Undersea Warfare (USW)
Electromagnetic Systems Department
Code 34 Industry Day
Imaging & Electronic Warfare (I&EW)
Contract





Distro A- Approved for Public Release

Agenda

- Introduction/Ground Rules
- Disclaimer Statement
- Background Information on Code 34
- RFP N6660425R3010 – Imaging and Electronic Warfare (I&EW) Systems Engineering, Technical, and Fabrication Services
  - Overview of technical requirements
  - Other anticipated solicitation specifics
- Conclusion/Wrap-Up

Introduction and Ground Rules

- Introduction of Participants
  - NUWCDIVNPT Technical Code 34
  - NUWCDIVNPT Contracts Department, Code 02
- Intent of Industry Day
  - Encourage competition by ensuring all potential offerors receive and have access to the same information
- Technical “Q&A” is encouraged
  - Q&A (all questions submitted in writing) will be answered via the SeaPort-NxG Portal

Introduction and Ground Rules

- No personal recording
- The Q&A and “Distribution Statement A” slides will be posted to the SeaPort-NxG portal and the Contracting & Office of Small Business Outreach page
  - Link: https://www.navsea.navy.mil/Home/Warfare-Centers/NUWC-Newport/Partnerships/Contracting-and-Small-Business/Outreach-Events/

Introduction and Ground Rules

- DO NOT directly contact the NUWCDIVNPT Technical Department after today – all further dialogue will be accomplished via the Q&A feature on the SeaPort-NxG portal
- Requirements contained in this briefing are presented as a summary

Full/updated requirements will be provided in the Requests for Proposal (RFP)

Disclaimer Statement

- Remarks today by Government officials involved in today's presentation should not be considered a guarantee of the Government's course of action in proceeding with the planned acquisition discussed
- This informational briefing shared today reflects current Government intentions and is subject to change based on a variety of circumstances

The formal solicitation, when issued, is the only document that should be relied upon in determining the Government's requirements

USW Electromagnetic Systems Department

Mission/Purpose

Serve as the Navy's principal activity for developing, acquiring, installing, modernizing and maintaining the world's most capable USW Electromagnetic systems including Antennas, Periscopes, Electronic Warfare, Communications, Electro-Optics Systems, and Electromagnetic Compatibility

Vision

Dominance of Electromagnetic Spectrum

USW Electromagnetic Systems Department Description

The Undersea Warfare Electromagnetic Systems Department (Code 34) serves as the U.S. Navy's principle research, development, test and evaluation (RDT&E) agent and conducts and manages a full spectrum program for undersea warfare communications and electromagnetic systems. This includes antennas, periscopes, electronic/information warfare, electro-optics systems, and electromagnetic compatibility for submarines, unmanned vehicles, undersea warfare networks and distributed undersea warfare systems and sensors.

Product Areas & Roles

IMAGING (AEA, TDA, ISEA)

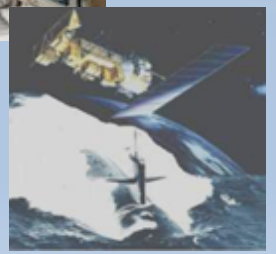
- Integrated Submarine Imaging Systems (ISIS)
- MTI Photonics Mast (PMP, PMV)
- Low Profile Photonics Mast (LPPM)
- Hull Penetrators/Dip Loops
- National Maintenance
- Imaging and Sensor Development

ELECTRONIC WARFARE (AEA, TDA, ISEA, ATD)

- AN/BLQ-10
- RADAR
- Surveillance Sensors
- Signature Reduction
- Periscope & Imaging Mast Automatic Direction Finders
- UxS Sensors
- Information Warfare
- Special Projects
- Advanced Development

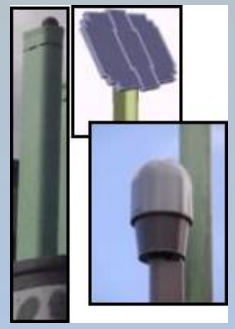
COMMUNICATIONS (LSI, AEA, TDA)

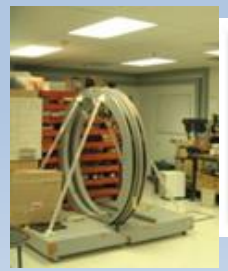
- Common Submarine Radio Room Integration & Test
- Communications at Depth
- Submarine SATCOM
- Submarine ADNS SE (IP WAN)
- UUV & Sensor Communications
- Interior Communications Systems
- Submarine Comms & Antenna TDA
- Special Projects & Assessments



COMMUNICATIONS ANTENNAS (AEA, ISEA, TDA)

