DOT, MARAD Release Assessment of US Merchant Marine Academy

Midshipmen and plebe candidates stand in formation at the U.S. Merchant Marine Academy at Kings Point in 2018. The Plebe candidates are congressionally nominated and are starting indoctrination, a rigorous, 20-day regimen of academic, military, and physical training. *U.S. NAVY*

WASHINGTON – The U.S. Department of Transportation (USDOT) and Maritime Administration (MARAD) released Nov. 24 a new report titled, "Organizational Assessment of the U.S. Merchant Marine Academy: A Path Forward" and an accompanying implementation plan prepared by the National Academy of Public Administration (NAPA).

"USMMA students are remarkable leaders committed to serving the nation and supporting positive change," said Acting

Maritime Administrator Lucinda Lessley. “They deserve a modern, safe, and inclusive learning environment where they have the training and resources that will prepare them to succeed in the U.S. merchant marine and in our armed forces. We acknowledge, and have been working to address, the many urgent issues raised by NAPA’s report and to put USMMA on a path to modernization.”

NAPA’s assessment affirms that USMMA faces “longstanding systemic issues” across almost all areas of its operations, including educational programs; facilities maintenance and capital management; sexual assault and sexual harassment prevention and response, including during the Sea Year; diversity, equity, and inclusion; and internal and external governance.

The assessment further warns that, “Because of the magnitude and fundamental nature of the challenges USMMA faces, the greatest risk to USMMA’s future is doing nothing to significantly address its challenges and the causes of those challenges.”

NAPA’s report also makes clear that these challenges have worsened over many years and that under-resourcing – particularly unmet personnel needs – makes many of these challenges more difficult to resolve.

The Way Forward

Since the start of the new administration, USDOT and MARAD leaders have been focused on the most urgent issues facing the USMMA. USDOT and MARAD will establish a task force, as recommended by the NAPA report, to develop recommendations that help chart the Academy’s future.

USDOT and MARAD also have numerous efforts underway to address challenges identified in the NAPA report. For example, USDOT and MARAD have announced a temporary pause in Sea Year training and are developing new requirements for commercial

vessels that carry cadets to protect the safety, security, and well-being of cadets.

In alignment with the reports' recommendation that USMMA should engage a facility executive to direct and coordinate maintenance and capital efforts, USDOT has detailed a senior federal official to direct ongoing efforts to address the Academy's maintenance backlog and lead capital efforts.

In addition, leadership is working to finalize and implement a campus-wide maintenance contract.

Consistent with the NAPA recommendation that USMMA accelerate investments in information technology, the USDOT Office of Chief Information Officer will work to identify options to upgrade information technology systems.

USDOT and MARAD remain committed to ensuring training and resources are available to graduate licensed merchant marine officers who can meet the national security, economic, and transportation needs of the nation. The recommendations provided by NAPA will assist the administration in supporting a campus where midshipmen learn to become exemplary leaders in a safe, secure, and modern environment.

For more information, the assessment and implementation plan are available for download.

The U.S. Merchant Marine Academy was founded in 1956 with a mission to educate and graduate leaders to serve the national security, marine transportation, and economic needs of the United States as licensed merchant marine officers and commissioned officers in the Armed Forces. USMMA provides students with a degree and credentials that allow them to embark on a career in public service.

The NAPA assessment was directed by the 2020 National Defense Authorization Act to provide an analysis of the operations of the USMMA and offer modernization recommendations for

implementation consideration.

The Coast Guard and American Maritime: A Vital Post-9/11 Partnership

A Coast Guard rescue team from Sandy Hook, New Jersey, races to the scene of the World Trade Center terrorist attack. A subsequent call for “all available boats” led to the largest maritime evacuation in history. *U.S. COAST GUARD / PA2 Tom Sperduto*

Twenty years ago this week, al Qaeda carried out attacks on the World Trade Center and the Pentagon, and perhaps would have succeeded in attacking a third target but for the bravery of the airline passengers who forced their plane down in Shanksville, Pennsylvania.

