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Engineers,
Let me say I am honored and humbled to take command of YOUR Marine Corps Engineer School (MCES). Over the past decade the school has expanded to become a significant contributor to our overall community, which plays an indispensable role in supporting our Combat Engineers and Utilities Marines in a dynamic and rapidly changing world. In a very short period since assuming command I have been able to observe the quality of the instructors and the support staff here and can confidently say they are making a difference --- because they care about every facet of the engineer Military Occupational Specialty (MOS). The MCES staff is dedicated to preparing young Marines for their role in the operating forces at every rank from entry-level to senior leadership. Finally, the MCES staff is working to enhance interaction with the operating forces to ensure our efforts support your needs in the areas of people, equipment, and doctrine.
I was once again reminded of the camaraderie and pride amongst Engineers when I conducted a visit to the recently completed Engineer Monument at the National Museum of the Marine Corps (NMMC). The monument is beautifully crafted and has been placed in a peaceful and fitting section of the surrounding Semper Fidelis Memorial Park. For those who were a part of the monument's design, development, funding, construction, and dedication --- job well done and thank you for your efforts! If you haven't been to the Engineer Monument and the NMMC, you are missing out and I highly recommend making the trip.
Marine Engineers continue to serve in harm's way to provide the Marine Air-Ground Task Force with mobility, counter-mobility, survivability, and general engineering. Engineers also support theater engagement plans across the globe to ensure maneuver of the force, enhance protection of the Marines and equipment, enable expeditionary operations and logistics, and shape the operational environment. It is truly amazing the quantity and quality of capabilities Engineers contribute to the overall combat and peacetime efforts of our Corps.
I look forward to working with everyone during the next few years. Please provide MCES with any input or recommendations regarding the Operational Engineer so we can continue refining this worthwhile product. I am pleased to see the articles from so many different units, but we can always do better – never stop looking to improve!
Semper Fidelis,
Colonel S. A. Baldwin
Commanding Officer, Marine Corps Engineer School

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1. 1st Combat Engineers Clear Way for Friendly Forces

By Sgt. Frances Johnson | Marine Expeditionary Brigade - Afghanistan | April 01, 2014

HELMAND PROVINCE, Afghanistan -- The Marines of 4th platoon, Mobility Assault Company, 1st Combat Engineer Battalion, conducted a route clearance operation in Helmand province, Afghanistan, March 24.

Route clearance missions are conducted in frequently traveled areas around Camp Leatherneck, ridding it of any explosive hazards along the way and allowing for better freedom of movement for coalition forces and the civilian population along the route.

"We pushed out to Route Red by Patrol Base Boldak," said Cpl. Cameron Brown, a combat engineer with 4th plt., MA Co., 1st CEB, and a Colorado Springs, Colo., native. "The infantry units have taken quite a few casualties over there due to vehicle-borne improvised explosive devices and complex ambushes, so they'll request engineer support over there to clear the routes they take before they actually take them."

Fortunately, the Marines did not come across any IEDs, but they came across other obstacles along the route.

"A lot of the challenges we face are the people we come into contact with," said 1st Lt. Joshua Betz, 4th platoon commander, MA Co., 1st CEB, and an Eaton, Colo., native. "A lot of the local kids throw rocks and stuff at the convoy, and that definitely hinders our ability to maneuver safely around the civilians."

Brown explained the complications they encountered during their mission, but still had a positive outlook on overcoming the challenges.

"I think we did fantastic," said Brown. "This was the first time taking this route; we had to deal with close quarters and there not really being actual roads and trying to mind everyone else's property and the crops. I mean, trying to hit the check points we needed to on the fly and mitigating our footprint in the village, I think it was actually really good."

Though the platoon came across a few hurdles along the way, they performed well and all came back safely to Camp Leatherneck, with only rock damage to a few of the vehicles' windows.