- Multifunction Mast (OE-538)
- SubHDR (OE-562A)
- Periscope EHF Antenna (OE-499)
- Submarine Antenna Technology
- Towed Buoys/ Buoyant Cable
- Off-Board Sensors
- Special Projects
- Expendable/Tethered Buoys





ELECTROMAGNETIC ENVIRONMENTAL EFFECTS (E3)

- Electromagnetic Compatibility
- EMI Assessments/Testing

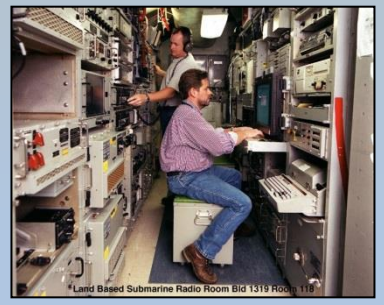
Major Facilities

Overwater Arch

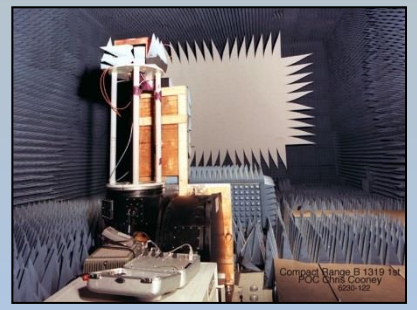
Electromagnetic Sensor Facility

Fishers Island, NY Overwater Sled

Submarine Radio Rooms



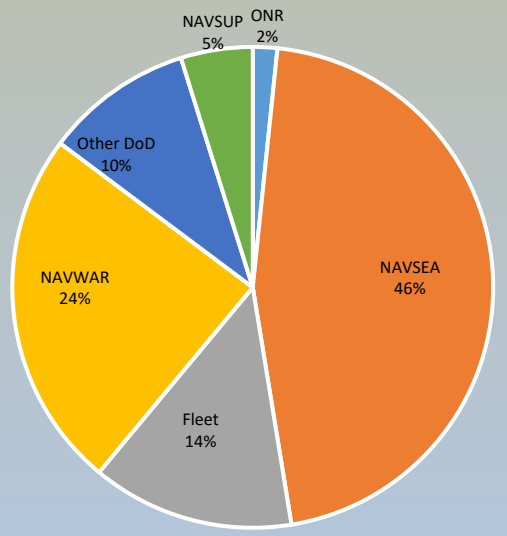
RF Test Chambers



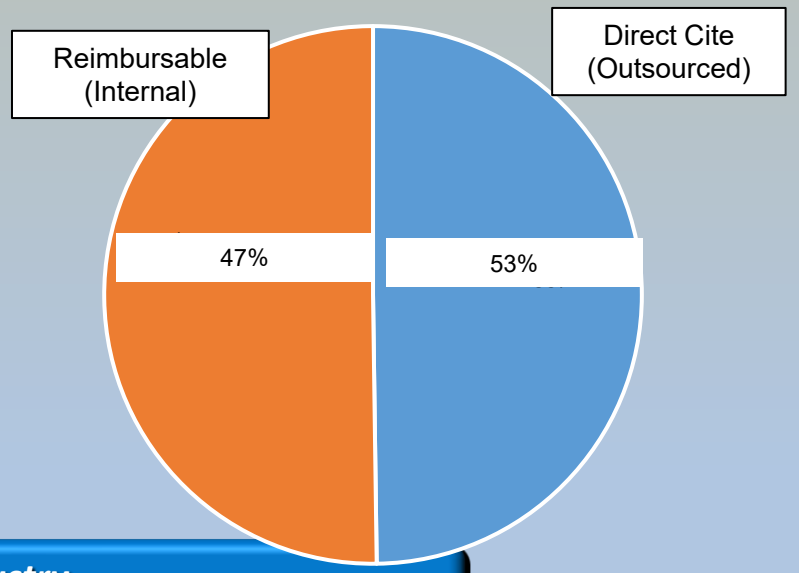
EW Test Facilities

USW Electromagnetic Systems Department Business Profile

Our FY25 Customers
$296.5M



- **Total workforce of 388 personnel (FY25)**
  - **95% of the workforce are scientists, engineers and technicians with 112 advanced degrees**
- **~ 53% of total program funding is outsourced**
- **Demand signal is strong and is projected to continue to increase**