These attacks would ultimately claim thousands of lives and dramatically alter America’s domestic security posture and the geopolitical landscape for years to come. But in the tense, chaotic hours that followed the unimaginable horror of commercial airliners striking the Twin Towers, amid the uncertainty of whether more was on the way, the U.S. Coast Guard and U.S. maritime industry were focused on a single shared mission in New York: Get people to safety.

When the local Coast Guard commander put out the call for “all available boats” to make their way to lower Manhattan to help rescue people stranded due to the closure of bridges and tunnels, the response was widespread and immediate. An armada of tugboats, ferries and other vessels quickly arrived on the

scene and, in a collective undertaking of tremendous skill and grit, safely evacuated 500,000 people. It was the largest maritime evacuation in history, even exceeding the heroic achievement at Dunkirk in 1940.

This kind of proactive collaboration to keep people safe has long defined the relationship between the Coast Guard and the U.S. maritime industry. And in the years since 9/11, they have continued their close partnership to keep our waterways and our nation secure – a partnership made possible by a mix of sound policy, focused coordination and shared commitment. The continued strength, agility and effectiveness of the partnership in the face of existing and emerging threats will depend on several key factors.

The Jones Act

First, the Jones Act, the law requiring that vessels moving cargo between two U.S. points be American built, owned and crewed, plays a foundational role in our maritime security and must remain sacrosanct. By keeping our domestic maritime industry in American hands, the law ensures a reliable pipeline of experienced American mariners for the long-term – the kind that works seamlessly with the Coast Guard and risks their own lives to evacuate half a million people from New York, without hesitation. It also greatly reduces the potential for malign actors who might seek to use our waterways to carry out attacks, decreasing the operational burden on the Coast Guard and allowing the service to channel its limited resources where they are needed most.

The Jones Act is also instrumental to the durability of what the Center for Strategic and Budgetary Assessments calls the Defense Maritime Industrial Base – the vast network of public and private sector maritime entities that collectively serve as a major component of our national security. The U.S. must be able to rely on American shipyards to build boats the Coast Guard needs to patrol and defend our territorial waters and

that America's maritime industry needs to move the cargo that drives our economy and supports military readiness.

Cyber Risk Management

Second, cyber risk management must remain an urgent priority. The Coast Guard's latest alert discussing recent cyberattacks on South African ports and leaked Iranian documents describing research on how a cyberattack can be used to target the Maritime Transportation System (MTS) is a stark reminder that our adversaries don't have to be in our waters to attack our waterways. And as ever, with greater technology innovation comes greater cyber risk to the MTS as these threats continue to evolve.

The Coast Guard recently issued its 2021 Cyber Strategic Outlook, detailing its approach to this complex, high-stakes threat landscape. Notably, among the report's major Lines of Effort is to "Protect the Marine Transportation System," elements of which emphasize continued coordination with the maritime industry to manage cyber risks and "improve the ability for owners and operators to prepare for, mitigate, and respond to threats to maritime critical infrastructure." Recognizing the importance of its own role in safeguarding the MTS, the tugboat, towboat and barge industry has taken proactive steps to improve that ability, including by developing Best Practices for the Towing Industry, a cyber risk management guide for use by marine towing companies of all sizes and sectors. This is important progress, but more surely remains to be done.

Finally, whether in response to threats of physical attacks, or attacks carried out in cyberspace, for the partnership to continue achieving results that keep the American people safe, the policies and practices guiding it into the future must be crafted with an eye toward facilitating the tracking and exchange of threat information in real time; ensuring that security regulations are informed by practical operational

realities and risk management principles; and maintaining effective security for our waterways without impeding the waterborne commerce that is itself fundamental to our national security.

That worst of days 20 years ago summoned what is best in our Coast Guard and our mariners, whose actions helped prevent further loss of life. And while we hope and pray not to hear another call for “all available boats,” we owe it to our nation to make sure this vital partnership is ready if we do.

Adm. James Loy, retired, served as the 21st commandant of the U.S. Coast Guard from 1998-2002 and subsequently as deputy secretary of homeland security. Jennifer Carpenter is president and CEO of The American Waterways Operators.

