&D

Coast Guard Drawing 154B WPC 243-201, (series), Main Propulsion Shafting A&D

Coast Guard Drawing 154 WPC 245-304, (series), Propeller Plans and Data Six Blade Propeller

Coast Guard Drawing 154B WPC 245-301, (series), Propeller Plans and Data Six Blade Propeller

Coast Guard Drawing 154 WPC 245-901, (series), Propeller CAD Model to Support CMM Scan (IGS File)

COAST GUARD PUBLICATIONS

Coast Guard Technical Publications (TP) 6632, SWBS 6633, Jul 2015, Reduction Gear – Model ZF 280-1

Coast Guard Technical Publication (TP) 8081A, SWBS 243, (series), Stern Tube Seal with Emergency Packing Gland

Coast Guard Technical Publication (TP) 8906A, SWBS 244, (series), Technical Repair Standard For Use On Fast Response Cutter (FRC-B) Propulsion Shaft - P/N 6205781 – (154' WPC (A) and (B) Class Cutters

Coast Guard Technical Publication (TP) 8913A, SWBS 086, (series), Technical Repair Standard For Use On FRC – Propellers, Michigan Type 1 and Type 2

OTHER REFERENCES

American Bureau of Shipbuilding (ABS) Rules for Survey After Construction, Part 7

2. REQUIREMENTS

INTENT: Identify and correct all discrepancies with the shaft system (i.e., shafts, shaft seals, propellers, stern tube bearings/carriers/housings, stern tube structure and coating system, all other associated components, etc.). All disturbed wearing and consumable components must be renewed at reassembly.

All zinc anodes must be renewed. Shaft seals must be inspected and overhauled or renewed.

Qualifications: 3-dimensional (3-D) scans - If requested by the KO, submit evidence proving that at least one on-site technician has successfully operated the scanning equipment in at least one prior similar contract, and has prior experience performing all of the scanning tasks specified herein.

Qualifications: Alignment Survey - If requested by the KO, submit evidence that at least one on-site technician has successfully performed alignment measurements using optical or laser systems in a prior contract.

Qualifications: Shaft Seal Work - At least one on-site technician must be qualified to work on this particular shaft seal (e.g. have successfully overhauled/renewed/repaired this particular type of shaft face seal, or have similar experience on a different face seal manufactured by the same company, or must otherwise be trained to disassemble/reassemble the shaft face seal.)

2.1 **Government-furnished property**.

MTI	TY	ITEM DESCRIPTION	NSN/PN	QTY
Y	**	Propeller Shaft	NIIN: 016057516	2 ea
Y	**	LH Propeller	NIIN: 016280276	1 ea
Y	**	RH Propeller	NIIN: 016279761	1 ea
N	**	Stave Kit (each kit contains 8 reg. Romor staves, 2 rubber locking staves, 2 Romor staves w/keeper slot)	NIIN: 016057400	4 kt
N	**	FWD Bearing Split External Retaining Ring Kit (contains 1ea retaining ring, 10ea socket head cap screws)	NIIN: 016057345	2 kt
N	**	AFT Bearing Split External Retaining Ring Kit (contains 1ea retaining ring, 10ea socket head cap screws)	NIIN: 016057510	2 kt
N	**	Kit, Installation Part-Replacement (see 2.1a for kit contents)	NIIN: 016294693	2 kt
N	**	Propulsion Shaft Seal Overhaul Kit (see table 7-4 of TP-8081, pg 7-8, **Service Kit B** – "Non-Split" Use when shaft is pulled)	NIIN: 016185248	2 kt
N	**	Propulsion Shaft Seal Overhaul Kit (see table 7-5 of TP-8081, pg 7-9, **Service Kit C** – "Split" Use when shaft is **not** pulled)	NIIN: 016185276	2 kt
N	**	Anodes, Zinc (stern tube)	NIIN: 016445483	28 ea
N	**	Anodes, Zinc (stern tube)	NIIN: 016445457	2 ea
N	**	NUT, SELF LOCKING (shaft to gear box coupling hub)	NIIN: 017222196	40 ea
N	**	BOLT, MACHINE (shaft to gear box coupling hub)	NIIN: 017222178	40 ea
Y	*	Kit, Propeller – Removal/Installation Tools and Equipment (see 2.1b for kit contents)	NIIN: 016322198	1 kt

*	Government-loaned property, which must 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 C5ISC Service Center.

2.1a These are the contents of the Government-furnished "Kit, Installation Part-Replacement". See Coast Guard Drawing 154 WPC 245-304.

PC#	PN	DESCRIPTION	MATL	QTY PER PROP	PRICE EA	PRICE PER SET
3	950733	Anode Zinc Plate	Zinc	1	$413.26	$413.26
4	950724	Cover Plate	2205 SS	1	$83.54	$83.54
5	950726	Retaining Ring	304L SS	1	$180.50	$180.50
6	950746	"O" Ring Fwd End FW Cap	Buna-N	1	$27.84	$27.84
7	950744	"O" Ring Aft End FW Cap	Buna-N	1	$27.16	$27.16
8	950756	M16 X 2 X 50mm SS SHCS	SS	4	$5.70	$22.80

PC#	PN	DESCRIPTION	MATL	QTY PER PROP	PRICE EA	PRICE PER SET
9	950755	M10 X 1.5 X 25mm SS SHCS	SS	3	$1.46	$4.37
10	950714	SS Hex "O" Ring Plug	SS	2	$41.54	$83.09
11	950738	Lifting Eye Bolt	Carbon Steel	3	$60.98	$182.93
12	950736	Plug - Lifting Hole	NiBrAl	6	$73.72	$442.32
13	950748	"O" Ring-Hub Fwd Propeller	Buna-N	1	$11.34	$11.34
14	950759	Anti Vibration Lock Washer	SS	3	$10.76	$32.28
15	950757	M6 X 1 X 20mm SS SHCS	SS	8	$1.28	$10.26

2.1b This is the contents of the Government-furnished “Kit, Propeller – Removal/Installation Tools and Equipment”.

QTY	PN	DESCRIPTION
1	999130	SPANNER WRENCH
1	950742	SPACER, INSTALLATION
1	999122	HYD. INSTALLATION NUT
1	999124	SKF HYDRAULIC PUMP 15,000 PSI
2	999125	ENERPAC HYDRAULIC PUMP 10,000 PSI
1	999142	MCDANIEL GAGE
1	999144	HYD.SWIVEL FITTING
1	999146	HYD. STRAIGHT FITTING
2	999148	WASHER, HYD. FITTING
2	999135	SKF QUICK CONNECTING NIPPLE
2	999136	SKF QUICK CONNECTING COUPLING
2	999137	10-FOOT WEAT HYDRAULIC HOSE
1	999128	INSTRUCTION MANUAL
		INST. ROD, HYD. INST. NUT (5/8 DIA X 9)

2.2 **Preventive/Recurring Tasks**. The Contractor must:

2.2.1 **Inspect/Op Test (Initial)** all affected surfaces/equipment/etc. DOCK AND SEA TRIALS (868a) are required. **Submit** a **CIR** for all initial inspections and tests. The report must address the condition of the stern tube structure and coating system, unusual stern tube stave bearing wear, and must contain a recommendation for propeller renewal or re-use.

2.2.2 **Perform** the work described/designated in the table below on the propulsion shaft system.

PROPELLERS

If a propeller fails a visual inspection (e.g., visibly bent, excessively worn at the tips, etc.) and will be renewed using GFP, **do not** 3-D Scan the damaged propeller. 3D Scan the new GFP propeller after it has been installed on the shaft.

3-D SCAN REQUIREMENTS - If **3-D Scan** is designated, go to **WISS - 245a Propellers** and comply with the requirements described for **3-D Scan** (e.g. calculate ISO 484/2 Class I tolerances, etc.). Prerequisite model data is provided under Coast Guard Drawing 154 WPC 245-901, (series), Propeller CAD Model to Support CMM Scan (IGS File).

	No Work	**Clean, Inspect** (245a)	**Clean, Inspect** and **3-D Scan** (245a)	**Renew** and **3-D Scan** (245a)	Configuration Item, additional rqmts.
1			X		STBD Propeller Assembly If 3-D Scan designated, **Submit** a 2.2.2a PROPELLER SCAN REPORT with the above CIR.
2			X		PORT Propeller Assembly If 3-D Scan designated, **Submit** a 2.2.2a PROPELLER SCAN REPORT with the above CIR.

ZINC ANODES

Vessels were modded to add 12ea anodes to the stern tube cover plates; some vessels may not have received this modification yet, if this vessel has not yet received the mod perform the mod on this vessel. When work is complete there should be a total of 28 anodes installed (14 anodes total per stern tube…8 anodes on each large cover plate, and 3 anodes on each small cover plate).

	No Work	**Renew**	Configuration Item, additional rqmts.
3		X	All STBD Stern Tube Zinc Anodes, the STBD propeller zinc plate, all associated fasteners. If Renew is designated **Comply** with 2.2.2b NEW ZINC ANODE CONFIGURATION below.
4		X	All PORT Stern Tube Zinc Anodes, the PORT propeller zinc plate, all associated fasteners. If Renew is designated **Comply** with 2.2.2b NEW ZINC ANODE CONFIGURATION below.

SHAFT ASSEMBLIES

(SHAFTS, STERN TUBE INTERIORS/STRUCTURE, STERN TUBE BEARINGS, ALIGNMENT SURVEY [bearing housings, seal flange, RG flange], SHAFT INSPECTIONS)

CLEANING/INSPECTING (i.e. NOT REMOVING SHAFTS) - When CLEAN/INSPECT is designated,

- clean and inspect all stern tube interior/exterior surfaces to the greatest practicable extent without removing the shaft
- inspect rope guard/access covers and all other visible components.

OVERHAULING (i.e. REMOVING SHAFTS) - When OVERHAUL is designated,

- inspect the shaft/RG coupling hubs, take measurements, fill out form
- unship/reinstall shaft, perform all shaft inspections (run-out on machine, etc.), see WISS 243a def for "*Shaft Assembly*" - ***Overhaul***
- clean/inspect stern tube, rope guard/access covers, etc.
- perform an RG-flange/shaft-seal-flange/stern-tube-bearing-housing alignment survey
- renew stern tube bearing staves
- renew shaft coupling fasteners
- Repair and coat stern tube interior structure, as appropriate
  - Perform weld repairs, as authorized
  - coat with additional epoxy cement, as authorized
  - repair/renew paint coatings

See WISS 243a for general definition of overhaul for this sub-system.

NOTES - All "align-able" components (e.g., RG mounting to structural rails, stern tube bearing, etc.) are cemented in place at the original alignment position when the vessel was constructed. Unless the vessel was struck or is otherwise permanently/temporarily deformed, or the original alignment was defective or disturbed, etc. the components should be in satisfactory alignment. The cursory ALIGNMENT SURVEY specified herein is designed to simply identify if a significant misalignment discrepancy exists. If a significant misalignment discrepancy is identified additional alignment and corrective tasks may be required; these will be authorized/funded by CR.

	No Work	**Clean** and **Inspect**	**Overhaul** (243a)	
5			**X**	**STBD Shaft Assembly** **Notify** the COR prior to performing inspections; all inspections must be performed in the presence of the COR or the COR's designated Coast Guard inspector.
6			**X**	**PORT Shaft Assembly** **Notify** the COR prior to performing inspections; all inspections must be performed in the presence of the COR or the COR's designated Coast Guard inspector.

If ***Overhaul*** is designated for either shaft assembly above:

- Prior to shaft removal, **Inspect** the shaft/RG coupling and **Submit** the *2.6 SHAFT/RG COUPLING MEASURMENT DATA FORM* below (include in the CIR above).
- **Comply** with 2.2.2c ADDITIONAL STERN TUBE OVHL RQMTS
- **Inspect** the shaft and **Submit** the *2.5 Shaft Measurement Data Form* below (include in the CIR above).
- **[ ] Repair [X] Renew** the stern tube interior coating system (631a, VCS). **Comply** with 2.2.2d STERN TUBE INTERIOR COATING SYSTEM RQMTS
- **[ ] N/A [X] Perform** 2.2.2d.1 PREVENTIVE MEASURES USING EPOXY CEMENT
- **Perform** a 2.2.2e ALIGNMENT SURVEY. **Submit** a **CFR** containing all inspection data. Describe all discrepancies identified, and recommended repairs.
- **Renew** shaft coupling fasteners at reinstallation.

SHAFT SEALS If the shaft is removed from the vessel, then use Service Kit "B" H76214-6 (non-split), otherwise use Service Kit "C" H76214-8 (split).					
	No Work	**Inspect** (243a)	**Overhaul** (243a)	**Renew** (243a)	
7			X		STBD Shaft Seal Assembly
8			X		PORT Shaft Seal Assembly

2.2.2a PROPELLER SCAN REPORT - All inspections may be performed without removing the propeller from the shaft. Visual inspections must be performed prior to performing a **3-D scan**. A **3-D scan** must not be performed on a propeller that has failed a visual inspection (i.e., if the propeller fails the visual inspection, do not perform the 3-D Scan on it); perform the scan on the corresponding new Government-furnished propeller immediately after it has been installed on the shaft.

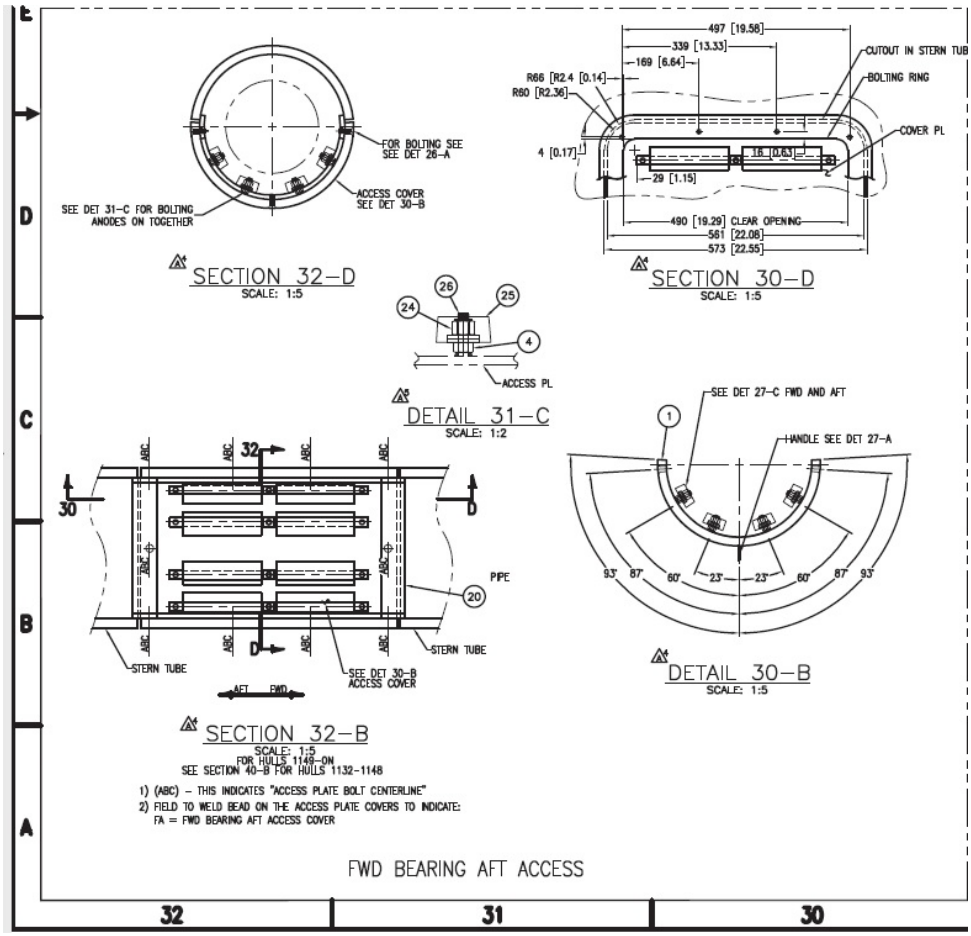
When tasked to perform a 3-D scan above, **Submit** one or more editable/unprotected compact discs (CD) containing the 3-D scan report in conjunction with submitting the associated CIR. The CDs must contain all measured and calculated data, and all associated images. The propeller serial number and inspection date must be recorded on each CD. Each CD must be sent to the following address within 2 weeks of completing the inspections:

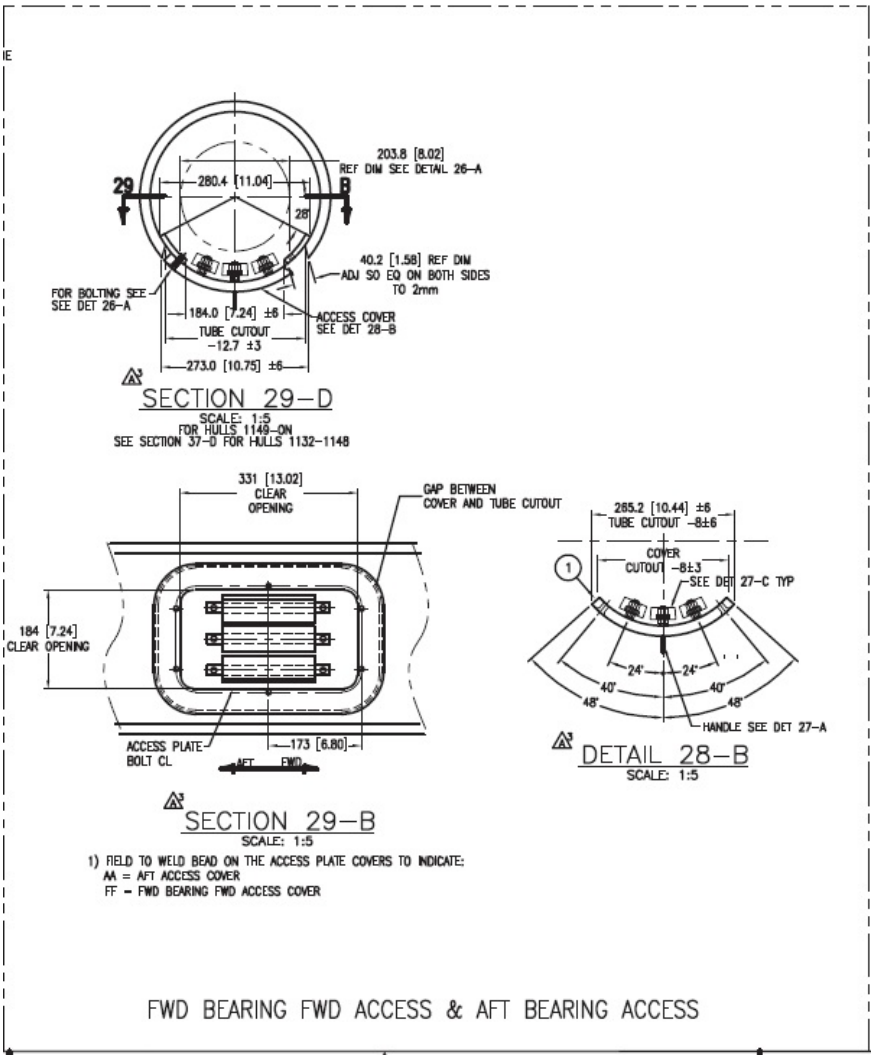
United States Coast Guard
SFLC-Patrol Boat Product Line
ATTN: SES Chief
300 East Main Street
Norfolk, VA 23510

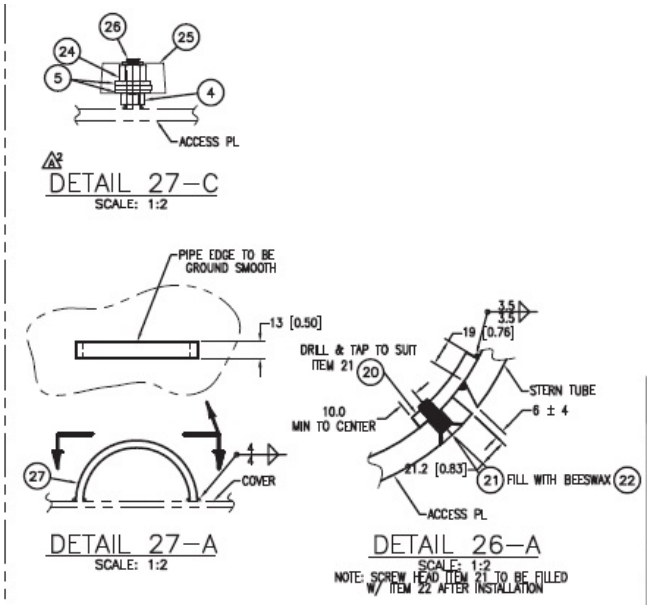
2.2.2b NEW ZINC ANODE CONFIGURATION. This vessel requires a zinc anode modification to the PORT an STBD stern tube covers adding an additional 12 anodes for a new total of 28 anodes. Reconfigure and install the Government-furnished zinc anodes to the stern tube covers as shown below (refer to Hull Applicability 1149-ON).

MATERIALS LIST

	PIECE NO	QTY	UNIT	MFR #/NSN	DESCRIPTION	MATERIAL	HULL APPLICABILITY	
H	1	23' 4-1/2" PER SHAFT			PIPE SCH 80 SMLS 14" NOMINAL	ASTM A106GRB		
	2	6 SQ FT		BSI# 1725556	GASKET :1/8" X 48" WIDE ROLL	DIAPHRAGM		
	3	56			BOLT: 3/8"-16 UNC X 2-3/4" LONG HEX HEAD	SST TYPE 316		
	4	52			NUT: 3/8"-16 UNC HEX HEAD	SST TYPE 316		
	5	208			FLATWASHER: 3/8"	SST TYPE 316	1149-ON	
		160			FLATWASHER: 3/8"	SST TYPE 316	1132-1148	△1
G	6	2			STRAP GROUNDING TYPE I BOND STRANDED WIRE CABLE 12" MIL-S-1310 REV-G S/S MFG#T1G12 "RT&O"	S/S		
	7	6 SQ FT			PLATE: 3/4" THICK	SST TYPE 316L		
	8	2		BSI# 6116515 GALVOTEC ALLOYS INC.	22.5# ZINC ALLOY ANODE DWG. - Z0220205F3 OR EQUAL	ZINC		
	9	8			LOCKWASHER: 3/8"	SST TYPE 316		
	10	8			WELD STUD: 3/8"-16 UNC DIA X 2-1/4" LG	SST TYPE 316L		
	11	16"			FLATBAR: 1-1/2" X 3/8" THICK	SST TYPE 316L		
	12	4			NUT: 1/2"-13 UNC HEX HEAD	SST TYPE 316		
	13	4			FLATWASHER: 1/2"	SST TYPE 316		
	14	4			LOCKNUT: 1/2"-13 UNC	SST TYPE 316		
F	15	4			WELD STUD: 1/2"-13 UNC DIA X 2-1/4" LG	SST TYPE 316L		
	16	10 SQ FT			PLATE: 1/4" THICK	ALUM ASTM H-116		
	17				NOT USED			
	18	2		BSI# 6209653	SHAFT SEAL ADAPTER PLATE - 62mm THK X 386mm OD. X 216mm ID.	SST TYPE 316L ASTM A403		
	19	10'		BSI# 6161057	TUBING MECHANICAL 16" (406.4mm) X 8" (203.2mm) (4 INCH WALL) STL-A106B	STEEL A106B		
	20	7'-0"			PIPE SCH 40 SMLS 12" NOMINAL	SST TYPE 316L		
	21	32			SCREW CAP: 3/8" X 1-1/4" UNC FLAT HEAD SOCKET COUNTERSUNK ANSI B18.3 ASTM F879 CONDITION CW TYPE 316	B18.3 SST TYPE 316		
	22	A/R			BEESWAX			
E	23	A/R			PLATE: 3/8" THICK	ASTM AH36		
	24	116			LOCKNUT: 3/8"-16 UNC HEX HEAD	SST TYPE 316	1149-ON	
		100			LOCKNUT: 3/8"-16 UNC HEX HEAD	SST TYPE 316	1132-1148	△1
	25	28		BSI# 6116590 GALVOTEC ALLOYS INC.	2.8# ZINC ALLOY ANODE DWG. - Z0020202H3 OR EQUAL	ZINC	1149-ON	
		16		BSI# 6116590 GALVOTEC ALLOYS INC.	2.8# ZINC ALLOY ANODE DWG. - Z0020202H3 OR EQUAL	ZINC	1132-1148	△1
	26	60			WELD STUD: 3/8"-16 UNC DIA X 1-1/2" LG	SST TYPE 316L	1149-ON	
		44			WELD STUD: 3/8"-16 UNC DIA X 1-1/2" LG	SST TYPE 316L	1132-1148	△1
	27	2"			PIPE SCH 40 SMLS 3" NOMINAL	SST TYPE 316L SMLS ASTM 312		
	28	2		BSI# 5091303	HALF COUPLING 1	SST TYPE 316L		




203.8 [8.02]
REF DIM SEE DETAIL 26-A
280.4 [11.04]
29
B
28°
40.2 [1.58] REF DIM
ADJ SO EQ ON BOTH SIDES
TO 2mm
FOR BOLTING SEE
SEE DET 26-A
184.0 [7.24] ±6
ACCESS COVER
SEE DET 28-B
TUBE CUTOUT
-12.7 ±3
273.0 [10.75] ±6
SECTION 29-D
SCALE: 1:5
FOR HULLS 1149-ON
SEE SECTION 37-D FOR HULLS 1132-1148
331 [13.02]
CLEAR
OPENING
GAP BETWEEN
COVER AND TUBE CUTOUT
184 [7.24]
CLEAR OPENING
ACCESS PLATE
BOLT CL
173 [6.80]
AFT
FWD
SECTION 29-B
SCALE: 1:5
285.2 [10.44] ±6
TUBE CUTOUT -8±6
COVER
CUTOUT -8±3
SEE DET 27-C TYP
1
24°
24°
40°
40°
48°
48°
HANDLE SEE DET 27-A
DETAIL 28-B
SCALE: 1:5
1) FIELD TO WELD BEAD ON THE ACCESS PLATE COVERS TO INDICATE:
AA = AFT ACCESS COVER
FF = FWD BEARING FWD ACCESS COVER
FWD BEARING FWD ACCESS & AFT BEARING ACCESS


26
25
24
5
4
ACCESS PL
DETAIL 27-C
SCALE: 1:2
PIPE EDGE TO BE
GROUND SMOOTH
13 [0.50]
27
4
COVER
DETAIL 27-A
SCALE: 1:2
3.5
3.5
19 [0.76]
DRILL & TAP TO SUIT
ITEM 21
20
STERN TUBE
10.0
MIN TO CENTER
6 ± 4
21.2 [0.83]
21
FILL WITH BEESWAX
22
ACCESS PL
DETAIL 26-A
SCALE: 1:2
NOTE: SCREW HEAD ITEM 21 TO BE FILLED
W/ ITEM 22 AFTER INSTALLATION

2.2.2c ADDITIONAL STERN TUBE OVHL RQMTS –The rope guard and all stern tube access covers must be removed. All growth and fouling must be removed from all accessible stern tube and shaft areas prior to performing inspections. All exposed surfaces (e.g. shafts, shaft bearing staves, stern tube surfaces and coatings, etc.) must be inspected to the greatest extent practicable to identify all discrepancies (e.g. damage, corrosion, excessive and/or abnormal wear, failed coatings, etc.).