"They blow me away every time we go outside the wire," said Betz of his Marines. "Especially in a very rural area like that, the terrain is very constricting. The route we had originally planned was actually nothing like the route that was actually taken today, and that's just because some of the roads our imagery shows as existing have been grown over with some of the poppy fields or have been destroyed for whatever reason. It just blows me away having to deal with so many variables, and I couldn't ask for a better group of guys to get us through this mission today."

Photos 1 & 2: Marines with 4th platoon, Mobility Assault Company, 1st Combat Engineer Battalion, listen to a debrief of their route clearance mission through Helmand province, Afghanistan, March 24, 2014. Route clearance missions are conducted in frequently traveled areas around Camp Leatherneck, ridding it of any explosive hazards along the way and allowing for better freedom of movement for coalition forces and the civilian population along the route. (Photos by Sgt. Frances Johnson)

Photo 3: A convoy makes a brief stop during their route clearance mission through Helmand province, Afghanistan, March 24, 2014. (Photo by Sgt. Frances Johnson)

Photo 4: Marines stand by their vehicles ready to start their route clearance mission through Helmand province, Afghanistan, March 24, 2014. (Photo by Sgt. Frances Johnson)

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2. 2d CEB Clears the Way for Last Marines to Depart Sangin, Afghanistan

By Cpl. Cody Haas | Marine Expeditionary Brigade - Afghanistan | May 12, 2014

CAMP LEATHERNECK, Afghanistan

Marines with 2nd Combat Engineer Battalion conducted multiple route clearance missions during retrograde operations in northern Helmand province, Afghanistan, May 3-5.

“Our mission is to verify all threats are free from the road,” said 2nd Lt. Joseph Jamgochian, 4th platoon commander, Route Clearance Company, 2nd CEB. “Overall our missions go very smooth without any hitches because the Marines spend a lot of time preparing their gear prior to each operation.”

Combat engineers are constantly checking and double-checking their equipment and vehicles. Mine detection equipped vehicles are verified for proper working order each day.
“We spend most of our time on maintenance with our trucks to make sure nothing is going to go wrong,” said1st Lt. Joseph Garcia, 2nd platoon commander, Route Clearance Co., 2nd CEB.

Marines and sailors on mounted patrols conducting operations rely on combat engineers and route clearance platoons to verify the routes to and from patrol bases and forward operating bases are clear of threats, such as improvised explosive devices.

“The Marines do a great job on missions,” said Jamgochian, a 24-year-old native of Santa Maria, Calif. “They adapt very quickly to any situation and overcome any obstacles to complete the mission.”

Each route clearance platoon that attaches to a mounted patrol consists of Marine operators, several minesweeping vehicles and improvised explosive device detection dogs with their handlers.

Most recently, the combat engineers were responsible for clearing the way for retrograde operations for Marines and equipment leaving Sangin, Afghanistan, and returning to Camp Leatherneck.

“We cleared the route from Sabit Qadam in Sangin District for Marines with 1st Battalion, 7th Marine Regiment,” said Garcia, a 24-year-old native of Miami. “It was a historic occasion. The Marines that have been rotating out there for more than four years now have handed it completely over to the Afghan National Army.”

Performing an in-depth clearance of IEDs of a frequently traveled route is a specialty among the Marines with 2nd CEB. During a 65-mile mounted convoy from Sabit Qadam, there were no vehicle maintenance incidents due to the preparation prior from Marines with Route Clearance Co. No aspect is overlooked or underestimated.

“The Marines with the route clearance platoon who attached with us are great at what they do,” said 1st Lt. Seth Monroe, motor transportation platoon commander with Combat Logistics Battalion 7. “They know their job in and out and get done what needs to be done.”

“We take pride in our job,” said Lance Cpl. Andrew Rodgers, a combat engineer with 2nd CEB and native of Dothan, Ala. “Our job is to find IEDs and keep the unit we’re attached to out of harm’s way. The Marines of 2nd CEB make sure everyone comes home safe every time we go out.”