Strategic Sealift Must Prepare for Contested Oceans, Panelists Said

The Henry J. Kaiser-class underway replenishment oiler USNS Yukon (T-AO-202), right, prepares to conduct a consolidated loading with the commercial tanker MT Empire State. U.S. Navy / Mass Communication Specialist 1st Class Patrick W. Menah Jr.
NATIONAL HARBOR, Md. – The nation's sealift components are used to operating in peaceful seas and permissive environments but must prepare now for times when control of the seas is not assured, a panel of maritime leaders said.

Speaking Aug. 4 at the Navy League's Sea-Air-Space expo at National Harbor, Maryland, were Douglas Harrington, deputy associate administrator for Federal Sealift at the Maritime Administration (MARAD); Christopher Thayer, director, Maritime Operations, Military Sealift Command (MSC); and Adam Peterson, of the government business development team at APL. The panel was moderated by Erica Plath, director, Strategic Mobility/Combat Logistics, Division, Office of the Chief of Naval Operations, U.S. Navy.

Thayer pointed out that sealift "capability today is far more than it was in 1990" when large numbers of sealift ships were activated for Operation Desert Storm. He said that sealift was again at an inflection point, with the Navy' preparation for distributed maritime operations in contested environments.

He said that, during distributed operations, the nation's maritime logistics forces may not always have escorts or overwatch and must "be prepared to operate and evade the enemy."

Thayer also stressed the need for counter-UAS systems, anti-jam capabilities for GPS, the need for cybersecurity and the ability to operate under emissions control.

Communications is "a huge vulnerability," Thayer said, noting that mobile communications capabilities are being deployed on some ships with tactical advisers.

Harrington also stressed the need for improved, more resilient communications capabilities for MARAD's Ready Reserve Force (RRF). He noted the current reliance on satellite communications and the effect on morale that emissions control would have on the crews.

To adapt to providing logistics in a contested environment, Thayer said that MSC was working on concepts such as re-loading missiles in vertical launch cells while ships are underway, underway replenishment using unmanned aerial vehicles and refueling the combat logistics ships from commercial ships using modular CONSOL (consolidated cargo replenishment) adapter kits.

Harrington discussed the need for recapitalization of the RRF MARAD's Ready Reserve Force and new, comprehensive strategy for equipping strategic sealift with new technology and regulations. He noted the increasing size and weight of defense cargoes. He advocated building increased resilience as well as cybersecurity.

He also said the government must "recall and re-focus on naval operations in a contested environment."

Peterson pointed out the dramatic decline of the U.S.-flag merchant marine since 1960, now less than 0.5% of the 43,000

ships (displacing 1,000 or more gross weight tons) in international trade. He stressed that the government needs to develop more incentives to keep commercial vessels available in peacetime and war.

Harrington praised the "significant period of recapitalization," which includes the construction of first of five National Security Multi-Mission Vessels, which will replace older ships and train mariners with modern technology now found on many merchant ships.

Asked about the Navy's plans to operate autonomous unmanned ships in its fleet, Thayer noted that it is "hard to refuel an autonomous ship at sea."

MARAD Awards Vessel Acquisition Management Contract to Crowley

MARAD has awarded Crowley Maritime Corp.’s Solutions business unit a $638 million contract for vessel acquisition management. *CROWLEY MARITIME CORP.*

JACKSONVILLE, Fla. – Crowley Maritime Corp.’s Solutions business unit has been awarded a multi-year, $638 million contract for vessel acquisition management (VAM) by the U.S. Maritime Administration (MARAD), the company said in a July 28 release.

Crowley’s strategic acquisition and vessel management service will assist MARAD in the enhancement of the Ready Reserve Force, helping reduce the overall age of the fleet and increase ship reliability. The fleet executes U.S. Department of Defense sealifts.

To carry out the contract, Crowley will use a new, proprietary information technology system to assess, research and make purchasing recommendations. Once the vessels are acquired, Crowley will oversee any required reflagging,

reclassification, modification and maintenance to ensure they are fit for service in compliance with U.S. Coast Guard, American Bureau of Shipping, and Defense Department requirements. After ships enter the fleet, Crowley will maintain and operate the vessels on behalf of MARAD.

“A successful VAM program is important to the U.S. as a maritime nation, the maritime industry and Crowley as we mutually invest in the strength of our nation,” said Mike Golonka, vice president, government ship management in Crowley Solutions. “We want to share our innovative, successful approach to vessel ownership and lifecycle engineering with the U.S. government.”

