

# **Elbit Selected to Provide Maritime UAS to the European Maritime Safety Agency**

HAIFA, Israel – Elbit Systems Ltd. has been awarded a framework contract for maritime unmanned aircraft system (UAS) patrol services to be provided by the European Maritime Safety Agency (EMSA) to countries in the European Union, the company said in a Nov. 1 release. The contract is for a two-year base period and two single-year option periods. If fully ordered, the total contract value is approximately \$68 million.

Under the contract, and in cooperation with CEiiA, a leading engineering company in Portugal, Elbit Systems will lease and operate its Hermes 900 maritime patrol UAS and its ground control station. A persistent long-range unmanned maritime surveillance system tailored for littoral and blue water operations, the Hermes 900 will feature maritime radar, an electro-optic payload, satellite communication and an automatic identification system receiver. Thus configured, the Hermes 900 will enable persistent monitoring of vast swathes of sea and long coastlines and effective identification of suspicious activities and potential hazards.

“Having been selected by the European Union authorities is yet another vote of confidence in the Hermes 900 by following additional contract awards for this UAS in Europe, Asia Pacific, Latin America and Israel,” said Elad Aharonson, general manager of Elbit Systems ISTAR Division. “Extensively deployed, the Hermes 900 family of UAS continuously expands its capabilities introducing the capability to operate in civilian airspace and integrating self-protection suites and stronger payloads.”

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# UTC Aerospace Systems Develops World's Highest- Resolution SWIR Camera for ONR

CHARLOTTE, N.C. – Under a contract with the Office of Naval Research (ONR), UTC Aerospace Systems' Sensors Unlimited business has developed the world's highest-resolution indium gallium arsenide Near Infrared/Shortwave Infrared (NIR/SWIR) imaging sensor, the company announced Oct. 31.

The new sensor includes a 16-megapixel photo-detector array on a 5-micron pitch, providing roughly 16 times more detail than the company's existing high-definition sensor, released in 2012, which has a resolution of 1.3 megapixels. UTC Aerospace Systems is a unit of United Technologies Corp.

The first-of-its-kind sensor is hybridized to a matching silicon Complementary Metal Oxide Semiconductor read-out integrated circuit and packaged into a hermetically sealed focal plane array. Imaging electronics were also designed and developed to integrate the focal plane array into a complete imaging camera.

Per ONR's requirement, the sensor is compatible with the RQ-21A payload SWAP (size, weight and power) envelope and offers the following capabilities:

- High coverage rate spectral sensing in the SWIR band.
- Ability to continuously monitor a wide area activity at a resolution (temporal and spatial) consistent with dismount detection/tracking.

- High fidelity inspection sensing in both of the above collection modes.
- Autonomous identification of objects, behaviors and materials of interest with accuracy rates high enough to enable a useful real-time dissemination of information directly to warfighters.

UTC Aerospace Systems developed the sensor for the U.S. Navy's Spectral and Reconnaissance Imagery for Tactical Exploitation (SPRITE) program and has delivered four prototypes to the service as part of a three-year, \$9.7 million award.

"Our newest SWIR camera uses groundbreaking technology to provide operators with a higher resolution and greater level of detail than ever before," said Michael Daugherty, program manager, UTC Aerospace Systems. "For the warfighter, this means an improved ISR [intelligence, surveillance and reconnaissance] situational awareness capability. We're honored to support the U.S. Navy and look forward to continuing to support the SPRITE program in the years ahead."

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## **U.S., Canadian Forces Wrap Up Vigilant Shield 19**

OAK HARBOR, Wash. – As the sun crept over the Olympic Mountains Oct. 27, Sailors assigned to Explosive Ordnance Mobile Unit (EODMU) 1 assembled their gear on the shore. Their mission – find, render safe, and exploit inert training mines to protect the harbor during mine countermeasure operations during exercise Vigilant Shield 19.

"The purpose of this exercise is to implement our homeland defense strategy," said Lt. j.g. James Knox, platoon leader

from EODMU 1's Platoon 122, according to a release from U.S. Northern Command (USNORTHCOM). "We are working together with other services and nations to mitigate the hazards of mines and/or improvised explosive devices."