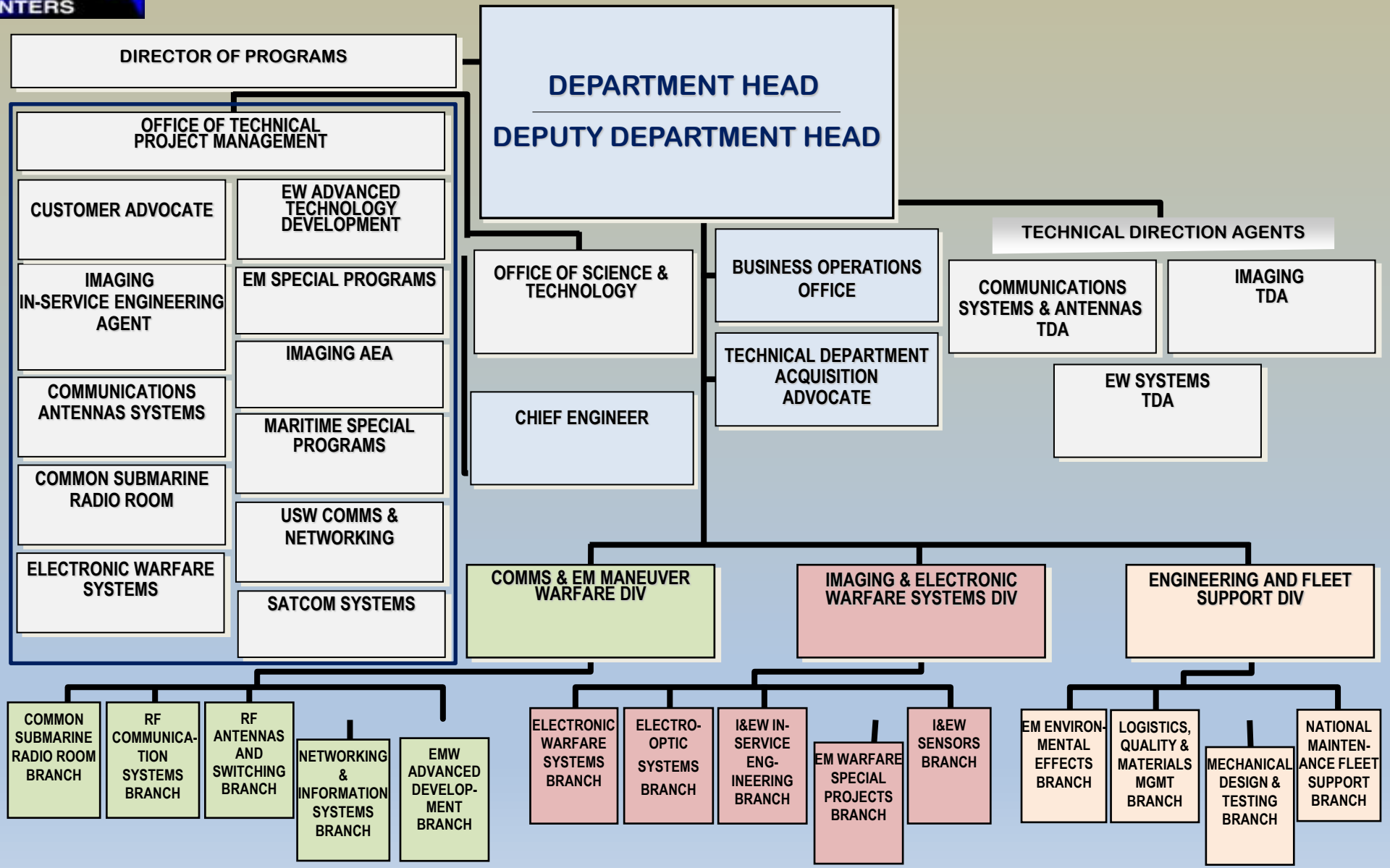


- Our demand signal continues to grow....
- We outsource ~50% of our work

Code 34 maintains a strong business partnership with industry to provide best value to our customers

Distro A

USW Electromagnetic Systems Department



Distro A

Code 34 I&EW Engineering, Technical, and Fabrication Services

- Engineering and technical services for the Imaging and Electronic Warfare programs (I&EW). There will be added scope and LOE for RADAR and EW ATD programs/projects. Support across TDA, AEA, and ISEA areas of responsibility.
- Market Survey is anticipated to be posted in SeaPort by the end of July
- SeaPort NXG Solicitation N6660425R3010 is expected in Q1 2026 (or sooner)
  - 5 year POP from 3/15/2027 – 3/14/2032
  - 1,315,290 total labor hour ceiling (263,058/year) / approximately 23% Government Site, 77% Contractor Site
- CPFF / $100 - $250M / 20% ODC/Labor
- Unique Characteristics
  - Multiple key personnel
  - FCL is TOP SECRET / Safeguarding is SECRET
  - Required Certifications include: Cyberspace/Cyber Workforce (CWF) qualifications and NAVSEA 04XQ approved quality system
- Follow on to N0017819D8424 / N6660424F3004 (Rite-Solutions, Inc.)
  - Awarded Contract Solicitation Number: N6660423R3008
  - Prior solicitation yielded one offer
- OCOI applies