Building on over 20 years of experience managing MARAD and other government and Navy vessels, Crowley will use the web-based platform to perform data analysis of the lifecycle of vessels and their components. The SHIPFAX platform will provide data-driven recommendations based on essential service requirements, as well as important factors to successfully manage and operate vessels.

Crowley will execute the contract with Stena Line, Serco and LCE (Life Cycle Engineering), who bring specialized and unique experiences and services in acquisitions, naval ship architecture, engineering and applied technology.

Crowley Maritime, University of North Florida to Establish

Crowley Center for Transportation and Logistics

University of North Florida President David Szymanski, left, and Crowley Maritime Corp. President and CEO Thomas B. Crowley Jr. announce the endowment. *CROWLEY MARITIME CORP.*

JACKSONVILLE, Fla. – Crowley Maritime Corporation and the University of North Florida (UNF) announced June 25 that Crowley has donated $2.5 million as an endowment gift for the creation and operation of a new center of excellence named the Crowley Center for Transportation and Logistics (CCTL).

The center will reside in UNF's Coggin College of Business and utilize interdisciplinary faculty expertise from across the University.

Headquartered in Jacksonville, where UNF is located, Crowley is a global leader in logistics, marine and energy solutions for the commercial and government sectors. As one of the U.S. maritime industry's leading employers with nearly 130 years of experience and innovation development, the company has recently advanced into new energy supply chain solutions such as offshore wind, as well as digital innovation at its locations across America, the Caribbean, Central America and beyond.

Crowley and the company's charitable work have historically supported logistics careers in its industry. The company's $2.5 million donation to UNF establishes a landmark commitment to the growth and development of skilled, talented students to be innovative leaders in transportation and logistics and faculty researchers leading data analytics through the establishment of the center.

"This donation represents a strategic investment in our industry's future – the talent and knowledge our leaders of

tomorrow and the research needed to propel our industry forward successfully," said Tom Crowley, the company's chairman and CEO. "We are humbled to be able to play a role in supporting the advancement of researchers, students and their careers in transportation and logistics. The University of North Florida, a dynamic leader in education in one of the global hubs of logistics services, is the rightful home to our new center."

The center is designed to be a world-leader in transportation and logistics research, education and industry engagement. The endowment will help fund the CCTL operations and leadership, faculty support, visiting scholars, pertinent industry research, pursuit of federally funded grants and contracts, student recruitment in the areas of transportation, logistics and data analytics, and course development.

"UNF is extremely appreciative of this generous gift by Crowley to establish a distinguished center of transportation and logistics research and education that will foster a collaborative environment of continued logistical growth, development and innovation," said UNF President David Szymanski. "Our partnership and alliance with Crowley will allow UNF's Coggin College of Business and the Crowley Center for Transportation and Logistics to be at the forefront of cutting-edge education and research and help prepare our students with skills for the workforce."

UNF's Coggin College of Business' transportation and logistics program is considered among the best in the nation due to an active and supportive regional professional community and a high-tech Logistics Information Technology Solutions Lab for students to learn about state-of-the-art supply chain tools and solutions.

Jacksonville is often lauded as "America's Logistics Center" and has many geographic advantages as an international transportation hub. Crowley's shipping and logistics services

serving Puerto Rico, the Caribbean and Central America have operated in the city for decades, providing containerized, oversized, refrigerated and recently, liquefied natural gas (LNG) supply chain services.

The combination provides a wealth of opportunities for UNF transportation and logistics graduates.

“Crowley Maritime’s gift to establish this center is not only important for the Coggin College and UNF but is a major investment in Jacksonville,” said Richard Buttimer, dean of UNF’s Coggin College of Business. “This center will train future generations of transportation, logistics and supply chain leaders, and will ensure that Jacksonville and Northeast Florida has a world-class pool of talent and leadership for this vital industry.”