VS 19 is a binational exercise between the United States and Canada designed to assess and enhance the readiness of North American Aerospace Defense Command (NORAD), USNORTHCOM, Canadian Joint Operations Command, their components, and mission partners to defend the homelands from attack. This year marked the 13th iteration of the annual homeland defense exercise which ran from Oct. 24-28.

The maritime exercise, which was led by USNORTHCOM's Navy component command, U.S. Navy North, deployed U.S. and Canadian maritime assets and personnel to Puget Sound for mine countermeasure operations. This exercise provided crucial training opportunities to improve interoperability and to demonstrate the U.S. and Canada's ability to defend North America in a binational environment. Their mission set included the location and exploitation of simulated mines in domestic waterways.

"Maintaining open ports is vital to our national interests," said Rear Adm. Dave Welch, commander of Naval Surface and Mine Warfighting Development Center (SMWDC). "The maritime component of this exercise provided our teams the opportunity to work together to maintain and increase our capabilities."

Operationally, Welch leads SMWDC's Mine Warfare Division's Mine Warfare Battle Staff as the U.S. Navy's Theater Mine Warfare commander or Global Mine Warfare commander. In this role, he leads or supports mine warfare operations in every numbered fleet and combatant command area of responsibility.

The maritime environment is inherently complex and NORAD and USNORTHCOM leverage timely information sharing with an array of American, Canadian, allied and interagency partners to

close gaps and seams in the maritime environment.

Back in Puget Sound, platoon leader Knox reflected on the importance of mine warfare domestically at the tactical level.

“In harbors like San Francisco, San Diego, and here in the Pacific Northwest, it is important that we [the military] and the merchant ships have freedom of movement,” Knox said. “We need to make sure that commercial vessels don’t have a reason to be afraid to deliver goods on a daily basis.”

During the exercise, Knox and his team located inert, simulated mines and towed them to the beach via rigid-hull inflatable boat so the team could run various tests on the devices. While challenging, the various teams working together including elements of Mine Countermeasures Squadron 3 and Mine Countermeasures Division 31 were able to achieve their training objectives.

“The key challenge of these exercises is that we want to locate the mine and exploit it,” said Senior Chief Explosive Ordnance Disposal Technician Justin Lewis. “Practicing these skills in the cold waters of the Pacific Northwest ensures that we can respond to a threat anywhere, under any conditions.”

Adding to the challenges provided by the weather conditions was the need to fully examine and exploit the inert training mine – not something that can be done where the mine lays in the water.

“We don’t want to neutralize the mine where it sits,” said Lewis. “We wanted to get it on land so we could run forensic tests to figure out what kind of mine it is. The scenario for this was that the Oak Harbor area was all mined, and in the unlikely event that this happened, we would be able to operate accordingly.”

According to Knox, teamwork and practice are integral to

maintaining the skills necessary to keep waterways open and safe. Neutralizing and dispensing of any threat that is found quickly is a high priority as there are many people and wildlife that call this region home.

USNORTHCOM partners to conduct homeland defense, civil support and security cooperation to defend and secure the United States and its interests. USNORTHCOM's area of responsibility includes air, land and sea approaches and encompasses the continental United States, Alaska, Canada, Mexico and the surrounding water out to approximately 500 nautical miles.

NORAD is a bi-national command formed by a partnership between Canada and the United States. NORAD provides aerospace warning, aerospace control and maritime warning for North America. USNORTHCOM conducts homeland defense, civil support and security cooperation to defend and secure the U.S. and its interests. The two commands have complementary missions and are co-located together on Peterson Air Force Base, Colorado.

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## **Port of Everett to Receive \$5.95 Million DOT Loan for Marine Terminal Rail Improvements**

WASHINGTON – U.S. Transportation Secretary Elaine L. Chao announced Nov. 1 that the U.S. Department of Transportation's (DOT's) Build America Bureau will provide up to a \$5.95 million Railroad Rehabilitation and Improvement Financing (RRIF) loan to the Port of Everett, Washington. The loan is for the Marine Terminal Rail Improvements Phase II Project.