2.2.2d STERN TUBE INTERIOR COATING SYSTEM RQMTS is as follows. EPOXY CEMENT (VCS) may be used to repair other damaged areas and pits when authorized by the COR.

COATING SYSTEM (from VCS)	COAT	COLOR
CA5 (2AC 3AF) Or NCA5 (2AC 3AF)	AC1	OSHA Safety Red (11105)
	AC2	Interior Haze Gray (26270)
	AF1	OSHA Safety Red (11105)
	AF2	OSHA Black (17038)
	AF3	OSHA Safety Red (11105)

2.2.2d.1 PREVENTIVE MEASURES USING EPOXY CEMENT- When designated above, in addition, and prior to applying the primer coat of paint to the stern tube interiors, AND IF THIS EPOXY CEMENT HAS NOT BEEN APPLIED IN THE PAST, apply a coat of EPOXY CEMENT (VCS), to the interior of each stern tube in the areas described below (do not apply cement to the machined surfaces under the bearings):

- From the Shaft Seal Flange (including the flange/stern-tube weld joint) aft to FR37, just aft of the stern tube access cover.
- From the FWD end of the FWD Bearing Housing to the FWD end of the FWD Bearing
- From the AFT end of the FWD Bearing to the AFT end of the FWD Bearing Housing
- From the FWD end of the AFT Bearing housing to the FWD end of the AFT Bearing

BELOW, Suggest placing a mirror/laser on the center of RG flange, letting the flat face and center of the flange prescribe the datum (i.e. 0,0,0, 0deg) for the reference line. Measure all offsets from that line. That, in combination with an inspection of the RG foundation/chocking, will allow rapid determination of a discrepancy.

DO NOT use a point at the center of the AFT Bearing and a point the center of the RG Flange to define the datum for the reference line.

2.2.2e ALIGNMENT SURVEY - After the shaft has been removed from the vessel, **Perform** an alignment survey on each shaft assembly's stern tube components. Thermal effects must be minimized by performing measurements late in the evening or before sunrise. Optical or laser methods must be used to establish a reference line through the stern tube. The vertical and horizontal offsets (from that reference line) of the following 6 points must be measured/recorded/submitted, and all discrepancies and repair recommendations (if any) must be recorded/submitted:

	Offset Measurement Position
1	Reduction Gear Flange
2	Shaft Seal Flange ("ADAPTOR PL")
	FWD Stern Tube Bearing
3	FWD End
4	AFT End
	AFT Stern Tube Bearing
5	FWD End
6	AFT End

REPAIRS

2.3 **Corrective/Repair and Alterative Tasks**. The Contractor must:

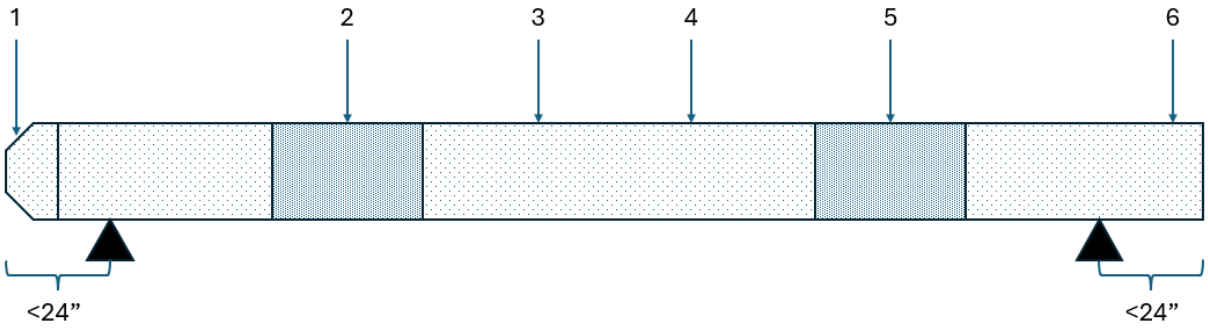
2.3.1 **Perform** repairs/alterations whenever the KO releases a Change Request authorizing new post-inspection repairs/alterations, or whenever pre-existing discrepancies/tasks/alterations are described below (price these tasks below into the pre-award quote).

CSMP # FOR INTERNAL USE ONLY	PRE-EXISTING DISCREPANCIES/TASKS OR ALTERATIONS
N/A	DISCREPANCY: N/A TASK(S): N/A

2.4 **Final Inspection/Testing Tasks**. The Contractor must:

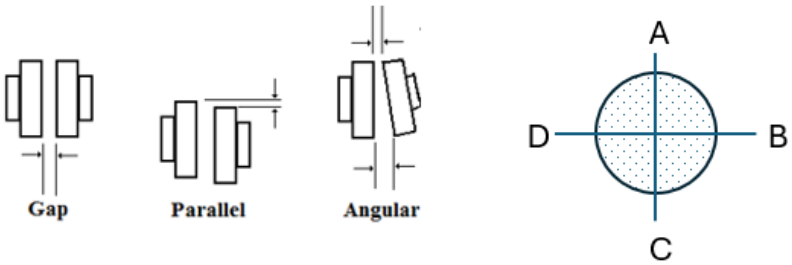
2.4.1 **Inspect/Op Test (Final)** all affected surfaces/equipment/etc. and then **Submit** a final CFR attesting to satisfactory completion of the work item. DOCK AND SEA TRIALS (868a) are required.

2.5 SHAFT MEASURMENT DATA FORM



With the shaft supported on rollers <24” from both ends, measure and record total indicator runout at the 6 locations described below and shown above.			
LOCATION		**PORT SHAFT TIR** (nearest 0.000”)	**STBD SHAFT TIR** (nearest 0.000”)
APPROX. CENTER OF THE TAPER	**1**		
APPROX. CENTER OF THE AFT JOURNAL	**2**		
APPROX. AFT 1/3 OF THE SPACE BETWEEN JOURNALS	**3**		
APPROX. FWD 1/3 OF THE SPACE BETWEEN JOURNALS	**4**		
APPROX. CENTER OF THE INTERMEDIATE JOURNAL	**5**		
NO LESS THAN 6” AFT OF THE FWD END OF SHAFT	**6**		
FACILITY			
INSPECTOR SIGNATURE			
DATE/TIME			

2.6 SHAFT/RG COUPLING MEASURMENT DATA FORM



With the shaft supported to bring the centerlines of the shaft flange and the gearbox flange as concentric as practicable • Measure and record the gap between the flanges, must be >1/4" and < 1/2" (ensure flanges are not in contact) • Measure and record 4 parallel and 4 angular readings			
LOCATION		**PORT SHAFT** (nearest 0.000")	**STBD SHAFT** (nearest 0.000")
GAP			
PARALLEL	**A**		
	B		
	C		
	D		
ANGULAR	**A**		
	B		
	C		
	D		
FACILITY			
INSPECTOR SIGNATURE			
DATE/TIME			

WORK ITEM 5: Piping Systems

1. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 154 WPC 256-201, (series), Main Propulsion Cooling System Arrangement

Coast Guard Drawing 154 WPC 256-301, (series), Main and Auxiliary Cooling System Diagram

Coast Guard Drawing 154 WPC 521-201, (series), Firemain System Arrangement

Coast Guard Drawing 154 WPC 521-301, (series), Firemain System and Magazine Sprinkler Diagram

Coast Guard Drawing 154 WPC 524-201, (series), Auxiliary Cooling System Arrangement

Coast Guard Drawing 154 WPC 529-301, (series), Bilge System Diagram

COAST GUARD PUBLICATIONS

Coast Guard Technical Publication (TP) 8000, SWBS 256, (series), Main Diesel Engine Seawater Strainer, 10 Inch Duplex Basket Strainer

OTHER REFERENCES

None

2. REQUIREMENTS

INTENT: Overhaul or Renew all the valves and strainers listed below. Perform a cursory inspection of various piping to identify all leaks, submit discrepancy descriptions and recommended repairs. Perform any authorized corrective maintenance described for any item contained in the system(s).

NOTES:

- PRE-AWARD QUOTING - Renew the valve/strainer in lieu of Overhaul when it is more economical to do so (i.e. for small valves it may be more economical to just renew the valve versus overhauling it).
- OVERHAUL - In the context of this item, Overhaul means 1) disassemble valve/strainer 2) clean, inspect looking for growth repairs that would require further compensation (report that), perform some minor dressing of sealing surfaces, 3) renew all consumable/wearing components e.g. seals, gaskets, etc. 4) reassemble.
- Mechanically clean piping interiors exposed after valve/strainer removal as much as practicable.
- Valves listed herein are "Sea Water System Valves" (200a, 256a)
- Strainers listed herein are "Sea Water System Strainers" (200a, 256a)

2.1 **Government-furnished property**.

MTI	TY	ITEM DESCRIPTION	NSN/PN	QTY
N	***	EDG Remote Fuel Cutout Valve	N/A	1 ea
*	Government-loaned property, which must 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 C5ISC Service Center.			

2.2 **Preventive/Recurring Tasks**. The Contractor must:

SEA VALVE AND STRAINER OVERHAULS

2.2.1 **Inspect-Op Test (Initial)** all valves designated below and associated piping (110a, 123a) (e.g., verify valves operators cycle properly, verify no damaged/leaking piping, etc.). **Submit** a CIR for all initial inspections and tests. Also include in the report discrepancies and recommended repairs from the inspections conducted in 2.2.3 below.

2.2.2 **Perform** the valve and strainer work specified below.

	No Work	**Overhaul** or **Renew** (256a)	
Valves			
1		X	#2 MDE R/W Sea Chest Valve (10" Butterfly Lug)
2		X	#1 MDE R/W Sea Chest Valve (10" Butterfly Lug).
3		X	#1 MDE R/W SUP Valve (10" Butterfly Wafer).
4		X	#2 MDE R/W SUP Valve (10" Butterfly Wafer).
5		X	#2 Aux Cooling Pump Suction Valve (4" Butterfly Wafer).
6		X	#1 Aux Cooling Pump Suction Valve (4" Butterfly Wafer).
7		X	#2 SSDG Strainer Inlet (3" Butterfly Wafer).
8		X	#1 SSDG Strainer Inlet (3" Butterfly Wafer).
9		X	#1 SSDG Suction (3" Butterfly Lug).
10		X	#2 SSDG Suction (3" Butterfly Lug).
11		X	#1 Fire pump Suction FMCOV 3-9-1 (fwd aux) (4" Butterfly Lug).
12		X	P-100 Suction FMCOV 3-36-2 (3" Butterfly Lug).
13		X	#2 Fire pump Suction FMCOV 3-32-1 (4" Butterfly Wafer
14		X	Strainer Isolation Valve A (10" Butterfly Lug).
15		X	Strainer Isolation Valve B (10" Butterfly Lug).
16		X	Strainer Isolation Valve C (10" Butterfly Lug).
17		X	Strainer Isolation Valve D (10" Butterfly Lug).
18		X	Strainer Isolation Valve E (10" Butterfly Lug).
19		X	Strainer Isolation Valve F (10" Butterfly Lug).
20		X	Strainer Isolation Valve G (10" Butterfly Lug).
21		X	Strainer Isolation Valve H (10" Butterfly Lug).
22		X	Raw Water Cross Connect Valve A (10" Butterfly Wafer).
23		X	Raw Water Cross Connect Valve B (10" Butterfly Wafer).
Strainers			
1		X	4 each Main Diesel Engine Strainers (10" Miller-Leaman).
2		X	2 each Ship Service Diesel Engine Strainers (3" Eaton).
3		X	2 each Propeller Shaft Seal Strainers (1.5" Kraissl). **See 2026004 below**
4		X	1 each Fire Pump Strainer (3" Eaton)
5		X	2 each C1 and C2 A/C Strainer (2.5" Kraissl) **See 2026003 below**
6		X	1 each Fire Pump Strainer (4" Eaton)

2.2.2a Select the most economical action (**Overhaul** or **Renew**) for each valve/strainer (when developing a pre-award quote).

2.2.2b Unless circumstances prevent, failed 90-10 CuNi piping and components must be renewed using 70-30 CuNi piping and components.

2.2.2.1 **Clean** mechanically the pipe interiors exposed by the removed valves as far as practicable into the pipe run (approx. 3LF to 5LF) to remove all fouling/growth.

INSPECT ALL PIPING FOR MISCL LEAKS

2.2.3 **Inspect** various piping systems (e.g., MDE/SSDG/EDG cooling water ppg, all auxiliary sea water ppg, all sewage and grey water ppg, all potable water ppg, all fuel oil ppg, all bilge water ppg, refrigerant ppg, etc.).

2.2.3a This is a cursory visual inspection to identify all previously unidentified serious/urgent discrepancies (e.g. leaks, severe corrosion, etc.) not already described below, so that urgent repairs can be included in the scope of work. Do not perform significant disassembly to gain access to the piping being inspected. The inspection must be in the presence of a Coast Guard Inspector or the COR/PE.

2.3 **Corrective/Repair and Alterative Tasks**. The Contractor must:

2.3.1 **Perform** repairs/alterations whenever the KO releases a Change Request authorizing new post-inspection repairs/alterations, or whenever pre-existing discrepancies/tasks/alterations are described below (price these tasks below into the pre-award quote).

CSMP # FOR INTERNAL USE ONLY	PRE-EXISTING DISCREPANCIES/TASKS OR ALTERATIONS
2026002	DISCREPANCY: EDG Remote Fuel Cutout Valve actuator/valve damaged beyond repair. Weld repairs may be required. TASK(S): **Renew** the EDG Remote Fuel Cutout Valve GFP furnished by Ship's Force. **Inspect** all associated components for discrepancies (e.g. reach rods, structure, etc.). **Submit** CFR.
2026003	DISCREPANCY: C1 and C2 A/C Strainer (2.5" Kraissl) damaged beyond repair. TASK(S): **Renew** 2ea shaft seal strainers. Acceptable Substitute: Eaton Aluminum Bronze Model 72

CSMP # FOR INTERNAL USE ONLY	PRE-EXISTING DISCREPANCIES/TASKS OR ALTERATIONS
2026004	DISCREPANCY: Propeller Shaft Seal Strainers (1.5" Kraissl). damaged beyond repair. TASK(S): **Renew** 2ea shaft seal strainers. Acceptable Substitute: Eaton Aluminum Bronze Model 72

2.3.1.1 **Perform** the additional (corrective/vessel-specific) valve and strainer work specified below.

	No Work	**Overhaul** or **Renew** (256a)	Valves
1	X		
2	X		
3	X		

2.4 **<u>Final Inspection/Testing Tasks</u>**. The Contractor must:

2.4.1 **Inspect/Op Test (Final)** all affected surfaces/equipment/etc. and then **Submit** a final CFR attesting to satisfactory completion of the work item. DOCK AND SEA TRIALS (868a) are required.

2.4.1a Test the operation and tightness of all affected seawater system components using the system fluid at normal operating pressure. Ensure zero visible leakage. Repair all discrepancies and retest.

WORK ITEM 6: Electrical Power Distribution System

1. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 154 WPC 320-301, (series), 450V System Deck Plan

Coast Guard Drawing 154 WPC 330-301, (series), 120V System Deck Plan

Coast Guard Drawing 154B WPC 320-301, (series), 450V System Deck Plan

Coast Guard Drawing 154B WPC 330-301, (series), 120V System Deck Plan

COAST GUARD PUBLICATIONS

None

OTHER REFERENCES

American Society for Nondestructive Testing, SNT-TC-1A: Personnel Qualification and Certification in Nondestructive Testing, 2016

2. REQUIREMENTS

INTENT: Take thermally imaged photos of the internals of the following energized components while they are at, or nearly at, a steady state temperature so that discrepancies can be identified. Perform all authorized corrective actions to those discrepancies. Return all equipment to its normal state.

WARNING - Take all necessary precautions to prevent injury due to electric shock and potential arc-flash. Only necessary personnel (contracted or ship's force) must be present in the compartment while energized panels are open. Only authorized personnel, and no Coast Guard personnel, must break the plane of the arc flash boundary.

VARIOUS NOTES:

Fahrenheit (F) = Celsius (C)*(9/5) +32, and C = (5/9)*(F-32)

A **hot spot** is a relative temperature related to the equipment which is surveyed. A general rule of thumb considers a 'hot spot' 18°F / 10°C or more above the equipment reference temperature.

A **cold spot** is any area of the equipment which is surveyed where the temperature is satisfactory, but exhibits an open connection, component fault, or some other similar problem.

This work item is ideally performed prior to going into drydock (e.g., during pre-docking sea trials, etc.) so that all equipment can be energized, CIR requirements can be met, growth repairs can be performed without impacting schedule, etc.

2.1 **Government-furnished property**.

MTI	TY	ITEM DESCRIPTION	NSN/PN	QTY
N/A	N/A	N/A	N/A	N/A
*	Government-loaned property, which must 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 C5ISC Service Center.			

2.2 **Preventive/Recurring Tasks**. The Contractor must:

2.2.1 **Inspect-Op Test (Initial)** the parts of the electrical power distribution system affected by this work item (e.g., panels, etc.). **Submit** a **CIR** describing discrepancies and recommended repairs.

2.2.2 **Perform** an inspection and **Submit a** THERMOGRAPHIC INSPECTION/REPORT (300a) on/for the following components, as designated in the table below.

NO WORK	INSPECT		NOMENCLATURE	SPECIFICATIONS	LOCATION
	X	1	SHIP SERVICE SWITCHBOARD (1S)	450VAC, 3PHASE, 60HZ, 1000A	3-36-0-E
	X	2	EMERGENCY SWITCHBOARD (1E)	450VAC, 3PHASE, 60HZ, 500A	1-10-0-E
	X	3	STBD MOTOR CONTROL CENTER GC21	450VAC, 3PHASE, 60HZ, 1200A	3-36-0-E
	X	4	PORT MOTOR CONTROL CENTER GC22	450VAC, 3PHASE, 60HZ, 1200A	3-36-0-E
	X	5	PORT ESSENTIAL PANEL	450VAC, 3PHASE, 60HZ, 250A	3-32-2
	X	6	STBD ESSENTIAL PANEL	450VAC, 3PHASE, 60HZ, 250A	3-32-1
	X	7	PORT EMERG/VITAL PANEL	450VAC, 3PHASE, 60HZ, 125A	3-33-2
	X	8	STBD EMERG/VITAL PANEL	450VAC, 3PHASE, 60HZ, 125A	3-33-1
	X	9	PORT MACHINERY PANEL	450VAC, 3PHASE, 60HZ, 125A	3-27-2
	X	10	STBD MACHINERY PANEL	450VAC, 3PHASE, 60HZ, 125A	3-27-1
	X	11	GALLEY PANEL	450VAC, 3PHASE, 60HZ, 250A	1-23-2
	X	12	GALLEY PANEL	120VAC, 3PHASE, 60HZ, 125A	1-25-2
	X	13	PORT LOAD CENTER	120VAC, 3PHASE, 60HZ, 400A	3-36-2
	X	14	STBD LOAD CENTER	120VAC, 3PHASE, 60HZ, 400A	3-36-1
	X	15	EMER LIGHTING PANEL	120VAC, 3PHASE, 60HZ, 250A	1-10-1
	X	16	C4ISR POWER PANEL	120VAC, 3PHASE, 60HZ, 250A	2-25-1
	X	17	PILOTHOUSE PANEL	120VAC, 3PHASE, 60HZ, 125A	01-26-1
	X	18	PILOTHOUSE EMERG PANEL	120VAC, 3PHASE, 60HZ, 125A	01-26-3
	X	19	2ND DECK EMERG PANEL	120VAC, 3PHASE, 60HZ, 125A	2-18-1
	X	20	HVAC PANEL	120VAC, 3PHASE, 60HZ, 125A	1-26-2
	X	21	MAIN DECK PANEL	120VAC, 3PHASE, 60HZ, 125A	1-15-2
	X	22	2ND DECK PANEL	120VAC, 3PHASE, 60HZ, 125A	2-22-2
	X	23	AUTO-BUS TRANSFER SWITCH (ABT24)	450VAC, 3PHASE, 60HZ, 200A	3-27-0-E
	X	24	AUTO-BUS TRANSFER SWITCH (ABT23)	450VAC, 3PHASE, 60HZ, 200A	3-27-0-E
	X	25	MANUAL BUS TRANSFER SWITCH (MBT22)	450VAC, 3PHASE, 60HZ, 100A	3-27-0-E
	X	26	MANUAL BUS TRANSFER SWITCH (MBT21)	450VAC, 3PHASE, 60HZ, 100A	3-27-0-E
	X	27	AUTO-BUS TRANSFER SWITCH (ABT21)	120VAC, 3PHASE, 60HZ, 260A	2-23-3-Q

NO WORK	INSPECT		NOMENCLATURE	SPECIFICATIONS	LOCATION
	X	28	AUTO-BUS TRANSFER SWITCH (ABT11)	450VAC, 3PHASE, 60HZ, 150A	1-10-0-E
	X	29	MOTOR CONTROLLER FWD CAPSTAIN	450VAC, 3PHASE, NEMA SIZE 1	3-36-0-E
	X	30	MOTOR CONTROLLER, OILY BILGE PUMP	450VAC, 3PHASE, NEMA SIZE 0	3-36-0-E
	X	31	MOTOR CONTROLLER, POTABLE WATER PUMP #2	450VAC, 3PHASE, NEMA SIZE 0	3-36-0-E
	X	32	MOTOR CONTROLLER, FUEL OIL OFFLOAD/TRANSFER PUMP	450VAC, 3PHASE, NEMA SIZE 0	3-36-0-E
	X	33	MOTOR CONTROLLER, PORT CAPSTAIN	450VAC, 3PHASE, NEMA SIZE 1	3-36-0-E
	X	34	MOTOR CONTROLLER, GREY WATER DISCHARGE PUMP	450VAC, 3PHASE, NEMA SIZE 0	3-36-0-E
	X	35	MOTOR CONTROLLER, FIRE PUMP (AFT)	450VAC, 3PHASE, NEMA SIZE 3	3-36-0-E
	X	36	MOTOR CONTROLLER, WASTE OIL PUMP	450VAC, 3PHASE, NEMA SIZE 0	3-36-0-E
	X	37	MOTOR CONTROLLER, STBD CAPSTAIN	450VAC, 3PHASE, NEMA SIZE 1	3-36-0-E
	X	38	MOTOR CONTROLLER, POTABLE WATER PUMP #1	450VAC, 3PHASE, NEMA SIZE 0	3-36-0-E
	X	39	MOTOR CONTROLLER, FWD AUX AIR COMPRESSOR	450VAC, 3PHASE, NEMA SIZE 0	3-36-0-E
	X	40	MOTOR CONTROLLER, FUEL OIL TRANSFER PUMP	450VAC, 3PHASE, NEMA SIZE 0	3-36-0-E
	X	41	MOTOR CONTROLLER, PORT FUEL COELESCER	450VAC, 3PHASE, NEMA SIZE 0	3-36-0-E
	X	42	MOTOR CONTROLLER, STBD FUEL COALESCER	450VAC, 3PHASE, NEMA SIZE 0	3-36-0-E
	X	43	MOTOR CONTROLLER, PORT MDE FUEL OIL BOOST PUMP	450VAC, 3PHASE, NEMA SIZE 0	3-27-0-E
	X	44	MOTOR CONTROLLER, SEAWATER PUMP #1	450VAC, 3PHASE, NEMA SIZE 0	3-27-0-E
	X	45	MOTOR CONTROLLER, BILGE PUMP #1	450VAC, 3PHASE, NEMA SIZE 0	3-27-0-E
	X	46	MOTOR CONTROLLER, PORT STEERING PUMP #2	450VAC, 3PHASE, NEMA SIZE 1	3-36-0-E
	X	47	MOTOR CONTROLLER, PORT UPPER ENGINE RM EXHAUST FAN	450VAC, 3PHASE, NEMA SIZE 1	3-27-0-E
	X	48	MOTOR CONTROLLER, PORT LUBE OIL PRIMING PUMP	450VAC, 3PHASE, NEMA SIZE 0	3-27-0-E
	X	49	MOTOR CONTROLLER, PORT ENGINE RM SUPPLY FAN	450VAC, 3PHASE, NEMA SIZE 0	3-27-0-E
	X	50	MOTOR CONTROLLER, PORT ENGINE RM EXHAUST FAN	450VAC, 3PHASE, NEMA SIZE 0	3-27-0-E
	X	51	MOTOR CONTROLLER, GENERATOR RM EXHAUST FAN	450VAC, 3PHASE, NEMA SIZE 0	3-36-0-E
	X	52	MOTOR CONTROLLER, CUTTER BOAT LAUNCH AND RECOVERY HPU	450VAC, 3PHASE, NEMA SIZE 1	3-40-2-E
	X	53	MOTOR CONTROLLER, STBD LUBE OIL PRIMING PUMP	450VAC, 3PHASE, NEMA SIZE 0	3-27-0-E
	X	54	MOTOR CONTROLLER, GENERATOR RM SUPPLY FAN	450VAC, 3PHASE, NEMA SIZE 0	3-36-0-E
	X	55	MOTOR CONTROLLER, STBD ENGINE RM EXHAUST FAN	450VAC, 3PHASE, NEMA SIZE 0	3-27-0-E
	X	56	MOTOR CONTROLLER, STBD ENGINE RM SUPPLY FAN	450VAC, 3PHASE, NEMA SIZE 0	3-27-0-E
	X	57	MOTOR CONTROLLER, FIN STABILIZER	450VAC, 3PHASE, NEMA SIZE 2	3-27-0-E

NO WORK	INSPECT		NOMENCLATURE	SPECIFICATIONS	LOCATION
	X	58	MOTOR CONTROLLER, SEA WATER PUMP #2	450VAC, 3PHASE, NEMA SIZE 0	3-27-0-E
	X	59	MOTOR CONTROLLER, STBD STEERING PUMP #1	450VAC, 3PHASE, NEMA SIZE 1	3-36-0-E
	X	60	MOTOR CONTROLLER, STBD MDE FUEL OIL BOOSTER PUMP	450VAC, 3PHASE, NEMA SIZE 0	3-27-0-E
	X	61	MOTOR CONTROLLER, STBD UPPER ENGINE RM EXHAUST FAN	450VAC, 3PHASE, NEMA SIZE 1	3-27-0-E
	X	62	MOTOR CONTROLLER, BOW THRUSTER	450VAC, 3PHASE, NEMA SIZE 4	3-3-0-E
	X	63	MOTOR CONTROLLER, FIRE PUMP FWD	450VAC, 3PHASE, NEMA SIZE 3	3-3-0-E
	X	64	MOTOR CONTROLLER, BILGE PUMP #2	450VAC, 3PHASE, NEMA SIZE 0	3-27-0-E
	X	65	MOTOR CONTROLLER, EMERGENCY GENERATOR RM EXHAUST FAN	450VAC, 3PHASE, NEMA SIZE 0	1-10-0-E
	X	66	MOTOR CONTROLLER, PORT STORAGE COMPARTMENT EXHAUST FAN	450VAC, 3PHASE, NEMA SIZE 0	3-40-2-E
	X	67	MOTOR CONTROLLER, STBD STORAGE COMPARTMENT EXHAUST FAN	450VAC, 3PHASE, NEMA SIZE 0	3-40-1-E
	X	68	MOTOR CONTROLLER, FORWARD AUXILIARY COMPARTMENT EXHAUST FAN	450VAC, 3PHASE, NEMA SIZE 0	3-3-0-E

2.2.2a SAFETY STANDARDS - Prior to opening an electrical enclosure, establish an arc flash boundary of at least four (4) feet from the electrical plane of the equipment. Clearly mark and erect a barrier to prevent the access of unauthorized personnel. Establish visible safety boundary at all entrances to the space where work is being performed using red danger tape or signage. Maintain this safety boundary until all thermal inspections are completed and all electrical covers are reinstalled within the space.