Nation’s Shipyards Support $42.4 Billion in Gross Domestic Product

A Sailor, assigned to the amphibious assault ship USS Bataan (LHD 5), stands fire watch in the upper vehicle stowage area June 1, 2021. Bataan is in port at General Dynamics NASSCO shipyard for a maintenance availability. *U.S. NAVY / Mass Communication Specialist 3rd Class Darren Newell*

WASHINGTON, D.C. – The U.S. Department of Transportation’s Maritime Administration (MARAD) announced June 14 the release of a new report finding that the Nation’s private shipyards support $42.4 billion in gross domestic product (GDP).

MARAD's new report – The Economic Importance of the U.S. Private Shipbuilding and Repairing Industry – measures the economic importance of the shipbuilding and repairing industry at the national and State levels for calendar year 2019.

"Shipyards create good jobs and support economic growth – not just in the areas surrounding our ports and waterways, but across the nation," said U.S. Transportation Secretary Pete Buttigieg.

In 2019, the nation's 154 private shipyards directly provided more than 107,000 jobs and contributed $9.9 billion in labor income to the national economy. On a nationwide basis – including direct, indirect, and induced impacts – the industry supported 393,390 jobs, $28.1 billion of labor income, and $42.4 billion in GDP.

The Biden administration recognizes the economic importance of the maritime industry and has proposed $17 billion in inland waterways, coastal ports, land ports of entry, and ferries as part of the American Jobs Plan. These investments would make our infrastructure more resilient while improving efficiency and creating new capacity to enhance freight movement in the United States.

Since 2008, the U.S. Department of Transportation has provided nearly $262.5 million in grant funding through its small shipyard grant program to nearly 300 shipyards in 32 states and territories to improve infrastructure at U.S. shipyards.

"The report issued by MARAD confirms that shipyards are vital economic engines in addition to being essential components of our industrial base," said Acting Maritime Administrator Lucinda Lessley. "The skilled jobs created by shipyards are not only essential to supporting our military and our commerce, they are contributing to the economic success of communities all over the United States."

The report states the U.S. shipbuilding industry has run a trade surplus in six out of the last 10 years, with a cumulative trade surplus of $7.3 billion over this period. From 2015 to 2020, U.S. shipbuilders delivered 5,024 vessels of all types including tugs and towboats, passenger vessels, commercial and fishing vessels, and oceangoing and inland barges, reaching 608 vessels in 2020. More than 60 percent of vessels delivered during the last six years have been inland tank and dry cargo barges.

There are currently 154 private shipyards in the United States, spread across 29 states and the U.S. Virgin Islands, that are classified as active shipbuilders. In addition, there are more than 300 shipyards engaged in ship repairs or capable of building ships but not actively engaged in shipbuilding. Although the majority of shipyards are located in the coastal states, active shipyards are also located on major inland waterways such as the Great Lakes, the Mississippi River, and the Ohio River.

The final report, The Economic Importance of the U.S. Private Shipbuilding and Repairing Industry, can be found at: https://www.maritime.dot.gov/sites/marad.dot.gov/files/2021-06/Economic%20Contributions%20of%20U.S.%20Shipbuilding%20and%20Repairing%20Industry.pdf

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MARAD Announces Funding Opportunity for Marine Highway Program

A map of America's Marine Highway routes. *MARITIME*

ADMINISTRATION

WASHINGTON – The U.S. Department of Transportation's Maritime Administration (MARAD) announced on May 21 the availability of $10.8 million in grant funding for the America's Marine Highway Program (AMHP). The AMHP's purpose is to encourage the use of America's 25,000 miles of navigable waterways. It provides an efficient, sustainable and cost-effective transportation system – alleviating road congestion, reducing carbon dioxide, and supporting job employment within local communities.

"The America's Marine Highway Program increases the use of environmentally sustainable practices to move freight across our transportation system." said U.S. Secretary of Transportation Pete Buttigieg. "These investments help local communities reduce congestion and create more economic opportunities."

The AMHP supports the increased use of our inland waterways to relieve landside congestion, provide new and efficient transportation options and increase the productivity of the surface transportation system.

Marine highways are all-water routes, often running alongside or near major highways. The AMHP helps to further integrate coastal and inland waterways into our transportation system, providing alternate options to traditional shipping methods. The increased movement of freight by water is also essential to achieving greenhouse gas reductions, as it requires less energy and releases fewer emissions than other options.