“This funding will help fund a key port in Washington state to handle more cargo, thereby helping our country remain competitive in the increasingly global economy,” Chao said.

The port is a natural deep-water port on Port Gardner Bay. As the third largest container port in the state of Washington, Everett is a major center of commerce. The port specializes in the handling of oversized and overweight cargoes and provides services to diverse businesses in a variety of industries, including aerospace manufacturer Boeing.

The project will expand on-terminal rail capacity to increase the amount of cargo that can be processed through the port. It will also alleviate local road congestion. The project provides approximately 3,300 lineal feet of on-terminal working track, more than doubling the operational capacity of rail at the seaport. It will also relocate a 39,000-square foot warehouse for use to provide cover for rail cargo.

“Completing critical infrastructure upgrades like this will better position the port and its facilities to handle the larger vessels and heavier cargoes and other opportunities on the horizon,” said Glen Bachman, Port of Everett Commission president.

The bureau, which administers the RRIF credit program, was established as a “one-stop shop” to streamline credit opportunities, while also providing technical assistance and encouraging innovative best practices in project planning, financing, delivery, and monitoring. To date, the RRIF credit program has closed approximately \$5.4 billion in financings.

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# Coast Guard Forces to Provide Maritime Security for APEC Summit

ALAMEDA, Calif. – U.S. Coast Guard service members are scheduled to provide port security for the Asia-Pacific Economic Cooperation (APEC) Economic Leader's Summit Nov. 12-18 in Port Moresby, Papua New Guinea (PNG), the Coast Guard Pacific Area said in an Oct. 31 release.

The deployment of Coast Guard personnel comes after U.S. Ambassador to PNG Catherine Ebert-Gray and PNG Police Commissioner Gary Baki signed a first-of-its-kind memorandum of understanding last week authorizing the Coast Guard to enforce security zones near Port Moresby during the summit.

Leaders and senior officials from 21-member nations are scheduled to attend the summit, including Vice President Mike Pence representing the United States.

"APEC Leader's Week marks the culmination of Papua New Guinea's efforts over the past two years as a host of the 2018 summit," said Ebert-Gray. "With dignitaries arriving from the 21 APEC economies, the United States and the U.S. Coast Guard is happy to offer its support in providing safety and security operations to supplement the Joint Security Task Force efforts to protect Papua New Guinea ports, waterways and coastal areas during this significant international event."

The Coast Guard is deploying small boats and nearly 100 specialized members as part of an adaptive force package to provide port security, waterside protection and anti-terrorism capabilities prior to and during the summit. The security teams will work in coordination with PNG Police and partner nations' security forces.

The APEC security mission is one of several recent joint operations conducted by the Coast Guard in the Western Pacific. In August, the service participated in the 17th annual Southeast Asia Cooperation and Training exercise, which brought together service members from navies and coast guards from nine nations to focus on increasing maritime domain awareness through collaborative and coordinated information sharing.

The Coast Guard is also engaged in the Oceania Maritime Security Initiative, with law enforcement detachments deployed on supporting U.S. naval vessels such as the guided-missile destroyer USS Shoup, assisting Pacific nations with protecting their exclusive economic zones and combating illegal, unreported and unregulated fishing.

These deployments support the Coast Guard's broader efforts to strengthen the United States' relationships with partner nations in the Western Pacific, enhancing their maritime capabilities and governance, and supporting regional stability and the security of global maritime commons.

"The United States is a Pacific nation," said Vice Adm. Linda Fagan, U.S. Coast Guard Pacific Area commander. "We have deep and long-standing ties to our partners in the region, and more importantly, we share a strong commitment to a rules-based international system that promotes peace, security and shared prosperity."

# Migrants to the Dominican Republic Following At-Sea Interdiction

SAN JUAN, Puerto Rico – The crew of the Coast Guard Cutter Winslow Griesser returned 24 migrants to authorities in Santo Domingo Oct. 30 following the at-sea interdiction of a migrant vessel Oct. 17 in waters approximately 22 nautical miles northeast of Punta Cana, Dominican Republic.