C34 Engineering Services Contract Technical Requirements

- 4.1 Engineering, Systems Engineering, and Process Engineering
  - Systems Engineering for New and Existing Systems
  - Requirements Development and Analysis
  - Integration of Hardware and Software into Systems
  - Gap analysis between system capabilities, requirements, and mission needs
  - Development and review of subsystem specifications, interface design documents, interface control documents, concepts of operations, and other system engineering documentation.
  - Review of foreign government systems and technologies and provide assessment of capabilities

C34 Engineering Services Contract Technical Requirements (cont)

- 4.2 Modeling, Simulation, Stimulation, and Analysis
  - Develop and validate physical and mathematical models of systems.
  - Develop simulation and / or stimulation to test systems, capabilities, and tactics within different environments.
  - Model I&EW systems to support requirements development and analysis.
  - Develop, review, and analyze Model Based Systems Engineering Models for I&EW systems.

C34 Engineering Services Contract Technical Requirements (cont)

- 4.3 Prototyping, Model-Making, Fabrication, and Pre-Production
  - Design, develop, fabricate, build, and assemble models, mock-ups, prototypes, pre-production units, special support equipment, and test tools.
  - Develop drawings and design documentation to include drawings, technical data packages, test plans, test procedures, and test reports for the prototype systems.
  - Test the prototypes against specifications.
  - Generate variance and waiver requests if the system does not meet specifications.

C34 Engineering Services Contract Technical Requirements (cont)

- 4.4 System Design Documentation and Technical Data
  - Develop and deliver test plans, test procedures, and test program plans for I&EW systems.
  - Update drawings and design documentation following integration and alteration installations.
  - Develop and deliver SHIPALTs, OPALTs, and TEMPALTs to include design documentation such as technical data packages, engineering drawings, test plans/reports, installation instructions, engineering change proposals, and requirements specifications.

C34 Engineering Services Contract Technical Requirements (cont)

- 4.5 Software Engineering, Development, Programming, and Networks
  - Develop software requirements and test documentation.
  - Review software requirements and test documentation.
  - Develop and deliver software code and executables in accordance with requirements.
  - Develop and deliver cybersecurity documentation in accordance with the Risk Management Framework process.
  - Conduct ACAS scans and assess system vulnerabilies of I&EW systems.
  - Provide Navy Qualified Validator support by validating I&EW RMF packages.
  - Conduct cyber Assessments & Authorizations onboard platforms to support SCI systems accreditations.
  - Develop and delivery cybersecurity documentation required for maintain I&EW systems onboard submarines.

C34 Engineering Services Contract Technical Requirements (cont)

- 4.6 Reliability and Maintainability
  - Analysis and system reliability and maintainability (R&M)
  - Recommend solutions to address R&M shortfalls
  - Develop and execute R&M test plans
  - Monitor reliability metrics and develop improvement plans

C34 Engineering Services Contract Technical Requirements (cont)

- 4.7 Human-Factors Engineering
  - Analyze I&EW systems humans factors engineering
  - Provide recommendations to address human factors systems requirements and design shortfalls
  - Develop human factors test plans, test reports, analysis reports, and program plans.

C34 Engineering Services Contract Technical Requirements (cont)

- 4.8 System Safety Engineering
  - Develop System Safety Program Plans, Systems Safety Hazard Analysis Reports, and Systems Safety Program Progress Reports for I&EW systems.
  - Analyze systems against safety requirements.
  - Develop gap analysis for I&EW systems in respect to safety specification.

C34 Engineering Services Contract Technical Requirements (cont)

- 4.9 Quality Assurance
  - Develop a Quality Assurance Program Plan
  - Conduct studies and implement government protocols for quality assurance for I&EW programs
  - 52.246-11 Higher Level Quality Standard

C34 Engineering Services Contract Technical Requirements (cont)

- 4.10 Interoperability, Test and Evaluation
  - Develop and update test plans, procedures, and reports
  - Review test plans, procedures, and reports
  - Execute test plans and procedures
  - Provide recommendations for systems and procedure updates based on test execution
  - Develop trip reports for events requiring travel
  - Conduct interoperability testing

C34 Engineering Services Contract Technical Requirements (cont)

- 4.11 Training Development and Execution
  - Conduct front end analyses for new or modified systems to identify training solutions and manpower requirements.
  - Develop, review, and update Navy training system plans.
  - Review engineering changes for training impacts.
  - Develop, review, and update course curricula and associated training documentation.
  - Conduct classroom courses and demonstration sessions in the areas of proper and safe operation, maintenance, and employment of systems.