"The America's Marine Highway Program provides essential funding to support the expanded movement of freight by water, while also supporting port communities on our coasts and inland waterways," said Acting Maritime Administrator Lucinda Lessley. "By investing in these services, we are able to bolster local communities and generate American jobs."

Since its inception, the AMHP has designated 45 marine highway projects, 21 of which are currently operating. Creating new Marine Highway "container on barge" services on commercially navigable waterways helps create American jobs in U.S. ports, vessels, shipyards and surrounding areas.

For example, since 2010, the Port of Virginia's 64 Express service, connecting Hampton Roads and Richmond, Virginia via the James River, has removed more than 221,000 cargo containers that would otherwise be carried by trucks along the heavily congested I-64 corridor. This one marine highway service has saved approximately $5.9 million in road maintenance and more than 17.5 thousand tons of carbon dioxide emissions while also supporting 1,100 direct and indirect jobs.

Through previous MARAD awards, an investment of over $4 million in federal funding leveraged $436 million in private investment in an economically distressed area near the Virginia Port Authority's Richmond Marine Terminal.

Only Marine Highway Projects previously designated by the secretary of transportation are eligible to receive funding under the AMHP.

Applications for the grants are due by 5:00 P.M. EDT on June 4, 2021. Additional information is available in the Federal Register here or by contacting Fred Jones, Office of Ports and Waterways Planning, 1200 New Jersey Ave., SE, Washington, DC 20590, 202-366-1123 or Fred.Jones@dot.gov.

MARAD Announces First Centers of Excellence Designations for Domestic Maritime Workforce Training and Education

MARAD has announced the designation of 27 Centers of Excellence for Domestic Maritime Workforce Training and Education. *U.S. DEPARTMENT OF TRANSPORTATION*

WASHINGTON – The U.S. Department of Transportation's Maritime Administration (MARAD) announced May 19 the designation of 27 Centers of Excellence for Domestic Maritime Workforce Training and Education (CoE). The CoE designation recognizes community colleges and training institutions that prepare students for careers in our nation's maritime industry. These academic institutions are located in sixteen states and one U.S. territory.

"Our collaboration with these institutions represents an important expansion of MARAD's role in supporting maritime education and will help form pathways to good-paying American jobs in our nation's maritime industry," said U.S. Transportation Secretary Pete Buttigieg.

MARAD may now start working with the designated institutions to enter into cooperative agreements to help advance recruitment of students and faculty, enhance facilities, award student credit for military service, and potentially receive assistance in the form of surplus equipment or temporary use of MARAD vessels.

Authorized under the National Defense Authorization Act of 2018, the CoE program is designed to assist the maritime

industry in gaining and sustaining a well-trained labor force while enhancing diversity and inclusion in the industry.

“The CoE designations recognize the high standard of maritime education and training provided by the designated community and technical colleges and maritime training centers. These institutions play vital roles in our nation’s maritime industry by providing the training and skills students need to begin and advance careers afloat and ashore,” said Acting Maritime Administrator Lucinda Lessley.

Information regarding the CoE program and the application process was disseminated through Federal Register notices. Successful applicants include accredited community colleges, technical colleges, and maritime training centers under State supervision. A searchable, interactive map is available to provide information on each CoE designee. For additional information, please visit Centers of Excellence on the MARAD website.

International Maritime Security Construct Releases New Bridge Reference Card Edition

A boarding team from dock landing ship USS Whidbey Island (LSD 41) approaches merchant vessel Golden Nori after pirates released the Japanese chemical tanker in December 2007. The IMSC has released its new Bridge Reference Cards, which help merchant mariners deal with situations like this. *U.S. NAVY /*

Cmdr. Michael Junge
MANAMA, Bahrain – The International Maritime Security Construct (IMSC) released the newest edition of its IMSC Bridge Reference Cards, May 13, Task Force sentinel Public Affairs said in a May 17 release.

Originally published in June 2020, the reference cards are designed as a quick-access distillation of guidance found in the United Kingdom Marine Trade Operations' (UKMTO) Best Management Practices to Deter Piracy and Enhance Maritime Security, edition 5 (BMP5) and address specific scenarios that threaten the physical security of merchant vessels.