The interdiction is the result of ongoing efforts in support of Operation Unified Resolve, Operation Caribbean Guard and the Caribbean Border Interagency Group (CBIG).

“The excellent coordination between three Coast Guard cutters and Coast Guard Sector San Juan ensured the safe return of all 24 persons to the Dominican Republic and serves as a constant reminder of the inherent dangers associated with taking to the sea in such overloaded and unseaworthy vessels,” said Lt. Luke A. Walsh, Winslow Griesser commanding officer.

During a routine patrol of the Mona Passage, the crew of a Coast Guard HC-144 Ocean Sentry maritime patrol aircraft detected a grossly overloaded 20-foot migrant boat in international waters traveling illegally toward Puerto Rico. Coast Guard Sector San Juan watchstanders diverted the Coast Guard Cutter Thetis to interdict the vessel.

Shortly thereafter, Thetis arrived on scene with the migrant vessel that was disabled and taking on water. Thetis crew safely embarked all 24 migrants, a Haitian man and 23 Dominicans, including an adult woman and two male minors. Once aboard a Coast Guard cutter, all migrants receive food, water, shelter and basic medical attention.

The migrants were subsequently transferred from Thetis to the

Coast Guard Cutter Joseph Napier and then to Winslow Griesser for their final transport to the Dominican Republic.

Thetis is a 270-foot medium-endurance cutter homeported in Key West, Florida, while Joseph Napier and Winslow Griesser are 154-foot fast-response cutters homeported in San Juan.

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## **L3 Technologies Awarded Contract for U.S. Navy's Next-Generation Jammer**

NEW YORK – L3 Technologies has been selected for a \$36 million demonstration of existing technologies (DET) contract award for the U.S. Navy's Next-Generation Jammer Low Band program, the company said in an Oct. 30 release. The DET program encompasses a period of performance of 20 months, culminating in a demonstration at Naval Air Station Patuxent River, Maryland.

The Next-Generation Jammer will augment, and eventually replace, the ALQ-99 tactical jamming system currently integrated on the EA-18G Growler aircraft.

“Our team is thrilled with the opportunity to participate in this important Navy program,” said Sean J. Stackley, corporate senior vice president and president of Communications & Networked Systems. “As the spectrum converges between communications and electronic warfare, we saw a chance to provide a unique solution that addresses current, advanced and emerging threats.”

Over the past few years, L3 Technologies has conducted

successful Navy technology demonstrations that operate cooperatively in electronic attack and electronic sensing. These exercises proved L3's unique capabilities and technological approach were well-suited for addressing the Navy's requirements and served as building blocks for the NGJ program.

"We listened closely to our customers," Stackley said. "We took a nontraditional approach and teamed with small businesses with a strong track record of performance in developing truly innovative capabilities for recent Navy programs. L3 is proud to have earned the privilege to participate in the NGJ program, and we are committed to delivering the performance our Navy customer needs."

Work on this program will be executed by L3 Broadband Communications in Salt Lake City, Utah.

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## **Armor Express Wins Marine Corps Soft Armor Contract Award**

CENTRAL LAKE, Mich. – Central Lake Armor Express Inc., a leading manufacturer and distributor of high-performance armor solutions, announced Oct. 30 that it has been awarded a multiyear, firm-fixed-price, indefinite-delivery/indefinite-quantity contract from the Marine Corps Systems Command.

The contract was competitively procured as a total small business set-aside, with a potential value of \$59.4 million. Under the terms of the award, the Company will provide up to 65,469 Plate Carrier Generation III-Soft Armor Inserts and

data reports, with production expected to be completed by October 2023.

Jim Henderson, CEO of the holding company that owns both Armor Express and KDH Defense Systems said, “It is our extreme honor to be chosen by the U.S. Marine Corps for this prestigious award, and we thank them for the trust they have placed in us. We also commend ongoing efforts by the U.S. armed forces to develop lighter body armor systems, while improving the modularity and flexibility of plate carriers deployed in the field. It is the servicemen and women who ultimately benefit, and all of us at Armor Express and KDH Defense Systems, stand ready to deliver.”