2.3 Corrective/Repair and Alterative Tasks. The Contractor must:

2.3.1 **Perform** repairs/alterations whenever the KO releases a Change Request authorizing new post-inspection repairs/alterations, or whenever pre-existing discrepancies/tasks/alterations are described below (price these tasks below into the pre-award quote).

CSMP # FOR INTERNAL USE ONLY	PRE-EXISTING DISCREPANCIES/TASKS OR ALTERATIONS
N/A	DISCREPANCY: N/A TASK(S): N/A

2.4 **Final Inspection/Testing Tasks**. The Contractor must:

2.4.1 **Inspect/Op Test (Final)** all affected surfaces/equipment/etc. and then **Submit** a final CFR attesting to satisfactory completion of the work item.

WORK ITEM 7: Ventilation Systems

1. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 154 WPC 168-201, (series), Louvers and Covers A&D
Coast Guard Drawing 154 WPC 251-301, (series), Combustion Air Diagram
Coast Guard Drawing 154 WPC 512-201, (series), HVAC Arrangement
Coast Guard Drawing 154 WPC 512-301, (series), HVAC System Diagram
Coast Guard Drawing 154 WPC 512-305, (series), HVAC Equipment List
Coast Guard Drawing 154 WPC 513-201, (series), Machinery Ventilation Arrangement
Coast Guard Drawing 154 WPC 513-301, (series), Machinery Ventilation Diagram
Coast Guard Drawing 154B WPC 512-201, (series), HVAC Arrangement
Coast Guard Drawing 154B WPC 512-301, (series), HVAC System Diagram
Coast Guard Drawing 154B WPC 512-305, (series), HVAC Equipment List
Coast Guard Drawing 154B WPC 513-201, (series), Machinery Ventilation Arrangement
Coast Guard Drawing 154B WPC 513-301, (series), Machinery Ventilation Diagram

COAST GUARD PUBLICATIONS

Coast Guard Technical Publication (TP) 8123, (series), Heating, Ventilation and Air Conditioning (HVAC) Equipment, Model - FRC-514-P1

OTHER REFERENCES

None

2. REQUIREMENTS

INTENT: Clean the interiors of the designated ventilation ducts and associated components that come in contact with air passing through the system. Perform various coatings repairs/renewals, louver/demister/fire-damper inspections/repairs as designated below.

SSDG PLENUMS LOCATED IN TOPSIDE COATING ITEM - SSDG compartment supply/return ducts are covered in the work item titled "Topside Structure and Coating Systems".

PREP FOR CLEANING - Mark and restore damper positions; remove all intake and exhaust screens, clean vent systems in their entirety from the point where the air enters the system to the point where the air is discharged from the system; restore, renew, or repair all articles or components removed or disturbed to their original condition if damaged or modified during contract work etc).

BALANCING DISCREPANT AIRFLOW - If designated below in the 2.3 Corrective/Repair and Alterative Tasks section, **"Balance"** the air flow by making adjustments to dampers, etc. per the manufacturer's instructions.

2.1 **Government-furnished property**. None

2.2 **Preventive/Recurring Tasks**. The Contractor must:

2.2.1 **Inspect/Op Test (Initial)** all affected surfaces/equipment/etc. **Submit** a **CIR** describing all discrepancies and recommended repairs. Include "before cleaning" images of the interior surfaces to be cleaned with the CIR above. Report any obvious air-flow discrepancies that would warrant system balancing. Report all fire-damper discrepancies.

HVAC SYSTEM

2.2.2 **Perform** the "HVAC Duct System" work described below and as designated in the table.

No Work	Clean, Inspect (510a)	Compartment Containing Duct Work	Sub-tasks
	X	Pilot House (01-19-0-C)	
MAIN DECK			
	X	HVAC Equipment Room (1-24-1-Q)	**Renew** the coating system on the demister housing (VCS, 631a). COATING SYSTEM: PolySLXN2a, TOP-COAT COLOR: OSHA Black (17038) **Operate and Inspect** intake fire dampers. See 2.2.3a FIRE DAMPER INSPECTIONS AND TESTS
	X	Passage (1-23-0-L)	
	X	Mess Deck (1-17-0-Q)	
	X	Galley (1-18-2-Q)	
	X	Office (1-16-1-A)	
	X	CO Cabin (1-12-1-L)	
	X	XO Stateroom (1-12-2-L)	
	X	OPS CPO Stateroom (1-15-2-L)	
SECOND DECK			
	X	Climate Controlled Store Room (2-23-4-A)	
	X	C4ISR Equipment RM (2-23-3-Q)	
	X	ENG CPO Stateroom (2-32-2-L)	
	X	2 Person Stateroom (2-21-2-L)	
	X	4 Person Stateroom (2-20-1-L)	
	X	4 Person Stateroom (2-17-2-L)	
	X	2 Person Stateroom (2-17-1-L)	
	X	2 Person Stateroom (2-15-2-L)	
	X	2 Person Stateroom (2-15-1-L)	
	X	1 Person Stateroom (2-10-2-L)	
	X	1 Person Stateroom (2-10-1-L)	
	X	Passage (2-10-0-L)	

2.2.2.1 **Provide** TEMPORARY HVAC (510a), if necessary. See the "General Requirements (This Contract)" at the top of the SOW to determine the TEMPORARY VESSEL HABITABILITY SERVICES (863a) that will be required.

VARIOUS VENTILATION SUPPLY/EXHAUST DUCTS FOR VARIOUS SPACES

2.2.3 **Perform** the work described below on the various designated duct systems and as described in the table.

	No Work	Clean, Inspect	supply/exhaust duct	Sub-tasks
1		X	Main Engine Room Supply SS-9 (PORT, 1-34-2-E)	**Renew** the coating system on the demister housing, and on the interior BHDs and overhead of the fan space. **Operate and Inspect** fire dampers. See 2.2.3a FIRE DAMPER INSPECTIONS AND TESTS **Perform** fan space maintenance. **Renew** the insulation in the fan space interior. See 2.2.3b ENGINE ROOM INTAKE FAN SPACE MAINTENANCE
2		X	Main Engine Room Supply SS-10 (STBD, 1-34-1-E)	**Renew** the coating system on the demister housing, and on the interior BHDs and overhead of the fan space. **Operate and Inspect** fire dampers. See 2.2.3a FIRE DAMPER INSPECTIONS AND TESTS **Perform** fan space maintenance. **Renew** the insulation in the fan space interior. See 2.2.3b ENGINE ROOM INTAKE FAN SPACE MAINTENANCE
3		X	Main Engine Room Exhaust ES-5 (PORT)	**Renew** the coating system on the demister housing. **Operate and Inspect** fire dampers. See 2.2.3a FIRE DAMPER INSPECTIONS AND TESTS
4		X	Main Engine Room Exhaust ES-6 (STBD)	**Renew** the coating system on the demister housing. **Operate and Inspect** fire dampers. See 2.2.3a FIRE DAMPER INSPECTIONS AND TESTS
5		X	Main Engine Room Exhaust ES-16 (PORT)	**Renew** the coating system on the demister housing. **Operate and Inspect** fire dampers. See 2.2.3a FIRE DAMPER INSPECTIONS AND TESTS
~~6~~		X	Main Engine Room Exhaust ES-15 (STBD)	**Renew** the coating system on the demister housing. **Operate and Inspect** fire dampers. See 2.2.3a FIRE DAMPER INSPECTIONS AND TESTS
7		X	PORT Steering Gear Room Supply	Exterior coatings covered under "*Topside Structure and Coating Systems*"
8		X	PORT Steering Gear Room Exhaust	Exterior coatings covered under "*Topside Structure and Coating Systems*"
9		X	STBD Steering Gear Room Supply	Exterior coatings covered under "*Topside Structure and Coating Systems*"
10		X	STBD Steering Gear Room Exhaust	Exterior coatings covered under "*Topside Structure and Coating Systems*"
11		X	FWD Auxiliary Machinery Room Supply	Exterior coatings covered under "*Topside Structure and Coating Systems*"
12		X	FWD Auxiliary Machinery Room Exhaust	Exterior coatings covered under "*Topside Structure and Coating Systems*"
13		X	EDG Room Supply (PORT)	**Renew** the coating system on the demister housing. **Operate and Inspect** fire dampers. See 2.2.3a FIRE DAMPER INSPECTIONS AND TESTS
14		X	EDG Room Exhaust (STBD)	**Renew** the coating system on the demister housing. **Operate and Inspect** fire dampers. See 2.2.3a FIRE DAMPER INSPECTIONS AND TESTS

	No Work	Clean, Inspect	supply/exhaust duct	Sub-tasks
15		**X**	Sanitary Exhaust (STBD)	Exterior coatings covered under "*Topside Structure and Coating Systems*"
16		**X**	Galley Hood Supply (STBD)	**Renew** the coating system on the demister housing. COATING SYSTEM: PolySLXN1, TOP-COAT COLOR: OSHA Black (17038) **Operate and Inspect** fire dampers. See 2.2.3a FIRE DAMPER INSPECTIONS AND TESTS
17		**X**	Galley Hood Exhaust (STBD)	**Renew** the coating system on the demister housing. COATING SYSTEM: PolySLXN1, TOP-COAT COLOR: OSHA Black (17038) **Operate and Inspect** fire dampers. See 2.2.3a FIRE DAMPER INSPECTIONS AND TESTS DO NOT DISTURB GAYLORD HOOD SAFETY EQUIPMENT/MECHANISMS/CONTROLS/SENSORS.

Coatings Configuration Description				
	Surface	**Substrate**	**CoatingSysName (VCS)**	**Topcoat Color**
1	**Main Engine Room Supply SS-9 (PORT, 1-34-2-E)** **Main Engine Room Supply SS-10 (STBD, 1-34-1-E)**			
	Demister Housings	Alum	PolySLXN2a	OSHA Black (17038)
	Fan Space Decks	Steel	DCK2 (May use the epoxy/polysiloxane coating system specified for the exterior weather decks without the non-skid (2 coats).	Dark Gray (16099)
	Fan Space Overheads and BHDs	Alum	BHD3a or BHD3b	Soft White (27880)
2	**Main Engine Room Exhaust ES-5 (PORT)** **Main Engine Room Exhaust ES-6 (STBD)** **Main Engine Room Exhaust ES-16 (PORT)** **Main Engine Room Exhaust ES-15 (STBD)** **EDG Room Supply (PORT)** **EDG Room Exhaust (STBD)** **Galley Hood Supply (STBD)** **Galley Hood Exhaust (STBD)**			
	Demister Housings	Alum	PolySLXN2a	OSHA Black (17038)

2.2.3a FIRE DAMPER INSPECTIONS AND TESTS - Completely disassemble the associated louver/demister assembly. **Inspect** all non-wearing components (e.g. steel/aluminum parts like blades and framing, screens, etc.) for damage, wear, excessive corrosion and all other discrepancies. **Submit** findings in the report described in 2.2.1 above. After all authorized mechanical/structural/electrical repairs are completed, **Repair** all failed coatings. Reassemble all previously disassembled components. **Renew** all wearing-components (e.g. seals, gaskets, o-rings, filters, etc.). **Renew** all fasteners. In the presence of the COR/PE, cycle or operate all moving parts, demonstrating that all disturbed and affected equipment is operating properly.

2.2.3b ENGINE ROOM INTAKE FAN SPACE MAINTENANCE - Remove the port and starboard intake supply fan assemblies and interior insulation from both compartments. Conduct a visual inspection of all exposed surfaces, fan assemblies, and surrounding shipboard structure to identify all discrepancies. Include results in 2.2.1 report above. After the completion of all preservation and authorized repairs reinstall the interior insulation in both compartments and the port and starboard fan assemblies; DO NOT install insulation to the bottom of the BHD, the bottom of the BHD insulation must stop less than 1 inch above the DetaCouple.

REPAIRS

2.3 **Corrective/Repair and Alterative Tasks**. The Contractor must:

2.3.1 **Perform** repairs/alterations whenever the KO releases a Change Request authorizing new post-inspection repairs/alterations, or whenever pre-existing discrepancies/tasks/alterations are described below (price these tasks below into the pre-award quote).

CSMP # FOR INTERNAL USE ONLY	PRE-EXISTING DISCREPANCIES/TASKS OR ALTERATIONS
N/A	DISCREPANCY: N/A TASK(S): N/A

2.3.2 [X] **No Work** [] **Balance** the "HVAC System" (510a).

2.4 **Final Inspection/Testing Tasks**. The Contractor must:

2.4.1 **Inspect/Op Test (Final)** the "HVAC System" (510a), the various ventilation duct systems, and all affected surfaces/equipment/etc. and then **Submit** a final CFR attesting to satisfactory completion of the work item.

2.4.1a Include "after cleaning" images of the interior surfaces that were cleaned with the CFR above.

WORK ITEM 8: Rudder System

1. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 154 WPC 204-301, (series), Equipment Removal Plan

Coast Guard Drawing 154 WPC 561-202, (series), Steering Arrangement & Details

Coast Guard Drawing 154 WPC 562-201, (series), Rudder Details

Coast Guard Drawing 154 WPC 562-202, (series), Rudder Arrangement & Details

COAST GUARD PUBLICATIONS

Coast Guard Technical Publication (TP) 8153A, SWBS 562, (series), Rudderstock Seal Assembly, Type EL + IS, Model H 78525-01

Coast Guard Technical Publication (TP) 8907A, SWBS 086, (series), Technical Repair Standard For Use On FRC - Rudder And EL + IS Rudderstock Seal Model - H 78525-01

Coast Guard Technical Publication (TP) 8916, SWBS 086, (series), Technical Repair Standard For Use On FRC - Flow Adaptive Rudder And EL + IS Rudderstock Seal Model - H 78525-01 (Hulls 1118, 1139 And On)

OTHER REFERENCES

None

2. REQUIREMENTS

INTENT: Operate both rudders to identify discrepancies, pull the designated rudders from the vessel, conduct inspections to identify all discrepancies, especially those components that can only be accessed in a dry dock, perform authorized repairs, clean/polish surfaces, renew all disturbed consumables/wearing-components, reassemble and test.

CLEARANCE FROM DD - 5 feet of clearance between the bottom of the rudder and the drydock floor is required for rudder removal. Rudder interior surfaces have been coated with a corrosion inhibitor, handle all fluids in accordance with all Federal, state and local regulations. Take care not to damage the installed lower bearings during the removal of the rudder stocks.

RUDDER EXTERIOR COATING SYSTEM – If the blades are steel then renewal of the coating system on rudder blade exterior surfaces is covered under, and must be priced under, the work item titled "*Underwater Body*". Otherwise, if the rudder blades are bronze then clean/polish the exterior surfaces.

RUDDER BLADE SHAFT ASSEMBLY – This consists of the rudder blade, the associated shaft, all associated bearings/seals/gaskets/o-rings/etc. i.e., the parts that can only be accessed and worked during a dry docking. Other components (e.g., hydraulics, electrical, etc.) should be inspected for major discrepancies, but are not directly part of the maintenance described herein, unless otherwise explicitly specified.

LOWER BEARINGS – Lower sleeve bearings (and upper roller bearings) must be renewed; disturbed/exposed bearing renewal is required whenever the "Overhaul" action is tasked for any component. Vessel lower bearing housing and shaft journal measurements must be taken and new bearings must be machined to suit those actual dimensions, in accordance with the drawing and manufacturer's instructions.

QUALIFICATIONS: If requested by the KO, submit evidence that one or more on-site technicians has successfully overhauled, renewed, or repaired the rudder face seal, or a similar model of face seal manufactured by the same company, and further describe all knowledge, experience, and training contributing to being qualified to disassemble/reassemble the rudder face seal.

2.1 **Government-furnished property**.

MTI	TY	ITEM DESCRIPTION	NSN/PN	QTY
Y	**	Port Rudder	NIIN: 016905509	1 ea
Y	**	Stbd Rudder	NIIN: 016905507	1 ea
N		Rudder Stock Seal (Seal Assembly from TP-8153, pg 7-2, Table 7-1)	NIIN: 015976204	2 ea
N		Shaft Seal Overhaul Kit (Upper Parts, **Service Kit A** from TP-8153, pg 7-5, Table 7-2)	NIIN: 015954647	2 ea
N		Shaft Seal Overhaul Kit (Lower Parts, **Service Kit B** from TP-8153, pg 7-5, Table 7-3)	NIIN: 015967760	2 ea
N		Locknut PC5 154WPC 562-002	NIIN: 332016431	4 ea
N		Lock Washer PC6 154WPC 562-002	NIIN: 332015247	2 ea
N		Upper Roller Bearing PC7 154WPC 562-002	NIIN: 015973537	2 ea
N		Oil Seal PC8 154WPC 562-002	NIIN: 016185091	2 ea
N		Lower Bearing PC9 154WPC 562-002	NSN: 016314104	2 ea

*	Government-loaned property, which must 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 C5ISC Service Center.

2.2 **Preventive/Recurring Tasks**. The Contractor must:

2.2.1 **Inspect-Op Test (Initial)** the rudder system (e.g., PORT and STBD rudder blades, the associated HPU and actuators, etc.). DOCK AND SEA TRIALS (868a) are required. **Submit** a CIR for all initial inspections/tests describing discrepancies and recommended repairs.

2.2.1a Each rudder must be rotated fully in both directions. All discrepancies must be identified and recorded/reported (e.g., unusual noise/vibration/binding, rudder angles indicated on all local or pilot house repeaters do not match actual rudder angles, bearing carriers/housings deflection, non-synchronized movement, or different rudder angles between rudders when the system has two rudders, etc.). The maximum rotation angle in both directions for each rudder must be recorded/reported. Unusual vertical or horizontal movement of each rudder must be recorded/reported.

2.2.2 **Perform** the tasks designated in the table below.

No Work	Overhaul	Rudder Blade/Shaft Assembly	Subtasks/requirements
	X	PORT	**Perform** a VOID AIR TEST (123a) on the designated rudder blade voids. **Renew** the upper and lower bearings using GFP. **Renew** the rudder stock seal assembly using GFP. **Renew** the drain plugs.
	X	STBD	**Perform** a VOID AIR TEST (123a) on the designated rudder blade voids. **Renew** the upper lower and lower bearings using GFP. **Renew** the rudder stock seal assembly using GFP. **Renew** the drain plugs.

2.2.2a RUDDER BLADE SHAFT ASSEMBLY OVERHAUL DESCRIPTION - When overhaul of a rudder blade shaft assembly is designated, adjustment and positioning of all affected components (e.g., tiller arm, steering arm, autopilot potentiometer base and wheel, etc.) must be marked for proper reinstallation prior to disassembly and while the rudder indicator is at zero degrees. The rudder/shaft assembly must be pulled from the vessel. After disassembly, all exposed components and surfaces (e.g., rudder stock/shaft and blade surfaces, bearings, bearing housing, shaft seal assemblies, grease passages, etc.) must be cleaned and visually inspected for all discrepancies (e.g. excessive wear, corrosion, cracked welds, deformation, any bend in the rudder stock, evidence that the rudder blade was struck or hit bottom, cracked weld joints, etc.). All associated machined surfaces (e.g. rudder stock journals/sleeves, keyways, lower bearing surfaces, etc.) must be inspected for unusual or excessive wear and then must be measured to the nearest 0.001" and those dimensions recorded. All consumable/wearing components (e.g., upper bearings, lower bearings, seals, gaskets, o-rings, etc.) must be renewed (use items in the GFP list). A dye penetrant test must be performed on all rudder stock/nut threads, keys, and keyways; note all discrepancies. Uncoated bronze rudder blades must be polished.

2.3 **Corrective/Repair and Alterative Tasks**. The Contractor must:

2.3.1 **Perform** repairs/alterations whenever the KO releases a Change Request authorizing new post-inspection repairs/alterations, or whenever pre-existing discrepancies/tasks/alterations are described below (price these tasks below into the pre-award quote).

CSMP # FOR INTERNAL USE ONLY	PRE-EXISTING DISCREPANCIES/TASKS
	DISCREPANCY: N/A TASK(S): N/A

2.4 Final Inspection/Testing Tasks. The Contractor must:

2.4.1 **Inspect-Op Test (Final)** the rudder system (e.g., PORT and STBD rudder blades, associated HPU and actuators, etc.). **Submit** a CFR for all final inspections/tests. DOCK AND SEA TRIALS (868a) are required.

2.4.1a. After all repairs have been completed, prior to coming out of drydock, and in the presence of the COR/PE or the COR's designated Coast Guard Inspector, steering gear and rudders must be operated in all modes of control from all control stations through the full range of motion. Post-repair operation must be compared to pre-repair operation to ensure no new discrepancies have been introduced, to prove all approved repairs have been performed successfully, and to ensure the rudders travel smoothly throughout the full range of motion without chattering or binding and at the required rate with no discrepancies. All necessary adjustments must be made to prepare the steering gear and rudders for final testing. The steering gear and rudder system then must be completely tested through all modes of control and through their full range of motion. After satisfactory testing the rudders must be aligned to mid ships (0 deg) and all discrepancies must be corrected before leaving dry dock. After the vessel is waterborne, and while underway on sea trials, the steering gear and rudders must be fully tested again as described above. Compare waterborne results with the drydocked results to detect any abnormalities. While underway on sea trials, in the presence of a Coast Guard Inspector, monitor steering gear and rudder operation.

WORK ITEM 9: Fin Stabilizer System

1. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 154 WPC 556-202, (series), Fin Stabilizer Hydraulic System A&D

Coast Guard Drawing 154 WPC 556-302, (series), Fin Stabilizer Hydraulic System Diagram

Coast Guard Drawing 154 WPC 565-201, (series), Fin Stabilizer System A&D

Coast Guard Drawing 154 WPC 565-301, (series), Fin Stabilizer Control System

Coast Guard Drawing 154 WPC 565-302, (series), Fin Stabilizer Control System COED

COAST GUARD PUBLICATIONS

Coast Guard Technical Publication (TP) 8010B, SWBS 565, (series), Fin Stabilizer System – Model QC-1500 with MPU20 Hydraulic System

Coast Guard Technical Publication (TP) 8911B, SWBS 086, (series), Technical Repair Standard For Use On FRC - Fin Stabilizer System Model QC-1500

OTHER REFERENCES

None

2. REQUIREMENTS

INTENT: Operate both fins to identify discrepancies, pull the designated fins from the vessel, conduct inspections to identify all discrepancies, especially those components that can only be accessed in a dry dock, perform authorized repairs, clean/polish surfaces, renew all disturbed consumables/wearing-components, reassemble and test.

Hydraulic components (e.g. cylinders, hoses, etc.) and other mechanical/structural components that are easily accessed inside the skin of the vessel are not within the scope of the recurring maintenance described herein, because they can generally be repaired anytime, while the vessel is out of dry dock. Unless these types of components are clearly discrepant (i.e. visibly damaged, leaking, etc.) performing work on them, other than removal/restoration as in interference, requires complete justification.

QUALIFICATIONS - If requested by the KO, submit evidence that one or more on-site technicians has successfully performed disassembly/reassembly of the Quantum Model QC-1500 fin stabilizer hull unit, or a similar unit from the same manufacturer, on at least one prior project/contract.

2.1 **Government-furnished property**.

MTI	TY	ITEM DESCRIPTION	NSN/PN	QTY
Y	**	Fin Blade	NIIN: 015988181	2 ea.
N	**	Hydraulic Cylinder	NIIN: 016823497	4 ea.
Y	**	Shaft, Shouldered	NIIN: 016590358	2 ea.

*	Government-loaned property, which must 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 C5ISC Service Center.

2.2 **Preventive/Recurring Tasks**. The Contractor must:

2.2.1 **Inspect-Op Test (Initial)** the fin stabilizer system (e.g., PORT and STBD fin blades, the associated HPU and actuators, etc.). DOCK AND SEA TRIALS (868a) are required. **Submit** a **CIR** for all initial inspections/tests describing discrepancies and recommended repairs.

2.2.2 **Perform** the tasks designated in the table below.

No Work	Overhaul		Subtasks/requirements
	X	PORT Fin Blade Shaft Assembly (Hull Unit)	**Perform** a VOID AIR TEST (123a) on the designated fin blade voids. **Renew** the upper and lower bearings. **Renew** the seals. **Renew** the coating system on the blade interior. CoatingSysName: IAV1 (VCS). **Renew** the drain plugs.
	X	STBD Fin Blade Shaft Assembly (Hull Unit)	**Perform** a VOID AIR TEST (123a) on the designated fin blade voids. **Renew** the upper and lower bearings. **Renew** the seals. **Renew** the coating system on the blade interior. CoatingSysName: IAV1 (VCS). **Renew** the drain plugs.

2.2.2a The designated fin assemblies must be disassembled and removed from the vessel to gain access to all the components affecting lower bearing and seal (e.g. fin blade, lower seal, fin shaft, lower bearing, etc.). All accessible fin system surfaces must be cleaned and inspected for damage, excessive wear, etc. It must be confirmed to the greatest extent practicable that the chock-fast bed holding the lower bearing is installed correctly, is fully intact, and is not damaged. Fin shaft OD critical dimensions, at 12-6 o'clock and 3-9 o'clock positions, at the 4 locations along the shaft shown on page 1-2-25 of TP-8911B Vol 1 must be measured and recorded/reported. All discrepancies to shaft surface finish must be recorded.

2.3 **Corrective/Repair and Alterative Tasks**. The Contractor must:

2.3.1 **Perform** repairs/alterations whenever the KO releases a Change Request authorizing new post-inspection repairs/alterations, or whenever pre-existing discrepancies/tasks/alterations are described below (price these tasks below into the pre-award quote).

CSMP # FOR INTERNAL USE ONLY	PRE-EXISTING DISCREPANCIES/TASKS
	DISCREPANCY: N/A TASK(S): N/A

2.4 **Final Inspection/Testing Tasks**. The Contractor must:

2.4.1 **Inspect-Op Test (Final)** the fin stabilizer system (e.g., PORT and STBD fin blades, associated HPU and actuators, etc.). DOCK AND SEA TRIALS (868a) are required. **Submit** a CFR for all final inspections/tests.