C34 Engineering Services Contract Technical Requirements (cont)

- 4.12 Fleet Introduction, Installation, and Checkout
  - Perform data collection, analyze, and provide recommendations and results
  - Troubleshoot, identify, and isolate defects in systems
  - Conduct system repairs, test repairs, and report on repairs
  - Conduct groom and certification of RF systems onboard submarines. Provide test reports.
  - Conduct onsite and remote technical investigation in response to system problems.
  - Analyze system failures, root cause of failures, trends, and update the Failure Analysis and Corrective Action System (FRACAS) documentation.
  - Review, develop, and deliver tactical EW libraries to the government and fleet.
  - Conduct installations onboard submarines including TEMPALTs, OPALTs, SHIPALTs, ECIs, and misc hardware/software.

C34 Engineering Services Contract Technical Requirements (cont)

- 4.13 Program Management Services
  - Milestone and schedule documentation
  - Program briefs
  - Records management, document control
  - Program/WBS specific financial reports
  - Attend program meetings, record: minutes, actions, decisions

C34 Engineering Services Contract Technical Requirements (cont)

- 4.14 Material Management
  - Draft MILSTRIP procurement documentation for I&EW
  - Track inventory and material procurement requests utilizing government processes and databases

C34 Engineering Services Contract Technical Requirements (cont)

A minimum of four (4) Key Personnel (in addition to the STR) are required to cover the below areas of expertise. Offerors shall propose the total key personnel required and shall propose each key person in the designated area of expertise and that meet all of the required qualifications listed.

(1) PWS Task 4.1 (Engineering, Systems Engineering, and Process Engineering) - 1 Key Person.

Required Qualifications:

- Demonstrated proficiency in reporting and assessing Reliability, Maintainability and Availability (RMA) Metrics in accordance with the DoD Guide for Achieving Reliability, Availability and Maintainability and the DoD Reliability, Availability, Maintainability and Coat (RAM-C) Rationale Report Manual.
- Demonstrated proficiency in analyzing and evaluating changes to existing submarine Imaging systems and Electronic Warfare systems based on engineering change proposals.
- Demonstrated proficiency in Radio Frequency (RF) system design, RF cascade analysis, and RF receiver integration and testing.

C34 Engineering Services Contract Technical Requirements (cont)

(2) PWS Task 4.5 (Software Engineering, Development, Programming, and Networks) - 1 Key Person.

Required Qualifications:

- Demonstrated proficiency in designing, developing, programming, and testing in Linux based systems.

(3) PWS Task 4.5 (Software Engineering, Development, Programming, and Networks) – 1 Key Person specifically proposed as a Cybersecurity Engineer II (CSE2)

Required Qualifications:

- Meets and maintains the certification and educational requirements required by the CWF, which are associated with the following work roles:
  - Security Control Assessor - Work Role Code 612
  - Information Systems Security Developer - Work Role Code 631
- Has an active TS/SCI clearance or be TS/SCI eligible as a result of a complete and valid Government Tier 5 Single Scope Background Investigation (SSBI), or equivalent.

C34 Engineering Services Contract Technical Requirements (cont)

(4) PWS Task 4.12 (Fleet Introduction, Installation, and Checkout) – 1 Key Person

Required Qualifications:

- Demonstrated proficiency and experience with the Diminishing Manufacturing Sources and Material Shortages (DMSMS) Case Review Process.
- Demonstrated proficiency in operating and testing Integrating Submarine Imaging Systems and Electronic Warfare Systems onboard submarines and in a laboratory-based environment.
- Demonstrated proficiency in testing submarine Imaging systems, which include infrared and visual sensors with selectable fields of view and stabilization control systems.

Conclusion/Wrap-Up

- Thank you for your interest in the Code 34 I&EW Engineering and Technical Services Contract Industry Day
- If you are considering submitting a proposal for this procurement, **please respond to the forthcoming Market Survey specific to this requirement; the Market Survey is anticipated to be posted by the end of July in the SeaPort Portal.**

Conclusion/Wrap-Up

- This briefing will be posted to the SeaPort-NxG Portal and the Small Business Outreach page
- "Q&A" (from today's Industry Day and any other subsequent Q&A) will be posted to the SeaPort-NxG Portal
- DO NOT contact today's presenters
  - All further dialogue will be accomplished via the Q&A feature on the SeaPort-NxG Portal