Henderson added, “With the recent contract extensions KDH received for the Modular Scalable Vest and Blast Pelvic Protection, along with this most recent ballistic protection award for Armor Express, we have secured over \$140.0 million of potential business with the U.S. armed forces over the past two months. Working in tandem with our supply chain and technology partners, it remains our goal to provide all customers with the most advanced, lightweight and comfortable protection, supported by unparalleled delivery and service.”

The company intends to leverage the manufacturing capabilities of KDH Defense Systems and will produce the ballistic armor at KDH’s state-of-the-art manufacturing facility in Eden, North Carolina.

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**Fairbanks      Morse      Awarded**

# Engine Contract for Navy's First Flight II LPD

WASHINGTON – Fairbanks Morse, an EnPro Industries company, has been awarded a contract to build and deliver the four main propulsion diesel engines (MPDE) that will power LPD 30, which will be the U.S. Navy's first LPD Flight II class ship, the company announced Oct. 30.

The newly designed ship will be based on the San Antonio-class hull, but the LPD Flight II is fitted with a fully capable flight deck and hangar, a well deck, and the vehicle and cargo capacities to support and sustain more than 500 combat-equipped Marines for up to 30 days. Each engine will feature common rail (CR) fuel injection technology.

The engines are scheduled to be delivered in the second and third quarters of 2020 to Huntington Ingalls Shipbuilding in Pascagoula, Mississippi. Fairbanks Morse will then support installation, testing and sea trials for the vessel. The four sequentially turbocharged 16-cylinder FM Colt-Pielstick PC 2.5 diesel engines with CR fuel injection will deliver over 31 megawatts of propulsion power and are among the largest medium-speed diesel engines manufactured in the United States.

“As an American manufacturer of medium speed engines, we take great pride in delivering engines and systems for the U.S. Navy and U.S. Coast Guard. This contract is particularly special as it is for the first LPD Flight II class ship,” said Deepak Navnith, Fairbanks Morse president. “As a company, we place significant value on innovation and it was at the heart of this win. The common rail fuel injection technology on the LPD PC 2.5 engines will lower total lifecycle costs for the Navy by reducing fuel consumption, lowering emissions, and reducing engine maintenance, enabling the Navy to spend more time at sea at a lower cost.”

The common rail system technology uses a common high-pressure fuel header, high-pressure pumps, electronically controlled fuel delivery, electronic governing system and a new control system to deliver a precise amount of fuel throughout all engine operations. The common rail technology will deliver improved specific fuel consumption at all operating points, resulting in millions of dollars saved by the Navy over the operational lifetime of the power systems.

Fairbanks Morse engineers in Beloit, Wisconsin, worked with the MAN Energy Solutions teams in Augsburg, Germany, and St. Nazaire, France, along with the U.S. Navy to apply MAN's proven commercial technology from the 32/44CR engine onto the FM Colt-Pielstick PC 2.5V STC engine.

Each engine will be built at the Fairbanks Morse manufacturing facility in Beloit, creating numerous jobs for American workers. Fairbanks Morse engines are installed on approximately 80 percent of U.S. Navy ships that have a medium-speed power application.

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## **Boeing Awarded Contract for F/A-18 Super Hornet, Growler Modifications**

PLANO, Texas – Boeing will continue its nearly 20-year legacy of F/A-18 modification work under a new \$204 million contract award from Naval Air Systems Command, the company said in an Oct. 26 release.

The sole-source contract, which covers inspections, modifications and repair work on U.S. Navy F/A-18E/F Super

Hornets and EA-18G Growlers, has a base option of \$62 million.

“Our team, many of whom are Navy and Marine Corps veterans, understand the critical need for aircraft readiness and mission availability,” said retired Adm. Pat Walsh, vice president of U.S. Navy & Marine Corps Services for Boeing Global Services. “We look forward to partnering with the Navy, as we have since 1999, on extending the service life of F/A-18s for continued reliable operation.”

Boeing will perform the work at the company’s Cecil Field facility in Jacksonville, Florida. In addition to periodic maintenance inspections and repairs, Boeing performs structural and electrical modifications. About 28 aircraft are expected to be inducted for maintenance and modifications during the first year of the contract.