WORK ITEM 10: Bow Thruster System

1. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 154 WPC 204-301, (series), Equipment Removal Plan

Coast Guard Drawing 154 WPC 568-201, (series), Bow Thruster System A&D

Coast Guard Drawing 154 WPC 633-301, (series), Cathodic Protection System

Coast Guard Drawing 154B WPC 568-201, (series), Bow Thruster System A&D

COAST GUARD PUBLICATIONS

Coast Guard Technical Publication (TP) 8096A, SWBS 252, (series), Bowthruster – Model 60 LK with Operator Panel and Motor Drive – Installation, Service, and Operation Manual

Coast Guard Maintenance Procedure Card (MPC) B10017.D, B/T Tunnel Anode Conversion (1 Time, Hull 1101-1132)

OTHER REFERENCES

None

2. REQUIREMENTS

INTENT: Operate the bow thruster to identify discrepancies, pull the designated propeller and gearbox the vessel, conduct inspections to identify all discrepancies, especially those components that can only be accessed in a dry dock, perform authorized repairs, clean/polish surfaces, renew all disturbed consumables/wearing-components, reassemble and test.

The lower gearbox must be removed to gain access to the recess in the hull so that hull coatings inside the recess can be repaired/renewed. Much of this work item removes interferences for proper hull painting.

QUALIFICATIONS - If requested by the KO, submit evidence that one or more on-site technicians has successfully performed disassembly/reassembly Schottel Transverse Thruster equipment/system, or a similar model of bow thruster manufactured by the same company, on at least one prior project/contract.

2.1 **Government-furnished property**.

MTI	TY	ITEM DESCRIPTION	NSN/PN	QTY
N	**	Set of bevel gears (19:28, Mfr: Schottel)	NIIN: 016181133	1 st.
Y	**	Propeller (Mfr: Schottel)	NIIN: 01F206086	1 ea.

*	Government-loaned property, which must 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 C5ISC Service Center.

2.2 **Preventive/Recurring Tasks**. The Contractor must:

2.2.1 **Inspect-Op Test (Initial)** the bow thruster system. DOCK AND SEA TRIALS (868a) are required. **Submit** a **CIR** for all initial inspections/tests describing discrepancies and recommended repairs.

2.2.2 **Overhaul** bow thruster components that can only be accessed in drydock (i.e., installed outside the hull, etc.).

2.2.2a Remove the propeller as described Section 6.5 of TP 8096A. Polish the propeller to a 63 RMS surface finish. **Inspect** the propeller for damage, excessive wear, and all other discrepancies.

2.2.2b Remove the underwater gearbox as described Section 6.7 of TP 8096A. **Inspect** all associated components (e.g. gears, gear teeth, etc.) for damage, excessive wear, and all other discrepancies. Max allowable gear backlash is 0.016". **Inspect** for discrepancies (e.g. coatings failures, corrosion, pitting, etc.) at the interface between the gearbox and hull plate inserts/bedplates, and on all surrounding structural surfaces.

2.2.2c **Renew** the bearings that mate with the power input shaft and the propeller shaft. **Renew** all disturbed soft components (e.g. gaskets, o-rings, etc.). **Renew** all gear case oil. **Repair** failed coatings on the bow thruster gearbox.

2.2.3 **Renew** all tunnel zinc anodes using "bolt on" zinc anodes.

2.2.3a Match existing quantities/sizes/weight of the existing anodes. New anodes must be bolt-on in lieu of weld on (stud-mounted). If this vessel is currently configured with weld-on vs. bolt-on then include a description of current configuration in the report above with a recommendation/proposal for converting to bolt-on. **Refer** to MPC B10017.D for suggested installation instructions.

2.3 **Corrective/Repair and Alterative Tasks**. The Contractor must:

2.3.1 **Perform** repairs/alterations whenever the KO releases a Change Request authorizing new post-inspection repairs/alterations, or whenever pre-existing discrepancies/tasks/alterations are described below (price these tasks below into the pre-award quote).

CSMP # FOR INTERNAL USE ONLY	**PRE-EXISTING DISCREPANCIES/TASKS**
	DISCREPANCY: N/A TASK(S): N/A

2.4 **Final Inspection/Testing Tasks**. The Contractor must:

2.4.1 **Inspect/Op Test (Final)** all affected surfaces/equipment/etc. and then **Submit** a final CFR attesting to satisfactory completion of the work item. DOCK AND SEA TRIALS (868a) are required. Test the bow thruster over its entire RPM range in both directions.

WORK ITEM 11: Stern Launch Door System

1. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 154 WPC 169-201, (series), Structural Closure Stern Gate

Coast Guard Drawing 154 WPC 633-301, (series), Cathodic Protection System

Coast Guard Drawing 154B WPC 169-201, (series), Structural Closure Stern Gate

COAST GUARD PUBLICATIONS

None

OTHER REFERENCES

None

2. REQUIREMENTS

INTENT: Remove the stern launch door from the vessel to gain access to all surfaces (bearings, pins, etc.), taking all necessary precautions to prevent damage during disassembly and transport. Thoroughly inspect all door surfaces to identify all discrepancies (e.g., damage, deformation, excessive wear, corrosion, material defects, etc.).

Repair or renew the coating systems as specified below. Perform all other authorized repairs.

Reinstall and test the door.

HYDRAULIC SYS PRECAUTIONS - Prevent introduction of contaminates into the hydraulic system and prevent damage to hydraulic system components (e.g. cylinder rod plated surfaces, switches and control stations, electric cables, etc.). Do not open the hydraulic system (i.e. break hose connections to cylinders, etc.) unless absolutely necessary. If breeching the system boundary is required then blank off each opening created with sheet metal discs and tape to completely seal the opening.

DOOR RIGGING PRECAUTIONS - Adequately support the door at all times. Door may warp/bend/distort if not supported properly. If weld repairs are required, prevent distortion by minimizing/controlling heat transferred to door.

Stern door arms may be compressed at installation. Brace stern door arms prior to disassembly to prevent unexpected/inadvertent springing.

COATING APPLICATION PRECAUTIONS - Protect all components from overspray and damage.

2.1 **Government-furnished property**. None.

2.2 **Preventive/Recurring Tasks**. The Contractor must:

2.2.1 **Inspect/Op Test (Initial)** all affected surfaces/equipment/etc. **Submit** a **CIR** for all initial inspections/tests describing discrepancies and recommended repairs.

2.2.2 **Perform** the following coating application/repair work:

No Work	**Repair,** and **Overcoat** (631a, VCS)	**Renew** (631a, VCS)	**Perform** 2.2.2b **ELEVATED QA**	The coatings system on the designated surfaces	Additional Tasks/Requirements
		X	X	All Stern Launch Door surfaces, P/S door hinge-pin foundations	See 2.2.2a DOOR COATING SYSTEM SPECIFICATIONS.
	X			All PORT Hydraulic Cylinder exterior surfaces	See 2.2.2a DOOR COATING SYSTEM SPECIFICATIONS.
	X			All STBD Hydraulic Cylinder exterior surfaces	See 2.2.2a DOOR COATING SYSTEM SPECIFICATIONS.

2.2.2a DOOR COATING SYSTEM SPECIFICATIONS -

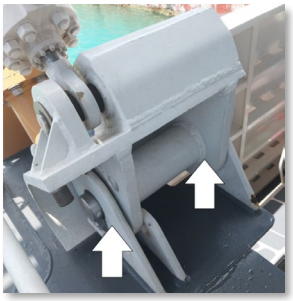
SURFACE	**CoatingSysName** (from VCS)	**COLOR SCHEME**
All Stern Launch Door surfaces ABOVE the top of the boot top	PolySLXN2a	TOPCOAT COLOR: Insignia White (17925)
All Stern Launch Door surfaces AT and BELOW the top of the boot top	CA5 (2AC 3AF+2BT) or NCA5 (2AC 3AF + 2BT)	**COAT** / **COLOR** AC1: OSHA Safety Red (11105) AC2: Interior Haze Gray (26270) AF1: OSHA Safety Red (11105) AF2: OSHA Black (17038) AF3: OSHA Safety Red (11105) Boot-top 1: OSHA Black (17038) Boot-top 2: OSHA Black (17038)
Hydraulic Cylinders	PolySLXN3b	TOPCOAT COLOR: Insignia White (17925)

2.2.2b ELEVATED QA - If "Renew" is designated, then Perform COATINGS QUALITY CONTROL CHECKPOINTS (631b) and Submit completed COATINGS QA FORMS (631b) with the final CFR below; otherwise, these elevated QA tasks are not required.

2.2.3 **Renew** both zinc anodes attached to the stern door, piece 14 of Coast Guard Drawing 154 WPC 633-301.

2.2.4 **Renew** all disturbed soft-parts (e.g., seals, gaskets, bumpers, etc.), and all soft-parts directly associated with the door.

2.2.5 **Renew** all door hinge assembly bushings, **Inspect** all other associated components (i.e. roller bearings, pins, spacers, washers, etc. and potentially renew, pending inspection).



2.3 **Corrective/Repair and Alterative Tasks**. The Contractor must:

2.3.1 **Perform** repairs/alterations whenever the KO releases a Change Request authorizing new post-inspection repairs/alterations, or whenever pre-existing discrepancies/tasks/alterations are described below (price these tasks below into the pre-award quote).

CSMP # FOR INTERNAL USE ONLY	PRE-EXISTING DISCREPANCIES/TASKS
	DISCREPANCY: N/A TASK(S): N/A

2.4 **Final Inspection/Testing Tasks**. The Contractor must:

2.4.1 **Groom** and **Inspect/Op Test (Final)** all affected surfaces/equipment/etc. and then **Submit** a final CFR attesting to satisfactory completion of the work item.

WORK ITEM 12: Sewage and Grey Water System

1. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 154 WPC 127-302, (series), Potable Water & Sewage Tank Fabrication Details

Coast Guard Drawing 154 WPC 506-201, (series), Fills, Vents, Sounds, and Overflows Arrangement

Coast Guard Drawing 154 WPC 506-301, (series), Fills, Vents, Sounds, Overflows Diagram

Coast Guard Drawing 154 WPC 528-301, (series), Grey Water System Diagram

Coast Guard Drawing 154 WPC 593-201, (series), Sewage System Arrangement

Coast Guard Drawing 154 WPC 593-301, (series), Sewage System Diagram

Coast Guard Drawing 154 WPC 593-303, (series), Sewage Control System

Coast Guard Drawing 154 WPC 601-302, (series), General Arrangement

Coast Guard Drawing 154 WPC 633-301, (series), Cathodic Protection System

Coast Guard Drawing 154B WPC 506-201, (series), Fills, Vents, Sounds, and Overflows Arrangement

Coast Guard Drawing 154B WPC 593-201, (series), Sewage System Arrangement

Coast Guard Drawing 154B WPC 593-301, (series), Sewage System Diagram

Coast Guard Drawing 154B WPC 601-302, (series), General Arrangement

COAST GUARD PUBLICATIONS

None

OTHER REFERENCES

ASTM International (ASTM) D1330, 2010, Standard Specification for Rubber Sheet Gaskets

2. REQUIREMENTS

INTENT: Clean and inspect the sewage and grey water system piping and tanks. If designated, renew the grey water tank interior coating system.

BLANKING PIPING - Be aware that 1) the grey water system has few isolation valves and many openings that must be plugged or blanked to contain cleaning media. 2) there are AC condensate drains into the Grey Water Tank at 8 separate locations.

Before filling a system with descaler ensure all openings below the fill point are blanked off or plugged.

CLEANING PLAN - Any temporary disruption or degradation of climate control must be fully addressed by the cleaning plan.

CHEMICAL vs MECHANICAL CLEANING - Based on lessons learned, it is suggested that sewage piping and grey water system piping be cleaned chemically vs. mechanically (e.g. waterjetting, etc.) in most cases.

Depending on the condition of the system at the contract start date, chemical cleaning may not adequately remove all obstructions, scale, and build-up present. More intrusive cleaning methods, such as pressure washing, flexible auger cleaning, or other mechanical means of cleaning, may be required to remove all obstructions, scale, etc. These more intrusive methods are in scope of this work item and the Contractor may be required to use one or more of them, in the appropriate quantities, to achieve minimum cleaning requirements.

2.1 Government-furnished property.

MTI	TY	ITEM DESCRIPTION	NSN/PN	QTY
N	**	Sewage Tank Zinc Anode	NIIN: 014474686	2 ea.
*	Government-loaned property, which must 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 C5ISC Service Center.			

2.2 **Preventive/Recurring Tasks**. The Contractor must:

2.2.1 **Inspect/Op Test (Initial)** all sewage and grey water system exterior surfaces and equipment. **Submit** a **CIR** for all initial inspections/tests describing discrepancies and recommended repairs.

2.2.1a Prior to commencement of cleaning work, witness Coast Guard personnel perform an operational pre-test of all items and shipboard devices to be disturbed, used, repaired, or altered, (e.g. TLIs, pumps, etc.) to demonstrate existing operational condition and to determine a more precise scope of cleaning required. Use the most economical methods for accomplishing the work.

2.2.2 **Submit** a CLEANING PLAN (593a) no later than 7 days after the arrival conference, and prior to the start of cleaning work. Do not proceed without COR approval of the plan. **Do not** use the sewage pump installed in the vessel's system to offload sewage system contents.

HAZMAT DISPOSAL		
WHEN AT A GOVERNMENT FACILITY - If the Coast Guard provides use of their facilities the Contractor may offload and dispose of sewage and grey water system contents into Coast Guard pier-side tanks, otherwise the Contractor must furnish disposal services (e.g. remove via tanker truck, etc.).		
1	X	N/A - Vessel at a Contractor's facility
2		Vessel berthed at a Government Facility, AND Coast Guard **will** provide use of their pier-side sewage/grey water disposal tanks to dispose of all generated waste.
3		Vessel berthed at a Government Facility, AND Coast Guard **will not** provide use of their pier-side sewage/grey water disposal tanks to dispose of all generated waste.

2.2.2.1 Create and maintain a PLUG LOG (123a) for submission later. **Submit** an up-to-date copy of the PLUG LOG (123a) whenever requested by the KO/COR, and include a completed copy in the final CFR below.

2.2.2.2 **Provide** TEMPORARY VESSEL HABITABILITY SERVICES (863d) (e.g. temp HVAC, temp sewage/grey water sys, etc.) as specified in the General Requirements (This Contract) work item at the beginning of the SOW.

2.2.3 **Clean** and **Inspect** the interior of the entire sewage piping system (593a).

2.2.4 **Clean** and **Inspect** the interior of the entire grey water piping system (593a).

2.2.5 **Clean** and **Inspect** the interior of the Sewage Holding Tank 2-4-0-W and Sewage Vacuum Accumulation Tank (593a). Open and vacuum-clean the associated control panel assembly and inspect for any indications of overheating or loose wiring or connections.

2.2.5.1 **Renew** zinc anodes that have lost more than 50% of their material using Government-furnished property, otherwise reuse the existing zinc anodes.

2.2.6 **Clean** and **Inspect** the interior of the Grey Water Tank 3-17-0-W (593a). Open and vacuum-clean the associated control panel assembly and **Inspect** for any indications of overheating or loose wiring or connections. **Perform** the designated coating system work described below.

GREY WATER TANK COATING SYSTEM WORK			
N/A	**Repair (631a)**	**Renew (631a)**	
		X	The coating system inside the Grey Water Tank

COATING SYSTEM DESCRIPTION When "Renewing" in Dry Dock		
Surface	**CoatingSysName (VCS)**	**Topcoat Color**
Grey Water Tank Interior	SGW2	Soft White (27880)

COATING SYSTEM DESCRIPTION When "Repairing" or while vessel is waterborne		
Surface	**CoatingSysName (VCS)**	**Topcoat Color**
Grey Water Tank Interior	GTV2	Soft White (27880)

2.2.6.1 If "**Renew** the coating system" is designated then **Perform** COATINGS QUALITY CONTROL CHECKPOINTS (631b) and **Submit** completed COATINGS QA FORMS (631b) with the final report.

2.3 **Corrective/Repair and Alterative Tasks**. The Contractor must:

2.3.1 **Perform** repairs/alterations whenever the KO releases a Change Request authorizing new post-inspection repairs/alterations, or whenever pre-existing discrepancies/tasks/alterations are described below (price these tasks below into the pre-award quote).

CSMP # FOR INTERNAL USE ONLY	PRE-EXISTING DISCREPANCIES/TASKS
	DISCREPANCY: N/A TASK(S): N/A

2.4 **Final Inspection/Testing Tasks**. The Contractor must:

2.4.1 **Inspect/Op Test (Final)** all affected surfaces/equipment/etc. and then **Submit** a final CFR attesting to satisfactory completion of the work item.

2.4.1a Thoroughly test all disturbed components and systems and accomplish the following tasks in conjunction with each other as appropriate, in the presence of the Coast Guard Inspector:

- Adjust the set point on each of the vacuum pressure switches (as applicable) to the set points noted previously.

- 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.

2.4.1b After all system components are reinstalled, test all disturbed piping for leaks, as follows:

- Run water down all disturbed grey water system piping runs for 5 minutes.
- Ensure the sewage system holds vacuum without cycling for at least 20 mins.
- Place both vacuumarator selection switches in the "RUN" position. Allow vacuumarator pump to run until system operating pressure of -0.40 to -0.55 bar is reached. Observe vacuum tank pressure gauge. Place both vacuumarator selection switches in the "OFF" position. (NOTE: A vacuum loss of more than 0.14 bar indicates an air leak exists in the system.) Verify vacuum system pressure remains between -0.40 to -0.55 bar for 20 minutes. Record pressure value and include in the final report.
- Perform smoke leak test on vacuum portions of the sewage system where the Contractor has disturbed a mechanical joint.
- Closely monitor the systems for leaks. Repair all leaks detected. Repeat test and inspection tasks until no leaks are detected.

2.4.1c Upon completion of testing and, in the presence of the Coast Guard Inspector, pump tanks to the limit of the ship's installed pumps.

WORK ITEM 13: Topside Structure and Coating Systems

1. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 154 WPC 131-301, (series), Scantlings Main Deck
Coast Guard Drawing 154 WPC 171-201, (series), Mast A&D
Coast Guard Drawing 154 WPC 171-601, (series), Mast Prefab
Coast Guard Drawing 154 WPC 251-301, (series), Combustion Air Diagram
Coast Guard Drawing 154 WPC 405-201, (series), Antenna A&D
Coast Guard Drawing 154 WPC 405-202, (series), Antenna Arrangement and Installation
Coast Guard Drawing 154 WPC 406-301, (series), Schedule of Bonding and Grounding
Coast Guard Drawing 154 WPC 422-301, (series), Electrical Navigational Aids
Coast Guard Drawing 154 WPC 601-302, (series), General Arrangement
Coast Guard Drawing 154 WPC 602-305, (series), Visual Identification and Draft Marks Plan
Coast Guard Drawing 154 WPC 625-201, (series), Window Arrangement
Coast Guard Drawing FL 2804-12, (series), U.S. Coast Guard Emblem
Coast Guard Drawing FL 2804-22, (series), Consolidated Visual ID for Cutters

COAST GUARD PUBLICATIONS

None

OTHER REFERENCES

None

2. REQUIREMENTS

INTENT: Perform the designated coatings repairs/renewals on all designated surfaces above the waterline (boot-top).

TASKS THAT WILL BE PERFORMED BY SHIP'S FORCE - Ship's Force will renew various stickers and labels currently installed on the ammo box and pyro box, as needed.

2.1 **Government-furnished property**.

MTI	TY	ITEM DESCRIPTION	NSN/PN	QTY
N/A	N/A	N/A	N/A	N/A
*	Government-loaned property, which must 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 C5ISC Service Center.			

2.2 **Preventive/Recurring Tasks**. The Contractor must:

2.2.1 **Inspect-Op Test (Initial)** all topside exterior surfaces (e.g., freeboard, superstructure, mast, weather deck non-skid and waterways, deck machinery, bits/chocks, etc.) that will be affected by the work specified herein. **Submit** a **CIR** for all initial inspections/tests describing discrepancies and recommended repairs. Include in the report all discrepancies identified after disassembly of the PORT & STBD SSDG Plenum to Main Deck Seal Assemblies and the PORT & STBD MDE Plenum to 01 Deck Seal Assemblies.

2.2.2 **Perform** the following coating system repairs/renewals and subtasks on the designated surfaces.

No Work	**Clean**	**Repair** and **Overcoat (631a)**	**Renew (631a)**	**Perform** 2.2.2a **ELEVATED QA**		**Perform** the designated coating system action on the exterior surfaces below (unless otherwise specified), using coating systems and colors specified in 2.2.2b **COATING SYSTEM AND COLOR SPECIFICATIONS**	**Additional Subtasks, Requirements, Notes**
			X		1	**FREEBOARD**	
			X	X	2	TEARDROPS	See 2.2.2c. TEARDROP AREA COATINGS SYSTEM SPECIFICATIONS
			X		3	VESSEL MARKINGS	See 2.2.2d VESSEL MARKINGS
			X		4	FIRE STATION (2ea bulwark)	**Stations #9 FP 1-14-1, #8 FP 1-14-2**
			X	X	5	**MAIN DK WEATHER DECK**	
		X			6	DECK MACHINERY	
			X		7	TOW BIT	
			X		8	MAIN DECK HANDRAILS	
			X		9	RAISED HATCHES	
			X		10	**TAFF RAIL**	**[X]** Coat 100% of Taff Rail **[ ]** Leave a 4 inch bare aluminum strip on the working surface of the Taff Rail. Polish that bare aluminum strip to a 125 microinch surface finish to avoid damaging towing lines
			X		11	JACKSTAFF	
			X		12	GOOSENECKS/VENTS/COFFERDAMS/ETC	
			X		13	**BOATSWAIN STORAGE (2-A-0-A)** interior	
			X		14	**P/S SSDG INTAKE PLENUMS** interior and exterior	**Overhaul** the seal assemblies between the plenums and main deck. See 2.2.2f SSDG INTAKE SEALS and 2.2.2g EXPOY CEMENT APPLICATION **Renew** the insulation on the plenum interior. See 2.2.2h PLENUM INSULATION RENEWAL

No Work	Clean	Repair and Overcoat (631a)	Renew (631a)	Perform 2.2.2a ELEVATED QA		**Perform** the designated coating system action on the exterior surfaces below (unless otherwise specified), using coating systems and colors specified in 2.2.2b **COATING SYSTEM AND COLOR SPECIFICATIONS**	**Additional Subtasks, Requirements, Notes**
			X	X	15	**01 DK WEATHER DECK (FWD FR 16.5)**	
			X		16	GOOSENECKS/VENTS/COFFERDAMS/ETC	
			X		17	Gun Mounts (2FWD)	
			X	X	18	**01 DK WEATHER DECK (AFT FR 16.5)**	
			X		19	01-17-1-M 50 CAL Ready Service Locker, exterior	
			X		20	01-28-2-M 50 CAL Ready Service Locker, exterior	
			X		21	01-28-1-A Flag Locker, exterior	
			X		22	01-28-3-K Pyrotechnics Stowage Locker, exterior	
			X		23	DC/FFE EQUIP Stowage Locker, interior and exterior	
			X		24	Gun Mounts (2AFT)	
			X		25	01 DK HANDRAILS	
			X		26	GOOSENECKS/VENTS/COFFERDAMS	
			X		27	**P/S MDE INTAKE PLENUMS**	**Overhaul** the seal assemblies between the plenums and the 01 deck. See 2.2.2i MDE INTAKE SEALS. Just exterior receives coatings, all paint should be removed from interiors
			X	X	28	**SUPERSTRUCTURE**	**Renew** various weatherproofing/isolation consumables in conjunction with interference removal and reinstallation on pilot house and 01 deck. See 2.2.2h **ELECTRONIC WEATHERPROOFING**
			X		29	ANTENNA SAFETY ENCLS (01 DK)	
			X		30	FIRESTATION (2ea superstructure)	Stations #5 FP 1-32-1, #4 FP 1-32-2
			X		31	FWD DC LOCKER (1-10-2-A) interior	**Perform** and **Conform** to 2.2.2e **FM-200 INTERFERENCE RMVL/RNSTL REQUIREMENTS**
			X		32	AFT DC LOCKER (1-34-3-A) interior	

No Work	Clean	Repair and Overcoat (631a)	Renew (631a)	Perform 2.2.2a ELEVATED QA	**Perform** the designated coating system action on the exterior surfaces below (unless otherwise specified), using coating systems and colors specified in 2.2.2b **COATING SYSTEM AND COLOR SPECIFICATIONS**		Additional Subtasks, Requirements, Notes
			X		33	**MAST**	**Renew** various weatherproofing/isolation consumables in conjunction with interference removal and reinstallation on the Mast. See 2.2.2h **ELECTRONIC WEATHERPROOFING**

2.2.2a **ELEVATED QA** - When a) ***"Renewing"*** the coating system on the designated surface, and b) when ELEVATED QA is designated in the tables above, then **Perform** COATINGS QUALITY CONTROL CHECKPOINTS (631b) and **Submit** completed COATINGS QA FORMS (631b) with the final CFR below; otherwise, these elevated QA tasks are not required for the designated surfaces. The Coatings Inspector (CI) must perform cursory oversight and inspections over all surfaces being coated above to ensure proper coating application.