"Mariners are thoroughly trained on how to respond in emergencies but being face-to-face with a real-life threat is a completely different experience compared to an exercise," said Lt. David Bourne, British Royal Navy, the information officer at Coalition Task Force Sentinel (CTF Sentinel), the operational arm of IMSC.

"It is important to have authoritative, but easy to understand, guidance at hand, especially when you are trying to think clearly with everything happening so quickly."

The newest edition has sections specifically devoted to limpet and sea mine awareness threats. Since May 2019, several maritime incidents in the Middle East region have been related to either mines or water borne improvised explosive devices (also addressed in the cards).

"Our aim is to deliver a greater understanding of mines and other explosives which have the potential to cause loss of life or severe damage to a vessel, and empower seafarers to alert authorities," said U.S. Navy Lt. Cmdr. Danielle Centeno, the task force's Maritime Trade Officer.

"Often times, under the cover of darkness, perpetrators use small boats or divers to plant limpet mines, which are mines that magnetically adhere to the metal hull of merchant

vessels.”

The reference cards provide industry best practices addressing factors seafarers and vessel masters should consider when facing threats to include being approached by a suspicious craft in port or at anchor.

“Mariners don’t have time to waste when facing a possible crisis. They must assess what they see and know who to call,” said Centeno.

If seafarers understand the threat, they are more likely to identify nefarious or suspicious activity before an attack materializes.

The cards also address what to do if hailed by unknown vessels or aircraft exhibiting threatening or harassing behavior, impeding safe navigation, or attempting to illegitimately alter one’s course within international waters.

“These bridge cards serve as a reminder to professional mariners that they are not alone,” said Royal Navy Commodore Adrian Fryer, CTF Sentinel’s commanding officer.

“Rather, there are a number of organizations like IMSC, UKMTO (United Kingdom Maritime Trade Operations), and other national defense forces that are devoted to protecting freedom of navigation.”

UKMTO is a British Royal Navy capability with the principal purpose of providing an information conduit between maritime security forces and the wider international maritime trade community.

IMSC continues to work together with industry partners to safeguard freedom of navigation and the free flow of commerce and to reassure merchant shipping by deterring and exposing state-sponsored malign activity that threatens security of the maritime commons in the Arabian Gulf, Gulf of Oman, Arabian

Sea, Gulf of Aden and the Southern Red Sea.

Crowley Completes First U.S. Design for Fully Electric Tug with Autonomous Technology

An illustration of Crowley's fully electric tugboat with autonomous technology. *CROWLEY ENGINEERING SERVICES*

SEATTLE – Crowley Engineering Services has completed the design of the first fully electric U.S. tugboat with autonomous technology, providing operators a sustainable and high-performing system for ship assist and harbor services in any port, the company said in a April 19 release.

The Crowley design, powered by the expertise of recently integrated subsidiary Jensen Maritime, leverages a large battery system and power saving technology to operate in a

fully electric mode while producing zero air emissions or greenhouse gases. The 82-foot tug will provide 70 short tons of bollard pull, featuring an Azimuthing drive propulsion system with two 1,800 kW motors and a 6 MWh battery.

The new design is featured in an animated video available here.

The design also supports fully customizable features to meet the vessel design requirements with the future in mind. The platform design can be adjusted for alternate power capacities suitable for a standard hybrid framework if desired. The fully modular batteries allow for upgrades as technology changes. In addition, Crowley has developed an onshore charging station to fully support charging and reliable performance at the home port.

“Crowley’s design provides operators the tugboat solution to continue serving ships quickly and powerfully, while reducing their environmental impact by eliminating a carbon footprint,” said Ray Martus, vice president, Crowley Engineering Services. “This new design sets the standard for innovation by showing that sustainability and power can work together seamlessly in our maritime industries.”

With no exhaust stack, the tug has 360 degrees of visibility from the pilot’s station, allowing the operator to see without obstruction. The tug has also been designed for future autonomous operation to increase the safety and efficiency of the operation including integrated automation and control systems. The intelligent maneuvering and control system offers more efficient vessel operations and allows masters to focus holistically on the overall control and positioning of the vessel in increasingly busy harbors.