2.2.2b **COATING SYSTEM AND COLOR SPECIFICATIONS.**

TOPSIDE COATINGS CONFIGURATION DESCRIPTION				
#	**Surface**	**Substrate**	**CoatingSysName (VCS)**	**Topcoat Color**
1	**FREEBOARD** All surfaces of the exterior hull from the top of the entire boot-top line to the outer edge of the main deck, including top and inboard sides of gunnels, and the RHIB-notch exterior down to the top of the boot top, including all associated attached components that have a top-coat color of white (e.g. transom ladders, etc.)	Steel	PolySLXN3**b**	Insignia White (17925)
2	TEARDROPS Teardrop shaped areas in black around MDE and SSDG exhaust ports.	Steel	See 2.2.2c **TEARDROP AREA COATINGS SYSTEM SPECIFICATIONS**	
3	VESSEL MARKINGS "Racing stripe", draft marks, lettering, etc.	OvrCtg	PolySLXN1 or SlcnAlkyd1 (add coats until fully opaque/covered as req'd)	Insignia White (17925) Coast Guard Blue (15182) OSHA Safety Red (11105) OSHA Black (17038) See 2.2.2d **MARKINGS**
4	FIRE STATION (bulwark)	Steel CuNi	PolySLXN3**b**	OSHA Safety Red (11105)

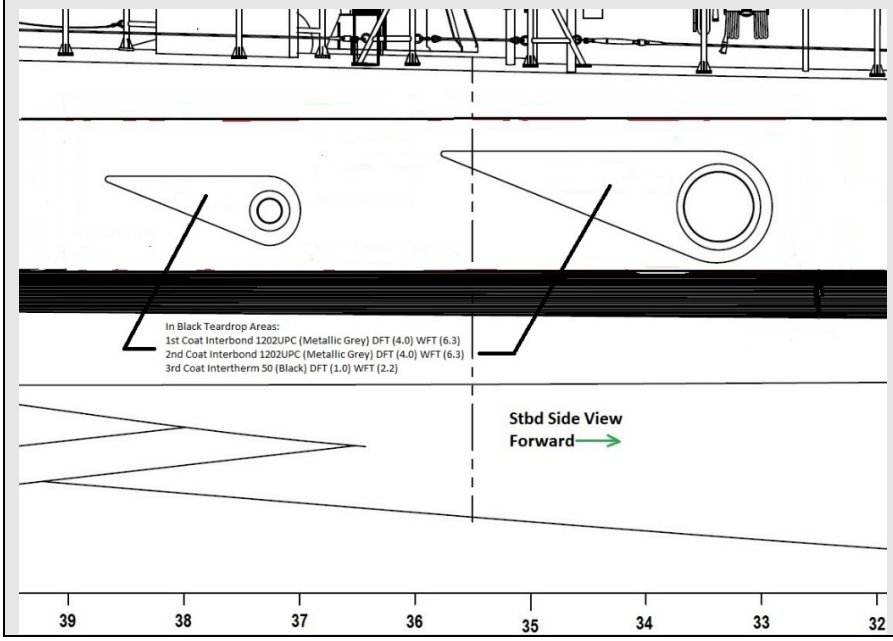
TOPSIDE COATINGS CONFIGURATION DESCRIPTION				
#	**Surface**	**Substrate**	**CoatingSysName (VCS)**	**Topcoat Color**
5	**MAIN DK WEATHER DECK** The union of the following exterior surfaces: • All existing non-skid coatings on main deck • All adjacent horizontal surfaces and associated like-colored components (e.g. bitt and chock foundations, machinery rack guards and machinery foundations, hatches and hatch guards, stanchion sockets, vent pipes, angle coaming area, and up to approximately six inches up from main deck all adjacent vertical surfaces to the bottom of "Superstructure" surfaces.	Steel	RollOn3**b**	Dark Gray (16099)
6	DECK MACHINERY	Steel	PolySLXN3**c**	Spar Buff (10371)
7	TOW BIT	Steel	PolySLXN3**c**	Spar Buff (10371)
8	MAIN DECK HANDRAILS	Steel	PolySLXN3**c**	Insignia White (17925)
9	RAISED HATCHES	Steel	PolySLXN3**c**	Insignia White (17925)
10	**TAFF RAIL**	Alum	PolySLXN2**a**	Spar Buff (10371)
11	JACKSTAFF	Alum	PolySLXN2**a**	Spar Buff (10371)
12	GOOSENECKS/VENTS/COFFERDAMS	Steel	PolySLXN3**c**	Spar Buff (10371) Insignia White (17925)
13	**BOATSWAIN STORAGE (2-A-0-A)** interior	Steel	***DECK*** - PolySLXN3c ***BHD/OVHD*** - BHD3**b**	***DECK*** - Dark Gray (16099) ***BHD/OVHD*** - Soft White (27880)
14	**P/S SSDG INTAKE PLENUMS**	Alum	PolySLXN2**a**	Insignia White (17925)
15	**01 DK WEATHER DECK (FWD FR 16.5)**	Steel	RollOn3**b**	Dark Gray (16099)
16	GOOSENECKS/VENTS/COFFERDAMS	Steel	PolySLXN3**c**	Spar Buff (10371) Insignia White (17925)
17	Gun Mounts (2FWD)	Steel	PolySLXN3**c**	OSHA Black (17038)
18	**01 DK WEATHER DECK (AFT FR 16.5)**	Steel	RollOn3**b**	Haze Gray (36270)
19	01-17-1-M 50 CAL Ready Service Locker	Alum	PolySLXN2**a**	Insignia White (17925)
20	01-28-2-M 50 CAL Ready Service Locker	Alum	PolySLXN2**a**	Insignia White (17925)
21	01-28-1-A Flag Locker	Alum	PolySLXN2**a**	
22	01-28-3-K Pyrotechnics Stowage Locker	Alum	PolySLXN2**a**	Insignia White (17925)
23	DC/FFE EQUIP Stowage Locker	Alum	PolySLXN2**a**	Insignia White (17925)
24	Gun Mounts (2AFT)	Steel	PolySLXN3**c**	OSHA Black (17038)
25	01 DK HANDRAILS	Steel	PolySLXN3**c**	Insignia White (17925)
26	GOOSENECKS/VENTS/COFFERDAMS	Steel	PolySLXN3**c**	Spar Buff (10371) Insignia White (17925)
27	**P/S MDE INTAKE PLENUMS**	Alum	PolySLXN2**a**	Insignia White (17925)

TOPSIDE COATINGS CONFIGURATION DESCRIPTION				
#	**Surface**	**Substrate**	**CoatingSysName (VCS)**	**Topcoat Color**
28	**SUPERSTRUCTURE**	Alum	PolySLXN2**a**	Insignia White (17925)
29	ANTENNA SAFETY ENCLS (01 DK)	Steel	PolySLXN2**a**	Insignia White (17925)
30	FIRESTATION (superstructure)	Steel CuNi	PolySLXN3**c**	OSHA Safety Red (11105)
31	FWD DC LOCKER (1-10-2-A) interior	Alum	***DECK*** - PolySLXN3c ***BHD/OVHD*** - BHD3**a** **or** BHD3**b**	***DECK*** - Dark Gray (16099) ***BHD/OVHD*** - Soft White (27880)
32	AFT DC LOCKER (1-34-3-A) interior	Alum	***DECK*** - PolySLXN3c ***BHD/OVHD*** - BHD3**a** **or** BHD3**b**	***DECK*** - Dark Gray (16099) ***BHD/OVHD*** - Soft White (27880)
33	**MAST**	Alum	PolySLXN2**a**	Spar Buff (10371)

2.2.2c **TEARDROP AREA COATINGS SYSTEM SPECIFICATIONS -** Topcoat Color must be OSHA Black (17038). PORT and STBD MDE and Generator TEARDROP areas must be coated using a system similar to the system being applied to the rest of the freeboard, but with these additional attributes:

- capable of withstanding substrate temperatures of up to 500 deg F
- capable of withstanding temperature gradients experienced when those hot surfaces are splashed with rain and sea water at near freezing temperatures (32 deg F).
- the note below describes a system that meets the high temp specification above. An equivalent system is acceptable, but only after Coast Guard evaluation/acceptance, submit that description of the proposed equivalent system with "PRESERVATION PLAN (631b)"

Teardrops:
1st Coat - Interbond 1202UPC (Metallic Grey) DFT (4.0) WFT (6.3)
2nd Coat - Interbond 1202UPC (Metallic Grey) DFT (4.0) WFT (6.3)
3rd Coat - Intertherm 50 (Black). DFT (1.0) WFT (2.2)



2.2.2d **VESSEL MARKINGS** - All miscl markings (e.g. Coast Guard Emblems, letters, numbers, stripes, etc.) may be Vinyl stickers or painted. If painted Conform to Coast Guard Drawings 602-305, FL 2804-12, and FL 2804-22, as applicable.

2.2.2e **FM-200 INTERFERENCE RMVL/RNSTL REQUIREMENTS** - If the FM-200 bottles in the FWD Damage Control Locker (1-10-2-A) become an interference to the work specified, **Perform** the following:

- Remove, temporarily store, and reinstall two FM-200 bottles as an interference. Ensure system is restored to its original condition upon completion of work.
- **Provide** a Certified Representative of Chemetron Fire Systems, who is familiar with the FM 200 fire suppression equipment/system and will provide any manufacturer's proprietary information, software, and tools pertinent to the equipment/system, and will assist with proper repair methods, and will ensure compliance with manufacturer's procedures and standards during disassembly, inspection, repair, modification, calibration, and reassembly of the equipment/system.
- **Submit** the Tech Rep's name and résumé to the COR at the Arrival Conference.
- After completion of all other work that may disturb the system, the Tech Rep must **Inspect-Op Test (Final)** the affected FM-200 system, **Submit** a CFR confirming recertification with the final CFR.

2.2.2f **SSDG INTAKE PLENUM SEALS** - Remove both port and starboard SSDG plenum/soft patch assemblies. After the completion of all authorized coating system repairs/renewals reinstall the soft patches. **Renew** seal assemblies (e.g. rubber gasket, RTV, etc.) and **Renew** all disturbed hardware and fasteners. See Coast Guard Drawing 131-301 Section 15-H for sealing details. Where stainless steel fasteners contact aluminum surfaces, **Install** neoprene, nylon, or PTFE (Teflon) washers, or apply a layer of marine sealant to prevent galvanic corrosion.

2.2.2g **EXPOY CEMENT APPLICATION** - Prior to paint application, apply a coat of an EPOXY CEMENT from VCS onto the soft-patch flange sealing surfaces (horizontal surface shown below).

2.2.2h **PLENUM INSULATION RENEWAL - Renew** all plenum interior insulation, it must stop approximately 6" above main deck to prevent wicking of condensate. **Inspect** of all exposed surfaces, fan assemblies, and surrounding shipboard structure to identify all discrepancies. Submit findings in the report described in 2.2.1 above.

2.2.2i **MDE INTAKE PLENUM SEALS -** Remove both port and starboard MDE plenums. Inspect all exposed surfaces, visible shipboard ductwork, and surrounding shipboard structure to identify all discrepancies. Submit findings in the report described in 2.2.1 above. Remove all coatings and contaminates from the interior of the plenum boxes, do not recoat; leave plenum box interiors uncoated bare metal. After the completion of all preservation and authorized repairs reinstall with new seal assemblies, filters, and fasteners in accordance with Coast Guard Drawing 251-301.

2.2.2j **ELECTRONIC WEATHERPROOFING -** Electrical & electronic equipment must be disconnected/protected/stored/reinstalled as follows.

- Disconnect electrical/electronic equipment cables at the connector or terminal board.
- Remove electrical/electronic equipment to expose its foundation.
- Steady large antennas during removal and reinstallation with a crane or equivalent method. Do not hoist a radar pedestal using its array.
- Use appropriate/safe methods (e.g. man-lift, staging, etc.) for accessing hard to reach areas of the mast.
- Coil up electrical cabling down to associated deck/bulkhead penetrations. Mark and protect all cable from damage (e.g. accidental cutting or grinding due to other work in the immediate vicinity, abrasion, etc.) and contamination (e.g. dust, dirt, weather, etc.) by sealing, tie-wrapping, and covering. Do not bend any electrical cable to a radius less than 20 times its diameter. Disassemble stuffing tube or Multi-Cable-Transit block to accomplish cable protection.
- Inspect cable ends for connectors that need replacement.
- Temporarily weatherproof all open connectors on removed electrical or electronics equipment to prevent all damage and discrepancies.
- Reinstall all previously removed equipment to their original location using DOD-STD-2003 and Coast Guard Drawing 154-WPC 406-301 as reference.
- Install only 316 SS (passive material) fasteners.
- Install new nylon insert lock nuts on all bolts.
- Install non-metallic washers (phenolic) between SS washers that mate with aluminum surfaces (e.g. mast foundations, equipment bases, etc.).
- Coat all threads with PTFE thread compound.
- Renew all rubber gaskets using 1/8” cloth embedded rubber to isolate between aluminum mast equipment foundations and appendages of dissimilar metals. See table below.
- All speaker cable gland entrances must face downward.
- Secure cables by installing new 316 SS 5/8” band width banding straps. All banding that comes in contact with cables must be lined with 5/8” rubber channel to protect cables. All cable hangers must be 316 SS.

List of electronic and electrical items that must be removed from the mast.
VHF Antenna #1-MFG# 5400-XT, Navigation lights.
IFF AN/APX-123(V)1-MFG# AS-177B/UPX.
TRACVISION M5 DUL LNB Satellite Television MFG# 01-0286-21” KVH.
VHF Antenna #2-MFG# 5400-XT.
Radio Direction Finder-# TC-6527-3 USCG DF.
Automatic Identification System- MFG# VHF-159 HD.
Stabilized Gimbal Assembly (SGA).
NMARSAT C FELCOM 15 –MFG# 1C115.
UHF SATCOM Antenna-MFG# AV2098-7.
UHF Shipboard NO.1 – MFG# AV457-9W.
BROADCAST –MFG# NARGENTUS.
UHF Shipboard NO.2 – MFG# AV457-9W.
Wind Sensor 23.
Cellular Antenna – MFG# 288-PW.

UHF Shipboard NO.3 – MFG# AV457-9W. INMARSAT MINI-M MFG# TT-3007C. UHF High LOS Antenna – MFG# AV457-1-90. VHF Antenna NO.1 – MFG# HS2774-1. Law Enforcement Light. Double Light (Center Strut, Facing Forward). Single Light (First Yard Arm STBD). Single Light (Second Yard Arm STBD). Single Light (Third Yard Arm STBD). Single Light (First Yard Arm Port). Single Light (Second Yard Arm Port). Single Light (Third Yard Arm Port). Single Light (First Yard Arm, Center Strut, Fwd). Single Light (Center Strut, between Yard arm 1 and 2, STBD, Fwd). Single Light (Center Strut, at Yard Arm 2, Fwd). Single Light (Between Yard Arm 2 and 2, STBD, Aft). Single Light (Above Third Yard Arm, Center Strut, Aft). Single Light (Above Third Yard Arm, Center Strut, Fwd). Horn. Cameras (2). Speakers (4). Cables with Cableways. Bridge Overhead and Bulkhead Panels.

01 DECK	
AFFECTED EQUIPMENT/COMPONENTS	**VARIOUS SPECIFICATIONS FOR WEATHER PROOFING AND ISOLATION.**
All fasteners that secure all components attached to the mast	Coat fasteners with Ultra Tef-Gel, P/N TG-01 or EQ.
Paint all Transmit HF antenna base red	Color must be Red (11105)
HF Coupler TMR-4096 and TMR - 4095	Install Electrical insulation tape (i.e., self-vulcanizing or self-fusing tape), Electrical tape and an Electrical coating. (e.g. 3M™ Scotchkote™ Electrical Coating or equivalent). Onto connector junctions.
FWD Assignable SPKR V-1030MCG	Between the component and the ship install Isolation Gasket, Rubber Cloth Inserted, HH-P-151, Class 4 1/8" THK or EQ. Cut to same dimensions as previously installed.
FWD Assignable SPKR V-1030MCG SATCOM AV-2098-143 (RF line)	Install 3M Pre-cut Thick Walls Adhesive Lined Heat Shrink (6"), P/N ITCSN-800-6 Covering RF on connector junction.
SATCOM AV-2098-143 (Data Line)	Install 3M Pre-cut Thick Walls Adhesive Lined Heat Shrink (9"), P/N ITCSN-1100-9 or EQ on pigtails, and connector junctions, etc. as appropriate.
SATCOM AV-2098 Dish	Install Foam Doughnut MFG – KVH, Part# 24-0142, NSN 5330-01-617-5561. Centered over foundation hole, between dish and ship, cables run thru doughnut. In presence of CG witness test that antenna movement aligns with manual bearing inputs from controller in C5ISC Space.
390-1 HF#1 Whip Antenna	Clean antenna and foundation junctions to bright metal. Cut conductive gasket Mfg-AvDec, Part#BL171050-0, NSN 5999-01-492-5863 to antenna base size. Install conductive gasket between ship and antenna. Apply Thixoflex Black Mfg- AvDec, Part# TG3212-50, NSN 8030-01-661-4927 to seam of antenna and foundation, smooth with finger. Ensure all opening and seams around antenna base are sealed including fasteners top and bottom. Paint base of antenna and thixoflex sealant with red paint. After installation Meggar from RF Feed cable, test readings of

01 DECK	
AFFECTED EQUIPMENT/COMPONENTS	**VARIOUS SPECIFICATIONS FOR WEATHER PROOFING AND ISOLATION.**
	equal to or greater than 200M Ohms is satisfactory, renew antenna if readings are less than 200M Ohms Also required Plunger Dispenser for thixoflex Mfg AvDec, Part# UG981108-01, NSN 5120-01-494-7678.
NVIS HF Antenna - 798013-000-001	Forward antenna attachment instructions - Clean base of antenna and ship to bright metal with wire wheel. Apply coat of zinc anti-seize to both antenna and ship, you want as much metal to metal contact. Mount Antenna. Seal antenna to ship seam and bolts with Thixoflex black sealing all openings to the antenna to ship junction. Paint Foundation Blue
RENEW SIRVSS (night vision camera) Transit	Remove existing transit parts, clean 4" tube of any salt residue. Assemble new transit parts around cable, apply Blue Molly or equivalent to inner block and cable, install. Perform water test. NOTE: Only use lubricant on inner blocks. Wipe inner tube dry do not apply any type of lubricant to the inside 4" pipe or transit parts that touch it. MCT Brattberg parts RGPO-4 (Stainless Steel) U-Block U-60 AD Block 40/29-33
KVH Connectivity Dome -02-1563-04WH	Upon re-installation renew Foam Doughnut MFG – KVH, Part# 24-0142, NSN 5330-01-617-5561 between dome and ship.
FWD and AFT Talk-Back SPKR and Push-button DGPS Antenna Port/stbd GPA019 Aft Assignable SPKR V-1030MCG AIS GPS Antenna BULLET III 0099800019 Time Code Antenna 142-614 FWD DDJ	Between the component and the ship install Isolation Gasket, Rubber Cloth Inserted, HH-P-151, Class 4 1/8" THK or EQ. Cut to same dimensions as previously installed.
Active RCV HF Antenna - 604818-00 Aft Assignable SPKR V-1030MCG	Install 3M Pre-cut Thick Walls Adhesive Lined Heat Shrink (6"), P/N ITCSN-800-6 Covering RF on connector junction.
HF#2 (stbd) and GMDSS HF (port) 390-1	After reassembly coat the seams and fasteners with Av-Dec (Aviation Devices & Electronics Components LLC) Thixoflex Black P/N TG3212-50 (50CC Cartridge) or EQ. Description of Applicator: Av-Dec (Aviation Devices & Electronics Components LLC) Injectable Sealant Applicator P/N UG981108-01 or EQ. Instructions - Clean base of antenna and ship to bright metal with wire wheel. Apply coat of zinc anti-seize to both antenna and ship, you want as much metal to metal contact. Mount Antenna. Seal antenna to ship seam and bolts with Thixoflex black sealing all openings to the antenna to ship junction. Paint base of antennas red. After installation Meggar from RF Feed cable, test readings of equal to or greater than 200M Ohms is satisfactory, renew antenna if readings are less than 200M Ohms

MAST	
AFFECTED EQUIPMENT/COMPONENTS	**VARIOUS SPECIFICATIONS FOR WEATHER PROOFING AND ISOLATION.**
All fasteners that secure all components attached to the mast	Coat fasteners with Ultra Tef-Gel, P/N TG-01 or EQ.
Primary Radar Cut-out Switch M15743/8-003 HS-2774-1 VHF Lower Yard Arm – PORT and STBD 6MC Speakers 6MC Junction box(lower) 5400 XT Middle Yardarm, STBD outboard (DSC #2) 288 PW Cell Antenna SC-4110 Iridium Radar XN10A/3.5 (Secondary) Radar XN24AF/8(Primary) 5400 XT Upper Yardarm, Port Outboard (DSC #1) Wind Vane Junction box(upper)	Between the component and the mast install Isolation Gasket, Rubber Cloth Inserted, HH-P-151, Class 4 1/8" THK or EQ. Cut to same dimensions as previously installed.
HS-2774-1 VHF Lower Yard Arm – PORT and STBD AV-457-1-90 800 MHZ Lower Port 5400 XT Upper Yardarm, Port Outboard (DSC #1) AV-457-6-9 UHF LOS (TACT 1) Top STBD Inboard TC-6527-3 RDF (data cable) AV-457-6-9 UHF LOS (TACT 2) VHF LOS - PSD (AV457-6-90)	Install 3M Pre-cut Thick Walls Adhesive Lined Heat Shrink (9"), P/N ITCSN-1100-9 or EQ on pigtails, and connector junctions, etc. as appropriate.
TC-6527-3 RDF (RF cable)	Install 3M Pre-cut Thick Walls Adhesive Lined Heat Shrink (6"), P/N ITCSN-800-6 Covering RF on connector junction.
AV-457-6-9 UHF LOS (TACT 1) Top STBD Inboard AV-457-6-9 UHF LOS (TACT 2) VHF LOS - PSD (AV457-6-90)	After reassembly seal the seams and fasteners with Av-Dec (Aviation Devices & Electronics Components LLC) Thixoflex Black P/N TG3212-50 (50CC Cartridge) or EQ. Description of Applicator: Av-Dec (Aviation Devices & Electronics Components LLC) Injectable Sealant Applicator P/N UG981108-01 or EQ. Instructions - Clean base of antenna and ship to bright metal with wire wheel. Apply coat of zinc anti-seize to both antenna and ship, you want as much metal to metal contact. Mount Antenna. Seal antenna to ship seam and bolts with Thixoflex black sealing all openings to the antenna to ship junction.
M5 KVH Tracvision (SAT TV) AIS VHF (VHF-159HD Morad)	Install Electrical insulation tape (i.e., self-vulcanizing or self-fusing tape), Electrical tape and an Electrical coating. (e.g. 3M™ Scotchkote™ Electrical Coating or equivalent). Onto connector junctions. Wrap vulcanizing tape starting at one end, cover junction overlapping each successive wrap 50% by maintaining an approximately 45 degree angle or just covering the line down the middle of the tape if present. Follow previous procedure with electrical tape, going 2” beyond previous procedure tape end.

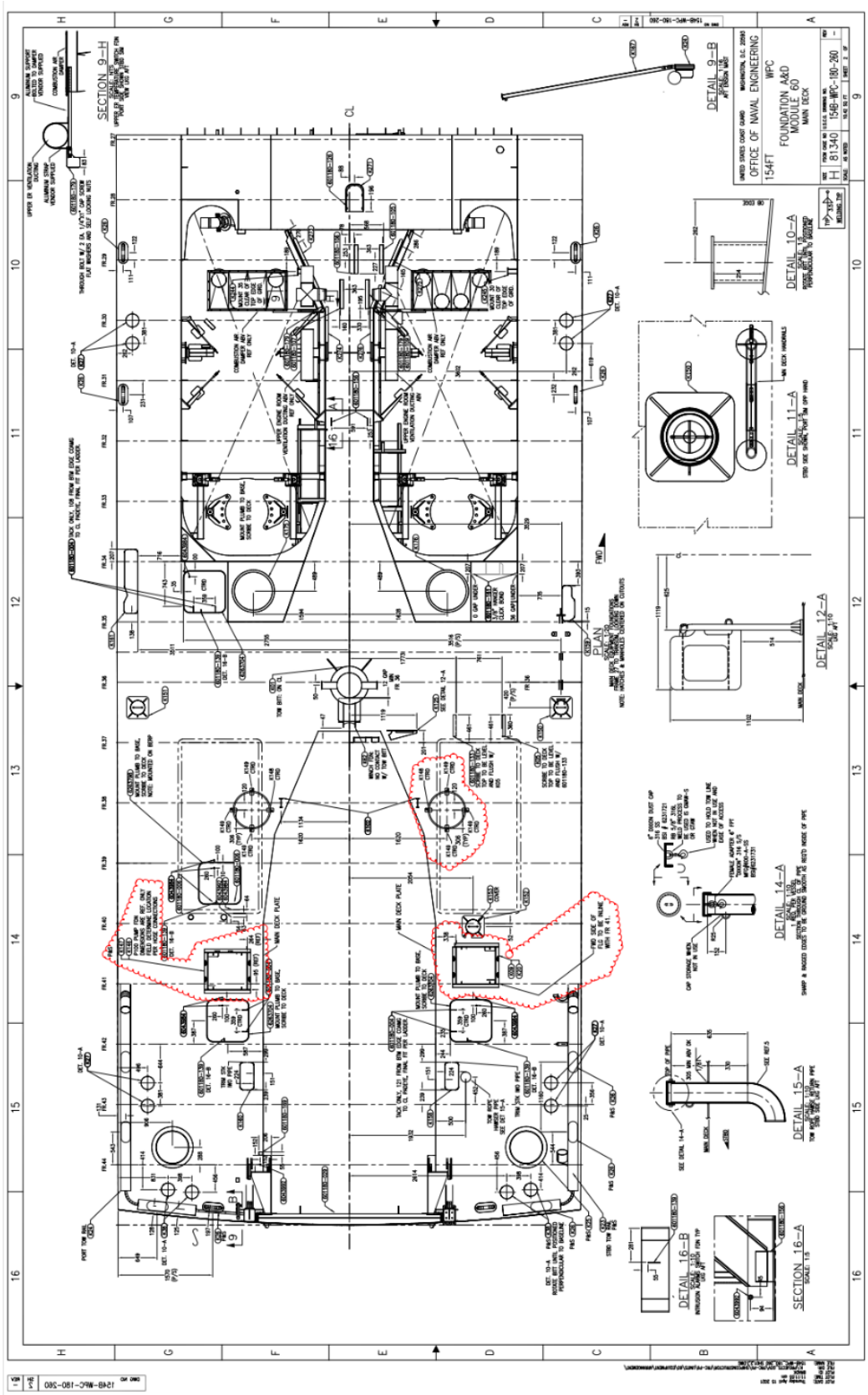
MAST	
AFFECTED EQUIPMENT/COMPONENTS	**VARIOUS SPECIFICATIONS FOR WEATHER PROOFING AND ISOLATION.**
	Cover all tape with Scotchkote™ Electrical Coating or equivalent.
AV-457-1-90 800 MHZ Lower Port	Clean antenna and foundation junctions to bright metal. Cut conductive gasket Mfg-AvDec, Part#BL171050-0, NSN 5999-01-492-5863 to antenna base size. Install conductive gasket between ship and antenna. Apply Thixoflex Black Mfg- AvDec, Part# TG3212-50, NSN 8030-01-661-4927 to seam of antenna and foundation, smooth with finger. Ensure all orifices around antenna base are sealed including fasteners. Paint base of antenna and thixoflex sealant with red paint. Also required Plunger Dispenser for thixoflex Mfg AvDec, Part# UG981108-01, NSN 5120-01-494-7678.

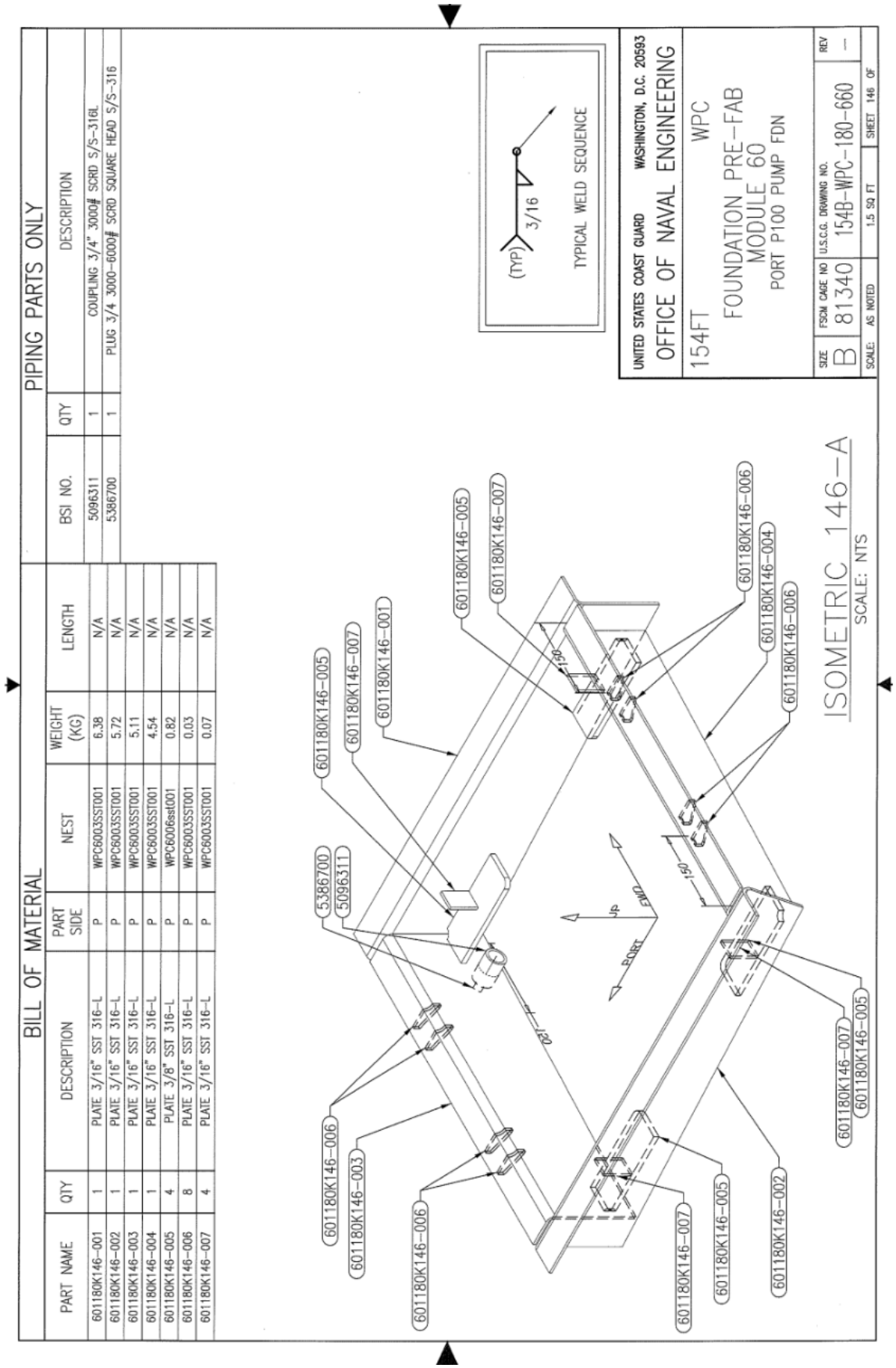
2.3 **Corrective/Repair and Alterative Tasks**. The Contractor must:

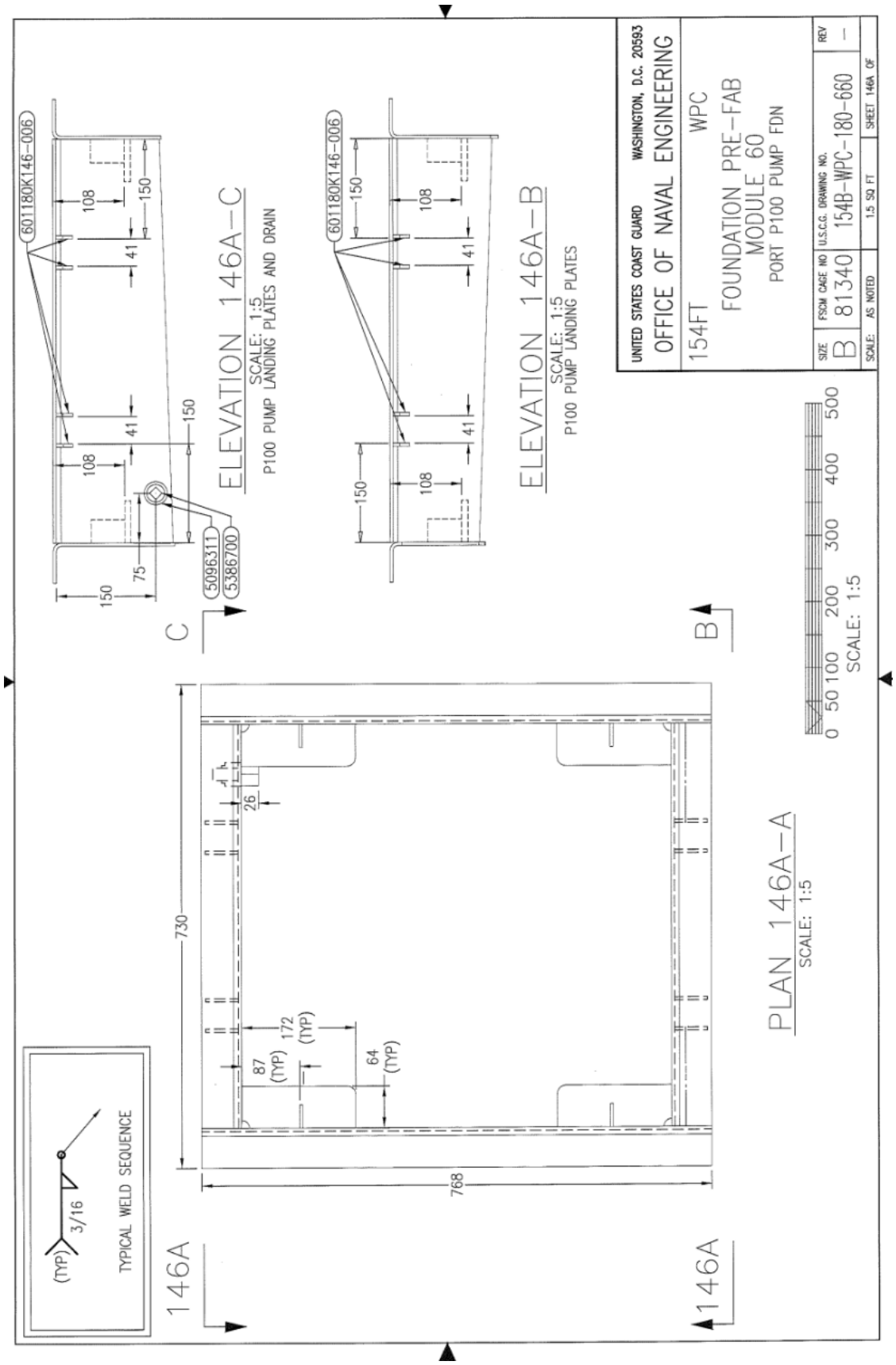
2.3.1 **Perform** repairs/alterations whenever the KO releases a Change Request authorizing new post-inspection repairs/alterations, or whenever pre-existing discrepancies/tasks/alterations are described below (price these tasks below into the pre-award quote).

CSMP # FOR INTERNAL USE ONLY	PRE-EXISTING DISCREPANCIES/TASKS
2026-008 (P-100 FDN MOD)	DISCREPANCY: Foundations corrode easily and are not installed in optimum positions. TASK(S): Remove (4ea) foundations. Relocate these foundations, and change the material to 316L stainless steel as described below in 2.3.1a. FOUNDATION MOD DESCRIPTION

2.3.1a FOUNDATION MOD DESCRIPTION -




BILL OF MATERIAL
PART NAME | QTY | DESCRIPTION | PART SIDE | NEST | WEIGHT (KG) | LENGTH
601180K146-001 | 1 | PLATE 3/16" SST 316-L | P | WPC6003SST001 | 6.38 | N/A
601180K146-002 | 1 | PLATE 3/16" SST 316-L | P | WPC6003SST001 | 5.72 | N/A
601180K146-003 | 1 | PLATE 3/16" SST 316-L | P | WPC6003SST001 | 5.11 | N/A
601180K146-004 | 1 | PLATE 3/16" SST 316-L | P | WPC6003SST001 | 4.54 | N/A
601180K146-005 | 4 | PLATE 3/8" SST 316-L | P | WPC6006sst001 | 0.82 | N/A
601180K146-006 | 8 | PLATE 3/16" SST 316-L | P | WPC6003SST001 | 0.03 | N/A
601180K146-007 | 4 | PLATE 3/16" SST 316-L | P | WPC6003SST001 | 0.07 | N/A
PIPING PARTS ONLY
BSI NO. | QTY | DESCRIPTION
5096311 | 1 | COUPLING 3/4" 3000# SCRD S/S-316L
5386700 | 1 | PLUG 3/4 3000-6000# SCRD SQUARE HEAD S/S-316
(TYP) 3/16
TYPICAL WELD SEQUENCE
UNITED STATES COAST GUARD WASHINGTON, D.C. 20593
OFFICE OF NAVAL ENGINEERING
154FT
WPC
FOUNDATION PRE-FAB
MODULE 60
PORT P100 PUMP FDN
SIZE B
FSCM CAGE NO 81340
U.S.C.G. DRAWING NO. 154B-WPC-180-660
REV -
SCALE: AS NOTED
1.5 SQ FT
SHEET 146 OF
ISOMETRIC 146-A
SCALE: NTS
5386700
5096311
601180K146-006
601180K146-003
601180K146-006
601180K146-005
601180K146-007
601180K146-001
601180K146-007
601180K146-005
601180K146-006
601180K146-004
601180K146-006
601180K146-007
601180K146-005
601180K146-005
601180K146-007
601180K146-002
UP
FWD
PORT
120
150
150

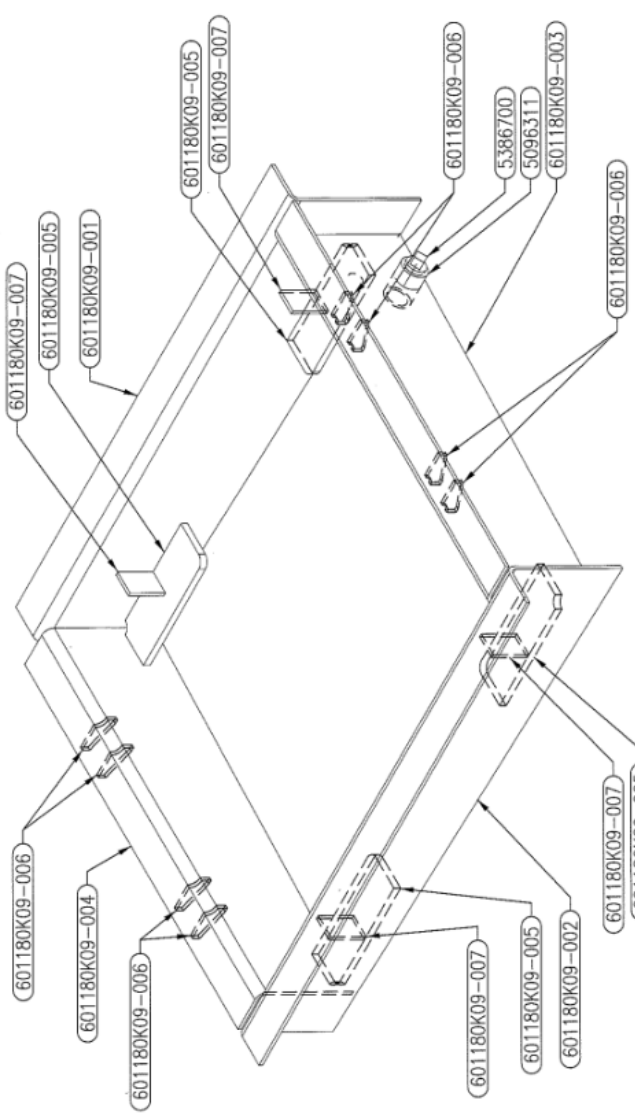

601180K146-006
108
150
41
75
5096311
5386700
ELEVATION 146A-C
SCALE: 1:5
P100 PUMP LANDING PLATES AND DRAIN
ELEVATION 146A-B
SCALE: 1:5
P100 PUMP LANDING PLATES
C
B
UNITED STATES COAST GUARD
WASHINGTON, D.C. 20593
OFFICE OF NAVAL ENGINEERING
154FT
WPC
FOUNDATION PRE-FAB
MODULE 60
PORT P100 PUMP FDN
SIZE
B
FSCM CAGE NO
81340
U.S.C.G. DRAWING NO.
154B-WPC-180-660
REV
SCALE: AS NOTED
1.5 SQ FT
SHEET 146A OF
0 50 100 200 300 400 500
SCALE: 1:5
730
768
26
87 (TYP)
172 (TYP)
64 (TYP)
PLAN 146A-A
SCALE: 1:5
146A
TYPICAL WELD SEQUENCE
3/16
(TYP)

BILL OF MATERIAL

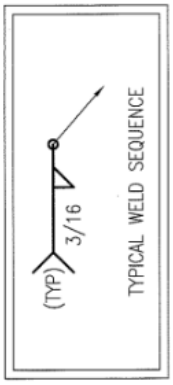
PART NAME	QTY	DESCRIPTION	PART SIDE	NEST	WEIGHT (KG)	LENGTH
601180K09-001	1	PLATE 3/16" SST 316-L	S	WPC6003SST001	6.16	N/A
601180K09-002	1	PLATE 3/16" SST 316-L	S	WPC6003SST001	5.87	N/A
601180K09-003	1	PLATE 3/16" SST 316-L	S	WPC6003SST001	5.14	N/A
601180K09-004	1	PLATE 3/16" SST 316-L	S	WPC6003SST001	4.56	N/A
601180K09-005	4	PLATE 3/8" SST 316-L	S	WPC6006sst001	0.82	N/A
601180K09-006	8	PLATE 3/16" SST 316-L	S	WPC6003SST001	0.03	N/A
601180K09-007	4	PLATE 3/16" SST 316-L	S	WPC6003SST001	0.07	N/A

PIPING PARTS ONLY

BSI NO.	QTY	DESCRIPTION
5096311	1	COUPLING 3/4" 3000# SCRD S/S-316L
5386700	1	PLUG 3/4 3000-6000# SCRD SQUARE HEAD S/S-316



ISOMETRIC 9-A
SCALE: NTS

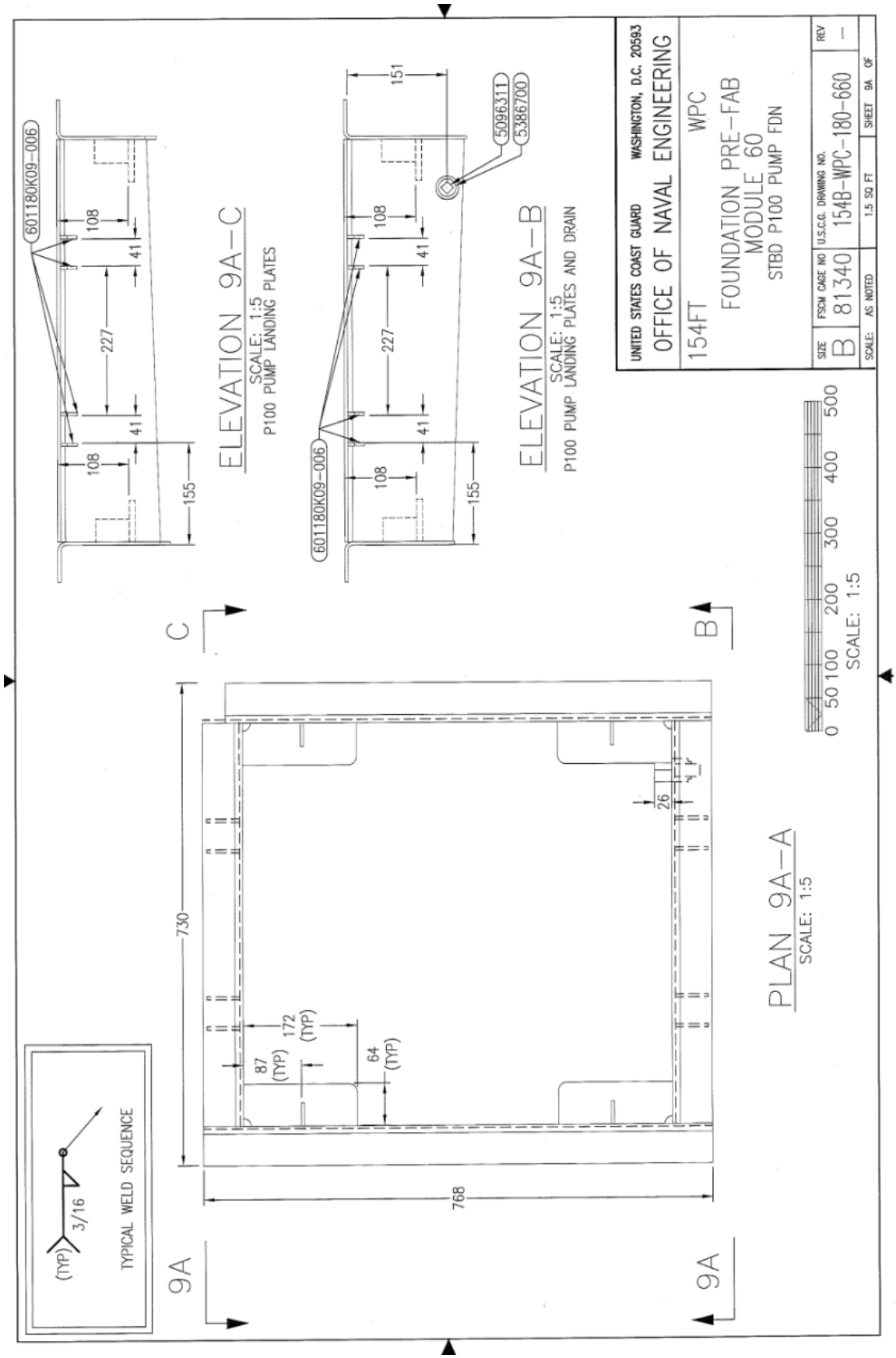


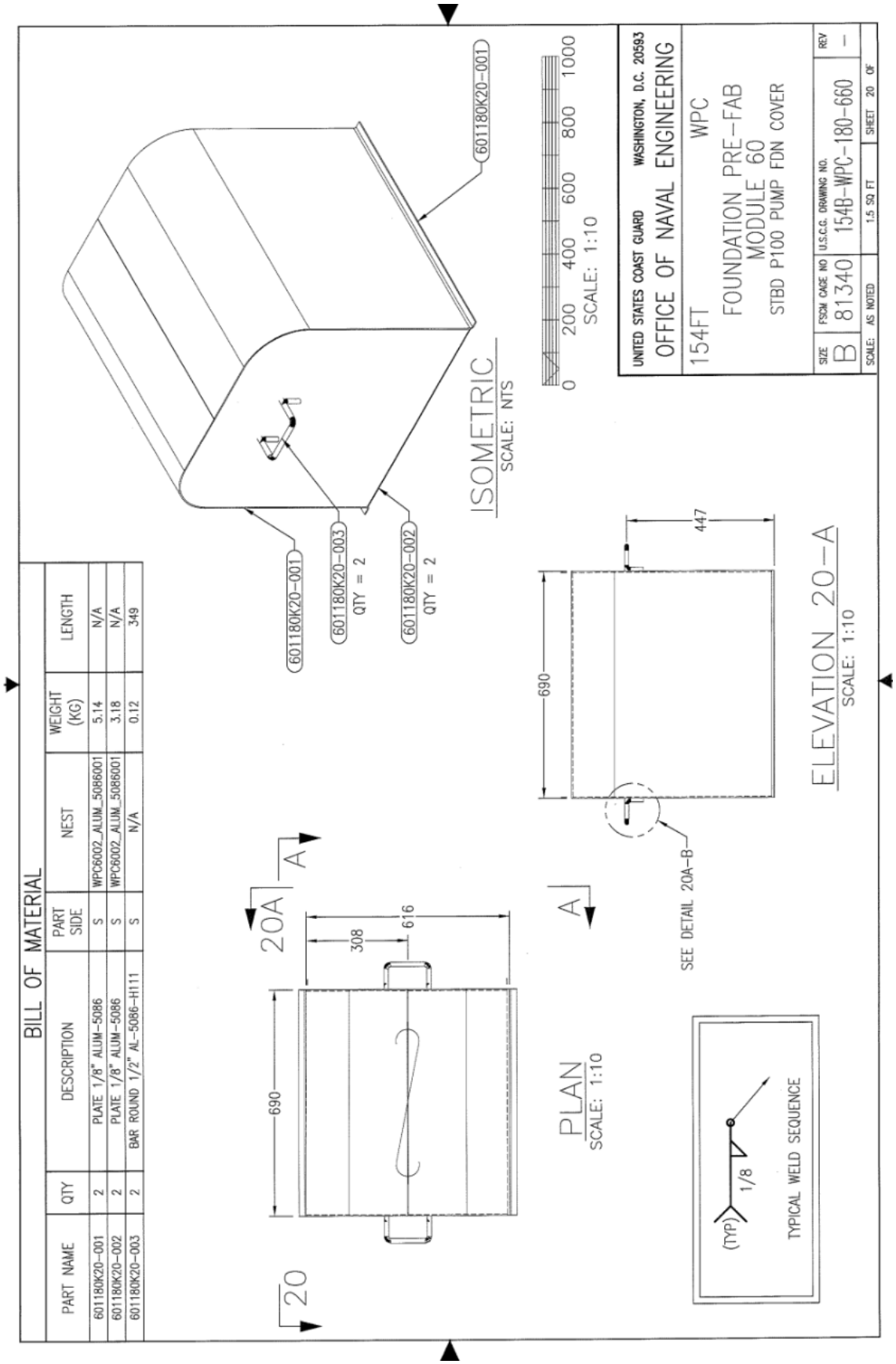
UNITED STATES COAST GUARD WASHINGTON, D.C. 20593
OFFICE OF NAVAL ENGINEERING

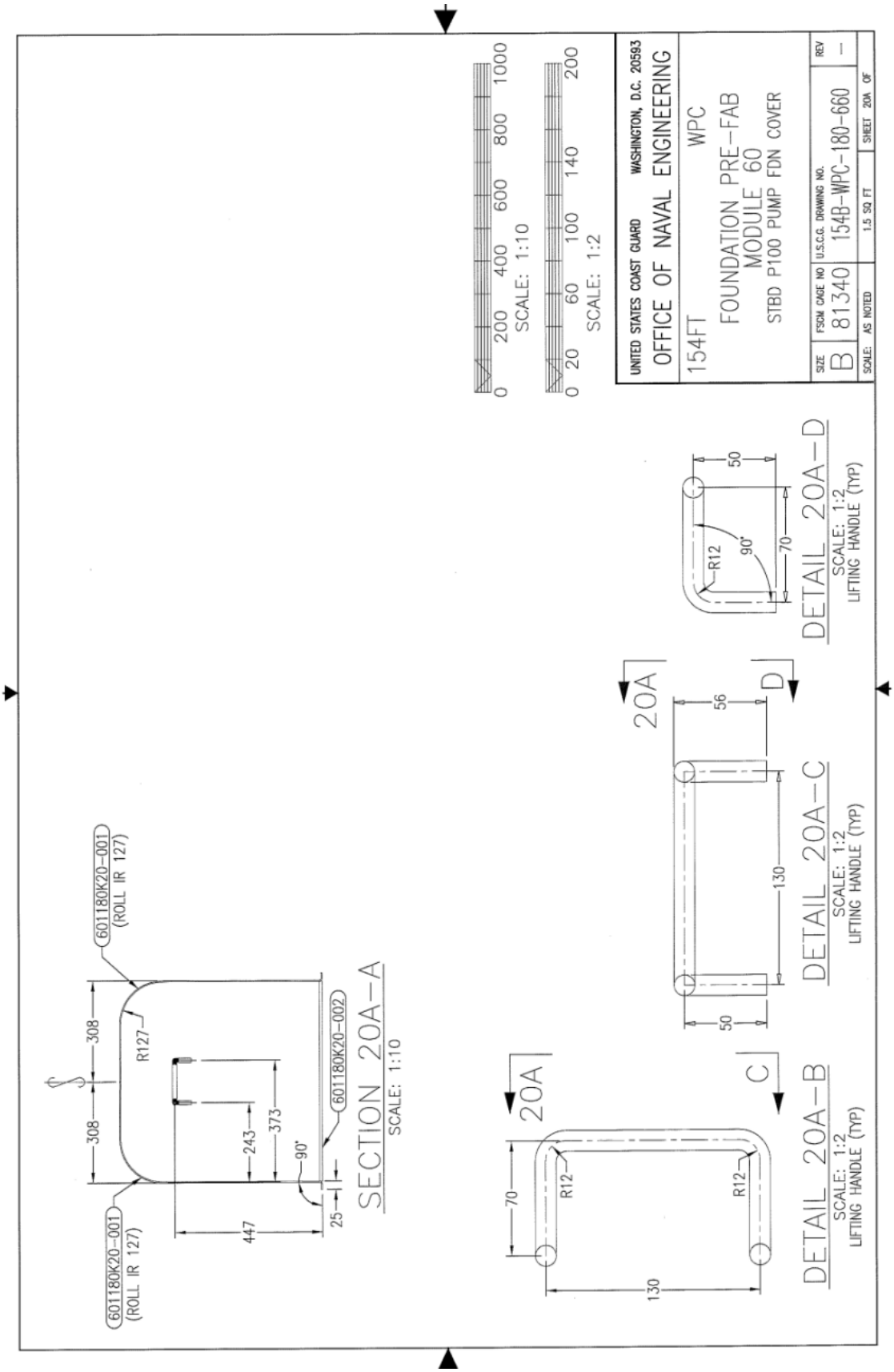
154FT WPC
FOUNDATION PRE-FAB
MODULE 60
STBD P100 PUMP FDN

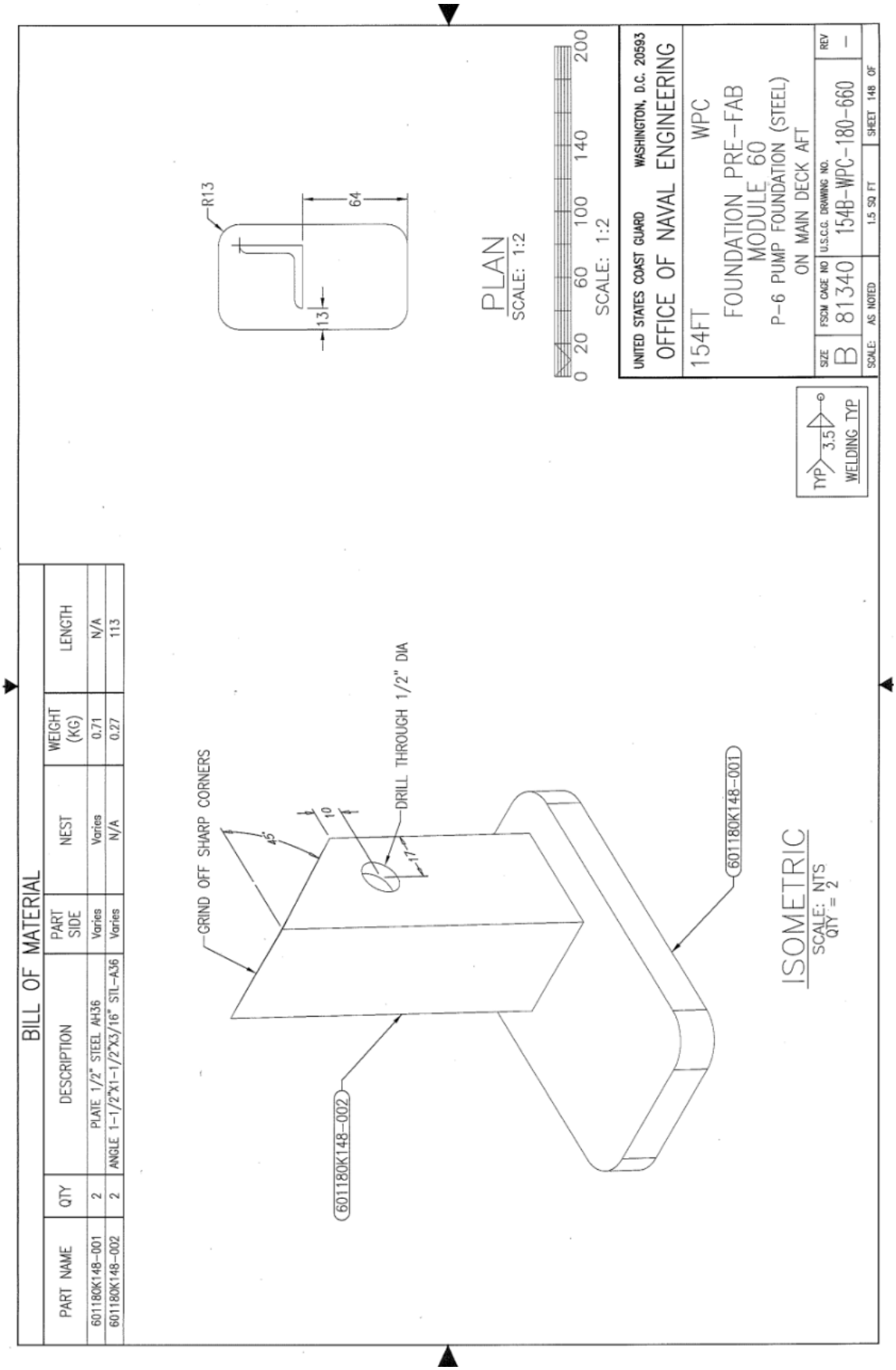
SIZE	FSCM CAGE NO	U.S.C.G. DRAWING NO.	REV
B	81340	154B-WPC-180-660	-

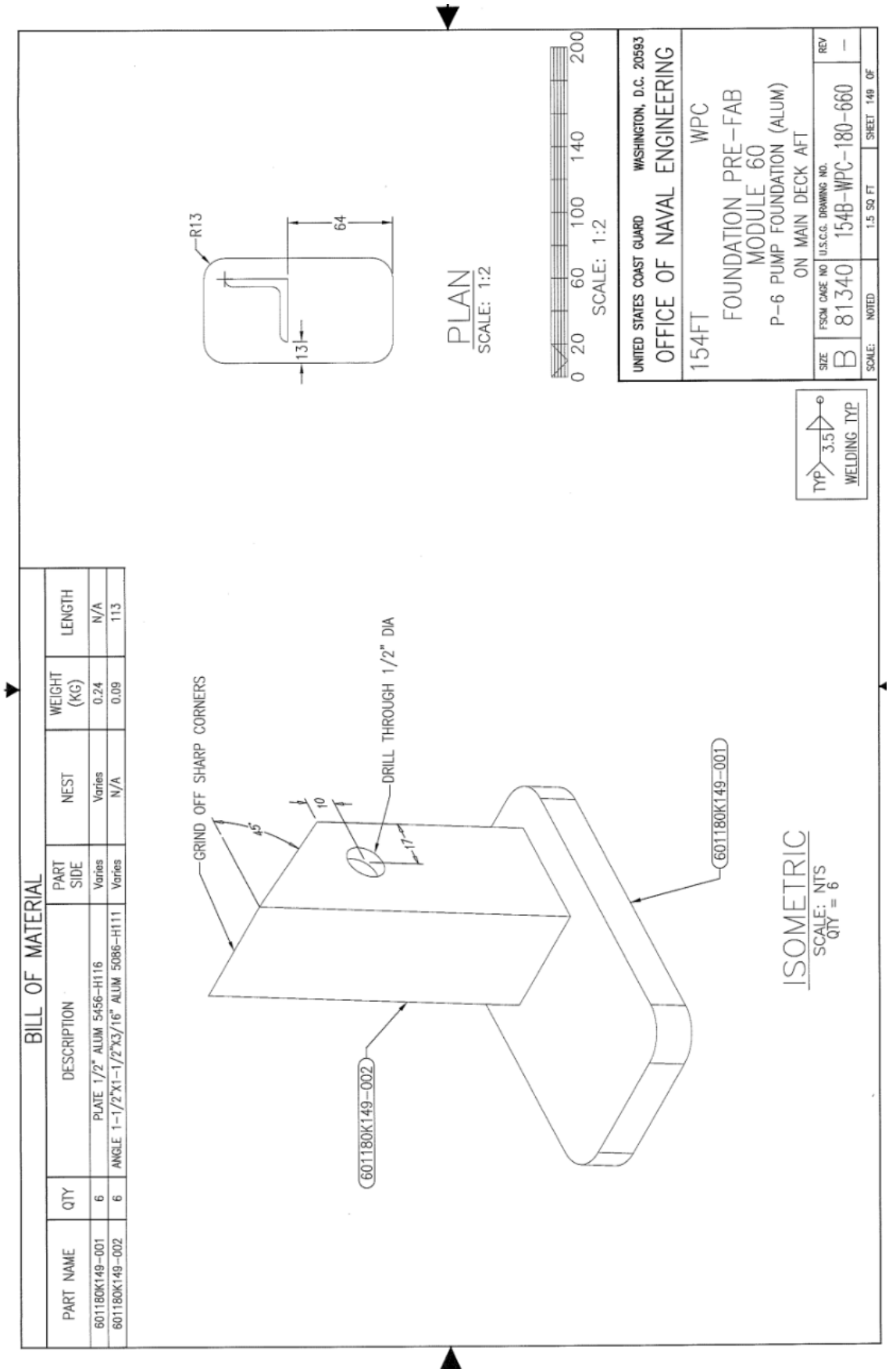
SCALE: AS NOTED 1.5 SQ FT SHEET 9 OF


601180K09-006
108
41
227
41
108
155
ELEVATION 9A-C
SCALE: 1:5
P100 PUMP LANDING PLATES
151
5096311
5386700
108
41
227
41
108
155
601180K09-006
ELEVATION 9A-B
SCALE: 1:5
P100 PUMP LANDING PLATES AND DRAIN
UNITED STATES COAST GUARD
WASHINGTON, D.C. 20593
OFFICE OF NAVAL ENGINEERING
154FT
WPC
FOUNDATION PRE-FAB
MODULE 60
STBD P100 PUMP FDN
SIZE
B
FSCM CAGE NO
81340
U.S.C.G. DRAWING NO.
154B-WPC-180-660
REV
-
SCALE: AS NOTED
1.5 SQ FT
SHEET 9A OF
0 50 100 200 300 400 500
SCALE: 1:5
C
B
730
768
172 (TYP)
87 (TYP)
64 (TYP)
26
PLAN 9A-A
SCALE: 1:5
(TYP)
3/16
TYPICAL WELD SEQUENCE
9A
9A


601180K20-001
601180K20-003
QTY = 2
601180K20-002
QTY = 2
ISOMETRIC
SCALE: NTS
0 200 400 600 800 1000
SCALE: 1:10
UNITED STATES COAST GUARD WASHINGTON, D.C. 20593
OFFICE OF NAVAL ENGINEERING
154FT
WPC
FOUNDATION PRE-FAB
MODULE 60
STBD P100 PUMP FDN COVER
SIZE B
FSCM CAGE NO 81340
U.S.C.G. DRAWING NO. 154B-WPC-180-660
REV -
SCALE: AS NOTED
1.5 SQ FT
SHEET 20 OF
BILL OF MATERIAL
PART NAME | QTY | DESCRIPTION | PART SIDE | NEST | WEIGHT (KG) | LENGTH
601180K20-001 | 2 | PLATE 1/8" ALUM-5086 | S | WPC6002_ALUM_5086001 | 5.14 | N/A
601180K20-002 | 2 | PLATE 1/8" ALUM-5086 | S | WPC6002_ALUM_5086001 | 3.18 | N/A
601180K20-003 | 2 | BAR ROUND 1/2" AL-5086-H111 | S | N/A | 0.12 | 349
20A
A
308
616
690
20
PLAN
SCALE: 1:10
A
447
690
SEE DETAIL 20A-B
ELEVATION 20-A
SCALE: 1:10
(TYP)
1/8
TYPICAL WELD SEQUENCE


UNITED STATES COAST GUARD WASHINGTON, D.C. 20593
OFFICE OF NAVAL ENGINEERING
154FT
WPC
FOUNDATION PRE-FAB
MODULE 60
STBD P100 PUMP FDN COVER
SIZE B
FSCM CAGE NO 81340
U.S.C.G. DRAWING NO. 154B-WPC-180-660
REV -
SCALE: AS NOTED
1.5 SQ FT
SHEET 20A OF
SCALE: 1:10
SCALE: 1:2
SECTION 20A-A
SCALE: 1:10
601180K20-001 (ROLL IR 127)
601180K20-002
DETAIL 20A-B
SCALE: 1:2
LIFTING HANDLE (TYP)
DETAIL 20A-C
SCALE: 1:2
LIFTING HANDLE (TYP)
DETAIL 20A-D
SCALE: 1:2
LIFTING HANDLE (TYP)


BILL OF MATERIAL
PART NAME | QTY | DESCRIPTION | PART SIDE | NEST | WEIGHT (KG) | LENGTH
601180K148-001 | 2 | PLATE 1/2" STEEL AH36 | Varies | Varies | 0.71 | N/A
601180K148-002 | 2 | ANGLE 1-1/2"X1-1/2"X3/16" STL-A36 | Varies | N/A | 0.27 | 113
GRIND OFF SHARP CORNERS
DRILL THROUGH 1/2" DIA
601180K148-002
601180K148-001
ISOMETRIC
SCALE: NTS
QTY = 2
R13
64
13
PLAN
SCALE: 1:2
0 20 60 100 140 200
SCALE: 1:2
TYP 3.5
WELDING TYP
UNITED STATES COAST GUARD WASHINGTON, D.C. 20593
OFFICE OF NAVAL ENGINEERING
154FT
WPC
FOUNDATION PRE-FAB
MODULE 60
P-6 PUMP FOUNDATION (STEEL)
ON MAIN DECK AFT
SIZE B
FSCM CAGE NO 81340
U.S.C.G. DRAWING NO. 154B-WPC-180-660
REV -
SCALE: AS NOTED
1.5 SQ FT
SHEET 148 OF


BILL OF MATERIAL
PART NAME | QTY | DESCRIPTION | PART SIDE | NEST | WEIGHT (KG) | LENGTH
601180K149-001 | 6 | PLATE 1/2" ALUM 5456-H116 | Varies | Varies | 0.24 | N/A
601180K149-002 | 6 | ANGLE 1-1/2"X1-1/2"X3/16" ALUM 5086-H111 | Varies | N/A | 0.09 | 113
GRIND OFF SHARP CORNERS
45°
10
DRILL THROUGH 1/2" DIA
17
601180K149-002
601180K149-001
ISOMETRIC
SCALE: NTS
QTY = 6
R13
13
64
PLAN
SCALE: 1:2
0 20 60 100 140 200
SCALE: 1:2
TYP
3.5
WELDING TYP
UNITED STATES COAST GUARD
WASHINGTON, D.C. 20593
OFFICE OF NAVAL ENGINEERING
154FT
WPC
FOUNDATION PRE-FAB
MODULE 60
P-6 PUMP FOUNDATION (ALUM)
ON MAIN DECK AFT
SIZE
B
FSCM CAGE NO
81340
U.S.C.G. DRAWING NO.
154B-WPC-180-660
REV
-
SCALE: NOTED
1.5 SQ FT
SHEET 149 OF

P100 and P6 Foundation Modification SOW

Purpose – To reconfigure the location and change the material from steel to stainless steel (P100 only) of the P100 and P6 foundations.

Material – Foundations, Stbd P100 Cover, and Port and Stbd Clips/Latches provided by Bollinger .

Applicable Crafts – Fitter/Welders, Electricians, Carpenters, Painters

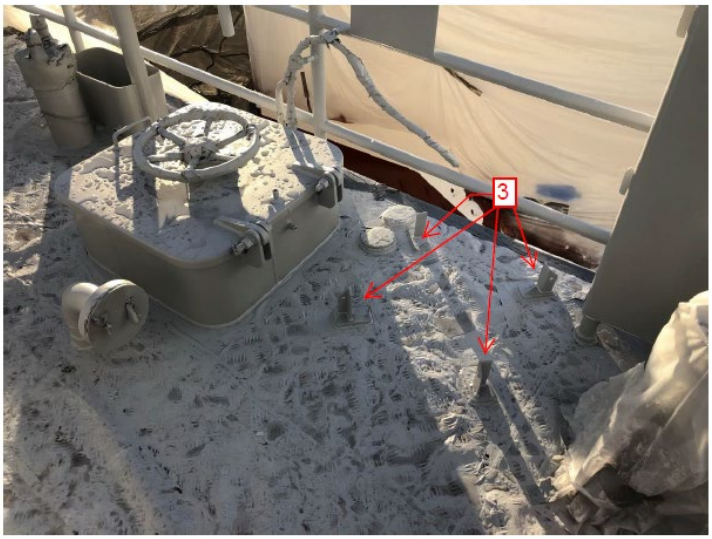
ECN – None

Drawings – 154B-WPC-100-660, 154-WPC-100-260-7

Current Configuration

(1) There is a P100 pump foundation to the Port side of Frame 8 forward of the house on the main deck and (2) there is a P100 pump foundation to the Port side just forward of the Port Steering Room hatch on the main deck. (3) There are P6 foundations (3 aluminum and 1 steel) to the Stbd side just forward of the Stbd Steering Room hatch on the main deck. (4) There is a P100 pump part storage locker to the Stbd side of Frame 8 forward of the house on the main deck. (See pictures below). Note Numbers in parenthesis are used on the pictures.

2


3

Modified Configuration

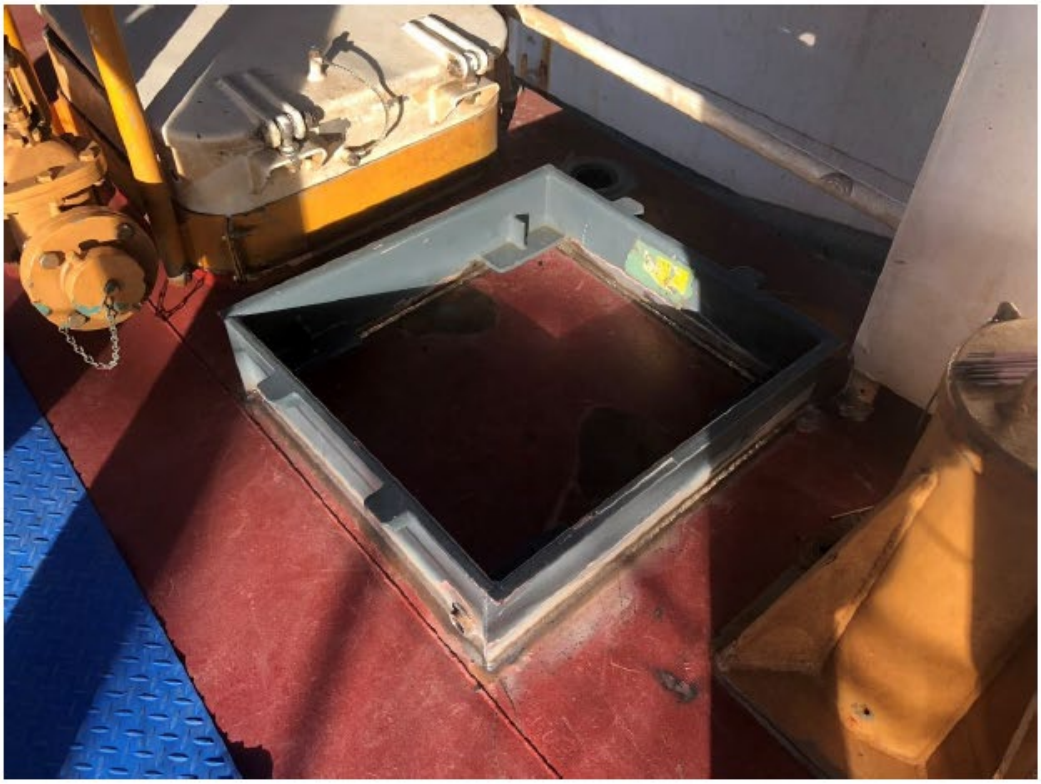
1. Remove (1) and (4) foundations and grind the deck smooth (See picture below).

2. Remove wire way in way of insulation removal in Stbd Side Generator Room (See picture below)

3. Remove the insulation from the Port and Stbd Steering Rooms forward of the hatch where the new P100 foundations will be installed and remove the insulation in the Stbd side Generator room where the new P6 foundation will be installed. Save all insulation for reinstallation. (See picture of P100 and P6 below)

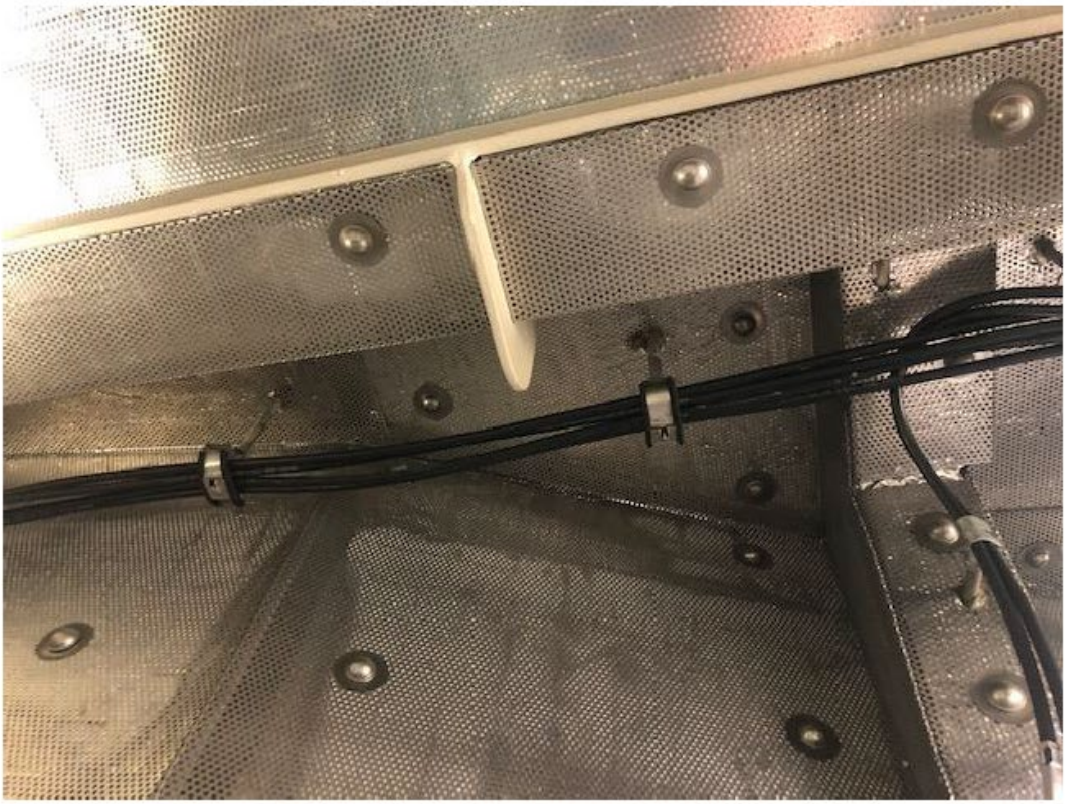
4. Remove the Port side P100 Foundation and the Stbd side P6 foundations and grind smooth (See pictures below)

5. Install the Port and Stbd new P100 foundations and P6 Foundations. (See pictures below). ***Note***: when fitting up the Port side P100 foundation the P100 pump will be required to make sure the hose connections can be made up correctly.



6. Paint Disturbed interior areas. (See pictures below)

7. Reinstall removed insulation and wire way removed in Stbd side Generator Room. (See pictures below)



8. Paint Port and Stbd P100 and Stbd P6 Foundations (Exterior). Note this should be done in conjunction with Paint Work Item of the Sustainment Efforts (See picture below).

9. Install Port and Stbd P100 Cover hold down clips and latches (4 per foundation/8 total) (See picture below)

2.4 **Final Inspection/Testing Tasks**. The Contractor must:

2.4.1 **Inspect-Op Test (Final)** all disturbed surfaces and equipment and **Submit** a final CFR (include all COATINGS QA FORMS (631b) if applicable).

2.4.1a If mast electrical/electronic equipment was removed as an interference then the following must be performed. After completion of work, and in the presence of the COR, **Inspect** the entire mast, correcting all discrepancies. Witness an operational test performed by Coast Guard personnel (e.g. HM&E and C5ISC personnel, etc.) of all mast electrical and electronic equipment, to prove satisfactory operating condition.

WORK ITEM 14: Underwater Body

1. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 154 WPC 165-201, (series), Transducer Details

Coast Guard Drawing 154 WPC 601-302, (series), General Arrangement

Coast Guard Drawing 154 WPC 602-305, (series), Visual Identification and Draft Marks Plan

COAST GUARD PUBLICATIONS

Coast Guard Maintenance Procedure Card (MPC) F14010.D, Probe, INSP/CLN

OTHER REFERENCES

None

2. REQUIREMENTS

INTENT: This work item either renews or repairs the underwater body coating system. In addition, work is also performed various interferences associated with coatings repair/renewal (e.g. depth sounder & speed log sensors, etc.)

NOTE

U/W body surfaces exclude areas covered by docking blocks unless the vessel is fleeted for the express purpose of preserving beneath those blocked areas.

NEW DEPTH SOUNDER

A Change Request may be released to install the new type of depth sounder transducer. Installation of the new depth sounder will involve modification of the system, required modifications will be detailed in the Change Request. Otherwise remove and reinstall the existing as an interference as described below.

2.1 **Government-furnished property**.

MTI	TY	ITEM DESCRIPTION	NSN/PN	QTY
N	**	Depth Sounder Transducer	NIIN: 015867921	1 ea.
Y	**	Speed Log Transducer	NIIN: 998393629	1 ea.
N		Parts Kit, Gate Valve (Doppler Speed Log)	NIIN: 993745925	1 ea.
N		Zinc Anodes	NIIN: 016476179	4 ea.

*	Government-loaned property, which must 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 C5ISC Service Center.

2.2 **Preventive/Recurring Tasks**. The Contractor must:

2.2.1 **Inspect-Op Test (Initial)** all surfaces/components that may be affected by tasks specified herein (e.g., DIELECTRIC SHIELD FAIRINGs, etc.). **Submit** a **CIR** for all initial inspections/tests describing discrepancies and recommended repairs.

2.2.2 **Perform** the following coatings application/repair work. If *Renew* is designated **Perform** COATINGS QUALITY CONTROL CHECKPOINTS (631b) and submit completed COATINGS QA FORMS (631b) with the final CFR below.

Repair, and **Overcoat (631a)**	**Renew (631a, VCS)**	The coating system on the designated surface(s)	Additional Tasks/Requirements
	X	All "Underwater Body" exterior coatings, and all similarly coated surfaces attached directly to the underwater body (e.g., sea chests, DIELECTRIC SHIELD FAIRINGs, fins, draft marks, etc.).	

COATING SYSTEM (from VCS)	**COAT**	**COLOR**
CA5 (2AC 3AF+2BT) or NCA5 (2AC 3AF+2BT)	AC1	OSHA Safety Red (11105)
	AC2	Interior Haze Gray (26270)
	AF1	OSHA Safety Red (11105)
	AF2	OSHA Black (17038)
	AF3	OSHA Safety Red (11105)
	Boot-top 1	OSHA Black (17038)
	Boot-top 2	OSHA Black (17038)

2.2.2a The depth sounder and speed log transducers must be removed as an interference. Pending their condition, new transducers may be provided as Government-furnished property for reinstallation, otherwise reinstall existing.

2.2.2b The DIELECTRIC SHIELD FAIRING must not be removed as an interference (e.g., for 100% near white blasting, etc.). It must only be disturbed if it is found to be failing, post inspection.

2.2.3 **Overhaul** the Speed Log Gate Valve using GFP. **Refer** to MPC F14010.D for proper speed probe extraction and insertion. After the cutter is refloated, verify the valve seals adequately by retracting the probe and shutting the valve. The leakage rate of the overhauled valve should be low enough to allow swapping of the probe while the cutter is waterborne.

2.2.4 **Inspect** all RHIB Notch Skid Pads, fastener assemblies, and hull plate beneath (e.g., each skid pad, stud, and fastener assembly, the surrounding exposed structure, etc.). Remove them from the vessel to gain access to the hull plate beneath.

2.2.5 **Renew** all Sea Chest Zinc Anodes using GFP.

2.3 **Corrective/Repair and Alterative Tasks**. The Contractor must:

2.3.1 **Perform** repairs/alterations whenever the KO releases a Change Request authorizing new post-inspection repairs/alterations, or whenever pre-existing discrepancies/tasks/alterations are described below (price these tasks below into the pre-award quote).

CSMP # FOR INTERNAL USE ONLY	**PRE-EXISTING DISCREPANCIES/TASKS**
	DISCREPANCY: N/A TASK(S): N/A

2.4 **Final Inspection/Testing Tasks**. The Contractor must:

2.4.1 **Inspect-Op Test (Final)** all surfaces/components affected by the tasks described herein and **Submit** a final CFR (include all COATINGS QA FORMS (631b) if applicable). DOCK AND SEA TRIALS (868a) are required.

WORK ITEM 15: ICCP/Antifouling System

1. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 154 WPC 633-301, (series), Cathodic Protection System

COAST GUARD PUBLICATIONS

Coast Guard Technical Publication (TP) 8001B, SWBS 633, (series), Cathodic Protection System – Model CA44227

OTHER REFERENCES

None

2. REQUIREMENTS

INTENT: Inspect the entire Cathelco Limited ICCP/AF system for discrepancies. Renew all Anti-Fouling Anodes in the anti-fouling part of the system.

Notes:

SUGGESTED METHODS FOR PERFORMING THE MICRO-OHMMETER MEASUREMENTS SPECIFIED HEREIN - Use a spool of twisted-pair insulated wire with appropriate alligator clips or plugs. Use one lead to monitor the voltage drop from the remote location and the other connects to the current source return. Make the test wiring of sufficient length to reach from the controller (below decks) to the anode under test (hull exterior). The specific gauge of the test wiring is not critical as long as the required test current can be injected, but generally is no thinner than No. 20 AWG and rarely is heavier than No. 16 AWG.

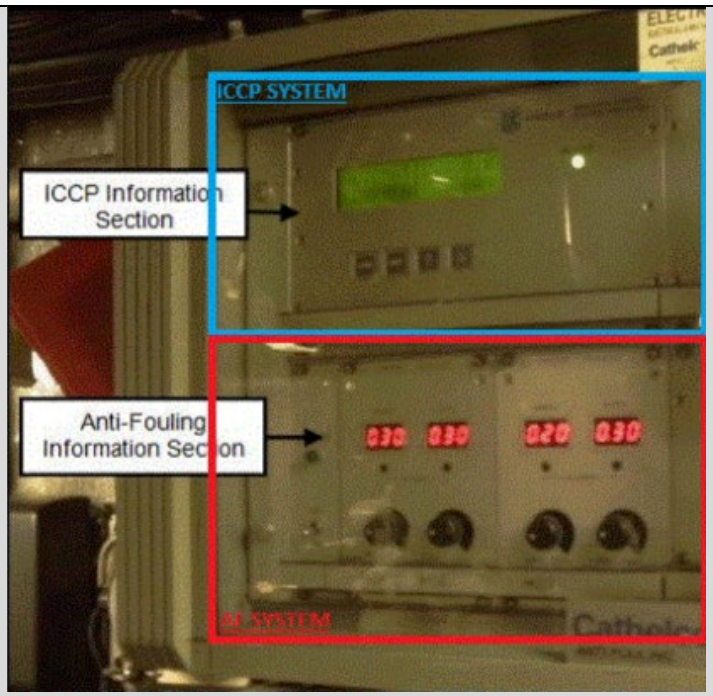
If the dielectric shield has been renewed or repaired DO NOT energize the impressed current cathodic protection system until the dielectric shield has cured for at least 7 days.

QUALIFICATIONS - If requested by the KO, submit evidence that one or more on-site technicians has successfully overhauled, renewed, or repaired the installed Cathelco Limited ICCP/AF system, or a similar model of ICCP/AF system manufactured by the same company, and further describe all knowledge, experience, and training contributing to being qualified to maintain, repair, and test the system.

ENERGIZING THE SYSTEM AFTER WORK IS COMPLETE - Once the vessel has come out of Dry-Dock and the hull has had a new paint system applied or repaired, the ICCP System must be switched to STAND-BY for a period of 4 weeks.

Do not secure the ICCP at the breaker, as this would compromise the operation of the AF system. Ensure the ICCP is energized as shown by the indication light on the right of the control cabinet (see figure below).

Placing the ICCP system in STAND-BY mode allows the AF system to continue functioning as intended. This will prevent impressing any current to the ship's hull (while the paint system cures), while still protecting the auxiliary seawater (ASW) system once waterborne.



2.1 **Government-furnished property**.

MTI	TY	ITEM DESCRIPTION	NSN/PN	QTY
N	**	Anode, Corrosion, Elliptical	NIIN: 994002561	2 ea.
N	**	Silver/Silver Chloride Reference Electrode Cell	NIIN: 995535405	2 ea.
N		Copper Anode, Anti-Fouling	NIIN: 991335325	3 ea.
*	Government-loaned property, which must 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 C5ISC Service Center.			

2.2 **Preventive/Recurring Tasks**. The Contractor must:

2.2.1 **Inspect-Op Test (Initial)** the Cathelco Limited ICCP/AF system. **Submit** a **CIR** for all initial inspections/tests describing discrepancies and recommended repairs.

	ID	FRAME	SIDE	COMPARTMENT
HULL ANODES	4 (13)	34½	Stbd	Engine Room (3-27-0-E)
	3 (12)	34½	Port	Engine Room (3-27-0-E)
REFERENCE CELLS	1 (21)	9½	Stbd	Forward Auxiliary Space (3-3-0-E)
	2 (20)	9½	Port	Forward Auxiliary Space (3-3-0-E)
ANTI-FOULING ANODES	1	34	Stbd	Engine Room (3-27-0-E)
	2	34	Port	Engine Room (3-27-0-E)
	3	10	Fwd	Forward Auxiliary Space (3-3-0-E)

2.2.1a Prior to drydocking the vessel witness Coast Guard personnel perform an initial operational test of the ICCP system to identify all operational discrepancies. Then after de-energizing the anodes for 2 to 3

hours, and in accordance with TP 8001 Section 5, verify no opens or shorts in both reference electrodes and anodes using a high impedance multi-meter. Include a description of all discrepancies noted, with recommended repairs, in critical inspection report described below.

2.2.2 **Service and Inspect** the Cathelco Limited ICCP/AF system after the vessel is in drydock.

2.2.2.1 **Clean** and **Inspect** ICCP anodes, reference electrodes, and dielectric shield (VCS UWB13-(Dielectric Shield)). Removing all marine growth and salt accumulation from all anode and reference electrodes external surfaces. **Inspect** all surfaces for discrepancies (e.g. pitting, dissolution, voids, corrosion, other damage, etc.). After protecting all anodes and electrodes, and in conjunction with the "Underwater Body" work item, sand or lightly sandblast the surrounding dielectric shield to remove all marine growth and loose paint. **Inspect** all dielectric shield surfaces for all discrepancies (e.g. damage, improper fairing shape, etc.).

2.2.2.2 **Perform** various inspections, and conduction and insulation resistance tests – Test and verify proper conduction between the hull and all ICCP system ground terminals. Disconnect cables from all various components (e.g. anodes, reference electrodes, junction boxes, power units, anti-fouling system anodes, etc.) and, using a 500VDC megger, test to verify proper wire insulation resistance between each individual cable conductor and the hull. **Inspect** all associated components for excessive wear, damage, and corrosion. **Inspect** all accessible anode and reference electrode gland housings for leaks, condensation, corrosion, and all other discrepancies. Remove connection box or cofferdam covers as needed to gain access.

2.2.2.3 **Renew** all Anti-Fouling Anodes – Disconnect all sea chest mounted anti-fouling anodes, thoroughly **Clean** the sleeve cavities, and install the new anodes. **Renew** O-rings and gland grommets.

2.2.2.4 **Service and Inspect** the Propeller Shaft Earthing System - **Clean** the contact surface on each propeller shaft and verify that the band clamps are tight. **Clean** and **Inspect** the rigging, brushes, and shunts. Remove the brushes from the brush holders and clean out dirt and other foreign debris. In the inspection report note remaining brush length. Inspect brush shunt connections for tightness and corrosion. Apply conductive grease to prevent corrosion and torque all shunt fasteners. Verify proper electrical continuity between the shaft, brushes, and grounding strap.

2.2.2.4a Brushes worn past 75 % of their original length must be renewed.

2.2.2.5 **Service and Inspect** the Rudder Stock and Fin Stabilizer bonding straps - **Inspect** the bonding strap between each rudder stock/fin stabilizer and the ship's structure for corrosion and continuity. Verify straps are at least No. 8 AWG flexible copper cable and are brazed to cable lugs on the rudder stock and fixed ship's structure. Apply conductive grease to all connections to prevent corrosion and torque all fasteners.

2.2.2.6 Restore System – Pending correction of all discrepancies, restore all connections. Reseal all anode and reference electrode cables in bilge junction boxes. Tighten all loose packing gland nuts.

2.3 **<u>Corrective/Repair and Alterative Tasks</u>**. The Contractor must:

2.3.1 **Perform** repairs/alterations whenever the KO releases a Change Request authorizing new post-inspection repairs/alterations, or whenever pre-existing discrepancies/tasks/alterations are described below (price these tasks below into the pre-award quote).

2.3.1a Repeat all insulation resistance and conduction inspections/tests specified above whenever affected components are renewed/repaired.

CSMP # FOR INTERNAL USE ONLY	PRE-EXISTING DISCREPANCIES/TASKS
	DISCREPANCY: N/A. TASK(S): N/A.

2.4 **Final Inspection/Testing Tasks**. The Contractor must:

2.4.1 **Groom** and **Inspect/Op Test (Final)** all affected surfaces/equipment/etc. and then **Submit** a final CFR attesting to satisfactory completion of the work item.

2.4.1a After refloating, verify no hull leaks from the ICCP system hull penetrations at anodes and reference cell glands. Clean all cofferdam cover gaskets and mating sealing surfaces; and reinstall covers. After completion of all work, thoroughly test the ICCP system in the presence of the Coast Guard Inspector, demonstrating fully satisfactory operating condition. DOCK AND SEA TRIALS (868a) are required.

WORK ITEM 16: Drydocking

1. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 154 WPC 079-900, (series), Stability and Loading Data Booklet

Coast Guard Drawing 154 WPC 079-902, (series), Curves of Form Hydrostatic Analysis

Coast Guard Drawing 154 WPC 997-002, (series), Alternate Docking Plan Mobile Lift Option

Coast Guard Drawing 154 WPC 997-004, (series), Steel Block Towers for Alternate Docking Plan

Coast Guard Drawing 154 WPC 997-302, (series), Docking Plan (Supersedes DWGS 154-WPC-997-1, 997-301)

Coast Guard Drawing 154 WPC 997-303, (series), Alternate Docking Plan 500 Ton Mobile Boat Lift

Coast Guard Drawing 154 WPC 997-304, (series), Alternate Docking Plan 820 MT Mobile Boat Lift

COAST GUARD PUBLICATIONS

Coast Guard Technical Publication (TP) 8010B, SWBS 565, (series), Fin Stabilizer System – Model QC-1500 with MPU20 Hydraulic System

OTHER REFERENCES

None

2. REQUIREMENTS

INTENT: Specifies contract-administrative and technical requirements for dry docking a vessel.

STRICT ADHERENCE TO DOCKING/LIFTING PLANS_- Strict adherence to the authorized Coast Guard docking and lifting plans is a vital requirement of this contract. Unapproved deviations from the approved Coast Guard docking plans are prohibited and will prevent contract award.

WHICH BLOCKING DWG APPLIES?

BLOCK BUILDS USING "SHIPYARD OWNED", TRADITIONAL-TYPE, FABRICATED BLOCKS - 154 WPC 997-302. This is the "legacy" plan provided to the Coast Guard at vessel acquisition.

PREFERRED PLAN over 997-302 above, INCLUDES MOBILE BOAT HOIST STRAP LOCATIONS - 154 WPC 997-002. Pending if 997-302 was used last DD, the vessel may need to be fleeted to accomplish proper coatings application if this dwg is used.

WHEN USING PRE_FABRICATED "STEEL TOWER" BLOCKS - 154 WPC 997-004. Provides details for the steel towers. Can be used for both docking positions 1 and 2 while only changing the soft cap sizes. Docking plan 997-004 is to be used in conjunction with 997-002 for mobile hoists and other applicable details where noted.

154 WPC 997-303 and 154 WPC 997-304 provide strapping specifics for different type boat lifts, may not be published yet,

TWO BLOCKING POSITIONS - The USCG has established two blocking positions that facilitate access to all of the U/W body surfaces of the 154 WPC vessel-class, allowing periodic comprehensive inspection and/or 100% preservation.

NOTES

RESUBMITTAL OF PREVIOUSLY APPROVED "PRE-AWARD" CALCULATIONS - Pre-award calculations

are used to determine contractor capability. In lieu of recreating. Contractors may resubmit pre-award calculations from a prior contract provided they were accepted as satisfactory will meet the requirements of this contract.

"NORMAL FORCE RQMTS" MAY BE WAIVED FOR "1 PIECE" COMBINATION SIDE/KEEL BLOCKS - The normal force requirements are waived for block pairs adjacent to the keel (i.e., blocks 1P-1S, 3P-3S, etc.), if constructed such that they form a single block. The block bases, at a minimum, must be as wide as the span between the outboard edges of the soft caps for each keel-adjacent block. All of the layers of the block, including the soft cap, must be secured to prevent slippage when the caps take load. Sketches of each block build intending to have the normal force requirement waived must be submitted to the KO for approval with the docking calculations.

REQ'D BLOCKING MODS FOR PROPER COATINGS APPLICATION - Temporary block removal may be required to preserve areas that were blocked previously and will again be blocked under this work item (i.e., former blocking position 1 under Coast Guard Drawing 154 WPC 997-302 will have unpreserved block areas under Coast Guard Drawing 154 WPC 997-002 or -004, position 2). A temporary blocking plan(s) must be submitted to remove any block or portion(s) thereof for each occurrence.

NECESSARY BLOCK HEIGHT FOR SHAFT/PROP/FIN/RUDDER REMOVAL - If running gear, fins, or rudders must be removed proper block height must be established. Additional support structure may be required in conjunction with the chosen docking plan to attain required height. Provide details of additional required structure in the pre-award and docking calculation submittals.

DATA/PROPERTIES FOR PREAWARD CALCULATIONS

Travel Lift/Mobile Boat Lift

When using a mobile boat lift, the cutter must be lifted in the minimum operating condition (or lighter) and with empty fuel tanks.

Displacement – Min Ops (LT): 312.25

VCG (FT ABL): 10.48

LCG (FT aft of FR 0): 86.90

Length Overall (FT): 153.6

Length Between Perpendiculars (FT): 145.6

The forward reference point is 2.10 ft aft of Frame 0.

All other docking methods (graving, floating, synchro lift, etc.):

Displacement – Full Load (LT): 343.24

VCG (FT ABL): 10.14

LCG (FT aft of FR0): 86.17

Length Overall (FT): 153.6

Length Between Perpendiculars (FT): 145.6

2.1 **Government-furnished property**. None.

2.2 **Preventive/Recurring Tasks**. The Contractor must:

2.2.1 **Submit** DOCKING CALCULATIONS (863c) at least 3 days before dry docking the vessel.

2.2.2 **Attend** the PRE-DOCKING CONFERENCE (863e) at least 24 hours before dry docking the vessel. **Submit** DRY DOCKING PROCEDURE DOCUMENTATION (863e) at the conference.

2.2.3 **Provide** DRY DOCKING SERVICES (863e); the vessel must be dry docked within 72 hours of arrival at the Contractors facility. Use the DOCKING POSITION designated below. **Submit** a CFR whenever a significant change to vessel weight and moment occurs (e.g., relocating or removal of liquid loads and/or dead loads (dunnage), etc.) while the vessel is in dry dock.

DOCKING POSITION	
1	
2	X

2.2.3.1 If no underwater body paint work is included in the SOW then **Clean, Inspect** all underwater body hull surfaces (863a); this task must be completed within 24 hours of dry docking the vessel.

2.2.3.2 [X] **N/A** [ ] **Provide** VESSEL FLEETING SERVICES (863e).

2.2.3.3 **Notify** the COR and the vessel crew of the schedule for undocking and the date and time of the UNDOCKING CONFERENCE (863e) at least 4 business days prior to undocking the vessel.

2.2.3.4 **Submit** UNDOCKING CALCULATIONS (863c) at least 3 days before undocking the vessel.

2.2.3.5 **Attend** the UNDOCKING CONFERENCE (863e) at least 24 hours before undocking the vessel

2.2.3.6 **Submit** the SATISFACTORY UNDOCKING CONDITIONS REPORT (863e) 12 hours before undocking the vessel.

2.2.3.7 **Submit** DOCUMENTATION OF DRY DOCKING SIGNIFICANT EVENTS (863e) no later than 48 hours after undocking the vessel.

2.3 **Corrective/Repair and Alterative Tasks**. The Contractor must:

2.3.1 **Perform** repairs/alterations whenever the KO releases a Change Request authorizing new post-inspection repairs/alterations, or whenever pre-existing discrepancies/tasks/alterations are described below (price these tasks below into the pre-award quote).

CSMP # FOR INTERNAL USE ONLY	PRE-EXISTING DISCREPANCIES/TASKS
	DISCREPANCY: N/A TASK(S): N/A

2.4 **Final Inspection/Testing Tasks**. The Contractor must:

2.4.1 **Inspect/Op Test (Final)** all affected surfaces/equipment/etc. and then **Submit** a final CFR attesting to satisfactory completion of the work item.

WORK ITEM 17: Temporary Services

1. REFERENCES

COAST GUARD DRAWINGS

None

COAST GUARD PUBLICATIONS

None

OTHER REFERENCES

None

2. REQUIREMENTS

INTENT: Provide various supplies/services to the vessel crew and Coast Guard contract-admin personnel during the performance period to support their various needs (e.g., incidental to maintenance they may be performing, office space for PE/COR, duty section berthing, etc.).

Notes:

"INDIRECT" BILLING OF CREW HOTEL SERVICES - The "2.2 Temporary Ship Systems" section below describes the hotel services required to enable vessel personnel to live and/or work onboard (i.e. use the systems installed on the vessel) during the contract performance period while at the contractor's facility. Per the solicitation language, these services (power, temp AC hook-ups, etc.) are not directly billable (overhead tasks) when at the contractor's facility and should be incorporated into the quoted labor rate, and costs spread across all items/CLINs in proportion to direct labor hours. Pricing for "Temporary Ship Systems" should be distributed through all contract work items in proportion to labor costs (included in overhead part of composite quoted composite labor rate). Vessel Habitability Requirements are detailed in the *General Requirements (This Contract)* above.

"DIRECT" BILLING OF PARTICULAR REQUESTED ITEMS - The "Assist Ship's Force" section below describes other items required by Coast Guard to 1) administrate this contract, or 2) perform other various maintenance tasks by themselves (in conjunction with, but not part of this contract).

SHORE-TIE ELECTRICAL POWER TEST PROCEDURE - Remember to Perform a SHORE-TIE ELECTRICAL POWER TEST PROCEDURE as specified in the General Requirements (All Contracts) work item when a shore tie will be used.

2.1 **Government-furnished property**. None.

2.2 **Temporary Ship Systems**. The Contractor must provide temporary/hotel services for Coast Guard personnel living and working aboard the vessel as specified in the *General Requirements (This Contract)* work item above. Do not directly add pricing for these items to this work item's CLIN, temporary/hotel services for Coast Guard personnel living and working aboard the vessel should be treated as overhead costs or applied directly to the maintenance work items impacted.

2.3 **Assist Ship's Force**. The Contractor must:

SUPPLIES/SERVICES FOR CG PERSONNEL PERFORMING CONTRACT ADMINISTRATION

2.3.1 [ ] **N/A** [X] **Provide** OFFICE SPACE WITH JANITORIAL SERVICES (863a) for Coast Guard personnel administrating the contract; provide the various items in the quantities specified below.

Office Items	**QTY**
Desk(s), with ergonomic rolling chair, straight back chair, internet line/WiFi, etc.	4
computer(s)/monitor(s)	N/A
Lateral filing cabinet(s)	N/A
Copier/Printer/FAX/Scanner(s) and associated supplies (access to)	1
Color Laser printer(s) and associated supplies	N/A
shredder(s)	0
Dry erase board(s) and associated supplies	1
Office Telephone(s) with independent extension numbers	N/A
Kitchenette items	**QTY**
refrigerator(s) (access to)	1
microwave(s) (access to)	1
water cooler(s) (access to)	1
Coffee mess(es) and supplies (access to)	1
Minimum quantities of restroom items	**QTY**
Male Toilet(s)	1
Female Toilet(s),	1
Multi-gender Toilet(s)	N/A
Minimum quantities of Shipboard Temporary Communications items	**QTY**
Shipboard Telephone Line(s),	N/A
Shipboard Internet Line(s)	N/A
Quantities of Parking items	**QTY**
Parking Spaces located as close as practicable to the vessel, <5 min walk from the vessel & Office Space, and inside the Contractor's facility (inside gate, secure)	4
Parking Spaces <10 min walk from vessel (inside gate, secure)	9
Notes and Additional Requirements	
N/A	

SUPPLIES/SERVICES FOR CG PERSONNEL PERFORMING VARIOUS MAINTENANCE TASKS ABOARD THE VESSEL

2.3.2 **Provide** the following items/services as designated in the table below, in the specified quantities:

N/A	Provide	Items/Services
X		**Temporary Compressed Air**, to operate vessel personnel's tools/equipment. **[X] N/A [ ]** Tie the temp air directly into the vessel's installed compressed air system. **[N/A] ea.** Independent compressed air hose(s) are required
	X	**[1]** ea. **Dumpster**, on the pier, near the gangway (or access to a dumpster) Empty at least once a week. Maintain in accordance with all applicable Federal, state, and local regulations.

N/A	Provide	Items/Services
	X	At least **[40]** Cubic Feet of **Paint and Flammable Stores**. Must be lockable/securable by vessel crew. Must comply with all applicable Federal, state, and local regulations.
X		At least **[50]** Cubic Feet of **Refrigerated Stores** (at 37 deg F, +/- 3 deg F) Must be lockable/securable by vessel crew.
X		At least **[50]** Cubic Feet of **Freezer Stores** (at 5 deg F, +/- 3 deg F) Must be lockable/securable by vessel crew.
X		At least **[50]** Cubic Feet of **Climate Controlled Dry Stores** (suitable for non-perishable food items, etc.). Must be lockable/securable by vessel crew.
	X	At least **[2500]** Cubic Feet of **Non-Climate Controlled Dry Stores** (suitable for life vests, tools, rigging gear, etc., like a connex box). Must be lockable/securable by vessel crew.
	X	**Small boat storage**. Provide full protection that can be safely and completely secured when the small boat is left unattended (e.g. watertight cover, storage in a warehouse or shop, etc.), in addition to isolating the boat from the elements. Transport each small boat to its storage area within one week of docking the vessel and back to the vessel prior to the end of the performance period. The storage must be located in the vicinity of the vessel. Access must be unrestricted for the entire performance period to allow vessel crew to perform maintenance during normal working hours. The cradle the boat rests on must meet the following criteria: • Geometrically equivalent to the boat support areas onboard the vessel, providing the same or more support than when being carried by the vessel/cutter. • Arrangement will allow ship's force to perform maintenance on the small boat, without modification of the cradle. • Structure is manufactured using the most economical methods and materials available and is capable of supporting the full weight of the small boat under normal conditions experienced during routine maintenance. • Contact surfaces are no harder or rougher than the contact surfaces for existing cradle onboard the vessel.
	X	**Liquid/solid waste disposal**, for waste generated by Coast Guard personnel who will be performing maintenance on the vessel (not part of contract work). **[10]** Gallons of Paint Thinner **[N/A]** Gallons of Engine Coolant **[N/A]** Gallons of Bilge Water **[N/A]** Number of Oily Filters **[N/A]** Pounds of Oily Rags
	X	**Containers**, for disposing of miscellaneous solid/liquid waste items generated by Ship's Force **[N/A]** ea. 1-Gallon Container(s) **[N/A]** ea. 5-Gallon Container(s) **[1]** ea. 55-Gallon Container(s)
	X	**Heavy Lift Equipment Services**, in the following quantities **[4]** Hours of Crane, rated at no less than **[4000]** Pounds **[N/A]** Hours of Fork Truck Rental **[N/A]** Hours of Man-lift Rental
Notes and Additional Requirements		
N/A		

WATCH STANDER/DUTY SECTION BERTHING

(1 ea. RV is acceptable for a mixed gender duty section)

2.3.2.1 **[] No Work [X] Provide** TEMPORARY EXTERNAL DUTY SECTION BERTHING (863d)**,** watch-standers will not be berthed onboard the vessel.

QTY	Berthing Type
1	Male
1	Female

2.3.2.2 If "No Work" is specified above (i.e. duty section personnel will be berthed onboard the cutter), and contract work significantly degrades the habitable condition of any berths on the vessel being used by the Duty Section, then **Provide** SUPPLEMENTAL DUTY SECTION BERTHING. Will be compensated via CR/mod.

WORK ITEM 18: Interior Deck Coverings

1. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 154 WPC 634-301, (series), Deck Covering Schedule

COAST GUARD PUBLICATIONS

None.

OTHER REFERENCES

None

2. REQUIREMENTS

INTENT: Inspect all designated deck covering areas, looking for discrepancies not already identified; report on those if found. Then, restore the surface of scuffed/worn areas of poured deck to a like-new condition and repair damaged areas of poured deck, as designated.

NOTE

It's not possible to know how thick the existing clear coat is in all areas, and it may be difficult to remove damaged or discolored clear coating without damaging the appearance of the flakes beneath. For these reasons the resealing should be planned as if application of flakes may be required over a significant portion of the specified surface to ensure no delays occur during execution.

CAUTION

Epoxy flake system is applied over delicate joiner deck on most of the 2nd deck areas. Do not damage joiner deck during removal of top layer of existing deck material. Renewal of deck covering in these areas will likely require renewal of the joiner deck beneath

To minimize impact on cutter weight & moment, do not add excessive deck covering material, beyond what was removed. Make new deck covering thickness as close as practicable to the original, pre-resealed thickness.

2.1 **Government-furnished property**. None.

2.2 **Preventive/Recurring Tasks**. The Contractor must:

2.2.1 **Inspect-Op Test (Initial)** all affected areas. **Submit** a **CIR** for all initial inspections/tests describing discrepancies and recommended repairs.

2.2.1a Inspections must include all designated poured deck areas, and all other affected components (e.g. cove bases, non-skid slip resistant tread stickers, items that will be removed as an interference, etc.).

2.2.2 **Perform** the tasks designated below.

2.2.2a To "Reseal" an epoxy flake system sand down the existing deck covering areas to remove all discolorations and damage, which may require covering removal into the colored area. Reapply color coat and flakes to obtain uniform color, as necessary. Reapply sealers. **Renew** PC 6 of Coast Guard Drawing 154 WPC 634-301 (slip-resistant treads) where disturbed. Maintain the existing net weight of

the deck covering system by maintaining its original thickness; generally, apply no more material than was removed. Allow coats to cure for the manufacturer recommended times.

	No Work	**Repair** and "Reseal"	the poured wet deck in the designated Compartment	Approx SQFT of poured deck
1		**X**	Head (1-12-0-L)	12
2		**X**	Passage (1-15-0-L)	30
3		**X**	Head (1-15-1-L)	15
4		**X**	Ship's Office (1-16-1-A)	35
5		**X**	Mess Deck (1-17-0-Q)	105
6		**X**	Galley (1-18-2-Q)	80
7		**X**	Head (1-23-1-L)	20
8		**X**	Passage (1-23-0-L) including stairwell landing	142
9		**X**	Passage (1-23-2-L)	12
10		**X**	Passage (2-23-0-L)	12
11		**X**	Passage (2-10-0-L)	70
12		**X**	Shower (2-12-1-L)	15
13		**X**	Head (2-12-2-L)	15
14		**X**	Shower (2-13-1-L)	15
15		**X**	Head (2-13-2-L)	15
16		**X**	Shower (2-14-1-L)	15
17		**X**	Head (2-14-2-L)	15
18		**X**	Passage (2-17-0-L)	51
19		**X**	Head (2-23-1-L)	30
20		**X**	Passage (2-23-0-L)	50
21		**X**	Climate Controlled Store Room (2-23-4-A) See 2026007 below	60
22		**X**	Passage (2-25-0-L)	20

2.3 **Corrective/Repair and Alterative Tasks**. The Contractor must:

2.3.1 **Perform** repairs/alterations whenever the KO releases a Change Request authorizing new post-inspection repairs/alterations, or whenever pre-existing discrepancies/tasks/alterations are described below (price these tasks below into the pre-award quote).

CSMP # FOR INTERNAL USE ONLY	**PRE-EXISTING DISCREPANCIES/TASKS**
2026007	DISCREPANCY: Deck is damaged in Climate Controlled Store Room (2-23-4-A). TASK(S): **Inspect** and Submit proposed repairs with the above CIR.

2.3.1a If tasked to perform cove base (PC 7 on Coast Guard Drawing 154WPC 634-301) renewal, 4 inch wide cove base may be installed in lieu of 2.5 inch wide cove base as specified on the drawing; use 4 inch cove base.

2.4 **Final Inspection/Testing Tasks**. The Contractor must:

2.4.1 **Inspect/Op Test (Final)** all affected surfaces/equipment/etc. and then **Submit** a final CFR attesting to satisfactory completion of the work item.