Photo: The Buffalo, a mine-protected vehicle with a robotic arm with a claw and spike attached, uses its claw to search for more buried anti-tank mines during a route clearance course conducted for the Marines of Mobile Assault Company, 2nd Combat Engineer Battalion, 2nd Marine Division, aboard Marine Corps Base Camp Lejeune, Nov. 17. Throughout the day the instructors took note of their dispersion, radio communications, reaction time, how Husky was maneuvering and scanning for IEDs, how the unit set up security and many other details that will affect them when they deploy. (Photo by Lance Cpl. Barrera)

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3. 8th ESB Stays Sharp on Trigger

By Cpl. Shawn Valosin |2nd Marine Logistics Group – Camp Lejeune, NC | April 16, 2014

Marines with Alpha Company, 8th Engineer Support Battalion, 2nd Marine Logistics Group assaulted the SR-8 range here with M-249 Squad Automatic Weapons, M-240B medium machine guns and the Corps' old work horse, the M-2.50-caliber machine gun, April 14.

"We want to familiarize our Marines with the weapons systems they will be using on convoys or in tactical environments," said Sgt. Matthew Monteforte, a State College, Pa. native and platoon guide with Alpha Co. "Some of these Marines haven't fired machine guns since Marine Combat Training. This allows them to get hands on with the actual machine guns and builds their confidence with the weapons systems."

Approximately 33 Marines with 8th ESB attended the training. They received classes the week prior to firing and additional instruction the morning of the shoot.

The courses covered characteristics of the machine guns such as rates of fire and maximum effective ranges. They also reviewed operating procedures, maintenance and immediate actions designed to clear jams and keep the weapons blazing on the firing line.

"I love getting to shoot guns that are bigger than myself," said Lance Cpl. Julianna Bolanos, an Austin, Texas native and combat engineer with the company. "It's good knowledge to have, so if we get deployed we'll be confident in our abilities to use the weapons systems."

The Marines fired at targets ranging from 100 yards to 400 yards away. Prior to firing each weapon, the shooters were required to answer a question about that particular machine gun from the personnel safety officers.

The Marines slid behind their machine guns on the firing line early in the afternoon and released more than 2,000 rounds in controlled bursts under the guidance of their PSOs.

Marine units routinely use each of the weapons systems fired by 8th ESB in deployed environments, whether mounted on a vehicle, carried by hand or nestled inside a helicopter.

Proficiency with the guns is crucial, especially for the Marines with the battalion, who not only carry out their own missions, but routinely augment other units in operational environments.

Alpha Co. spent more than three hours conducting drills at the range, ensuring that every Marine had the opportunity to get hands on with the weapons and left confident in their ability to employ them at a moment's notice.

Photo 1: A Marine with Alpha Company, 8th ESB, 2nd MLG fires an M-249 Squad Automatic Weapon under the supervision of a personnel safety officer at a machine gun range aboard Camp Lejeune, N.C., April 14, 2014. Marines with the company also fired M-240B medium machine guns and M-2 .50-caliber machine guns to maintain proficiency with weapons systems they may utilize during deployments. Marine Corps photo by Cpl. Shawn Valosin) (Photo by Cpl. Shawn Valosin)

Photo 2: A personnel safety officer readies ammunition for a Marine with Alpha Company, 8th Engineer Support Battalion, 2nd Marine Logistics Group on the firing line at the SR-8 range aboard Camp Lejeune, N.C., April 14, 2014. The training helped the Marines learn how to release accurate, controlled bursts of machine-gun fire under the guidance of safety officers who provided feedback on the Marines' performance. (U.S. Marine Corps photo by Cpl. Shawn Valosin) (Photo by Cpl. Shawn Valosin)

Photo 3: A Marine with Alpha Company, 8th Engineer Support Battalion, 2nd Marine Logistics Group fires an M-249 Squad Automatic Weapon during a machine gun shoot aboard Camp Lejeune, N.C., April 14, 2014. The hands-on training was particularly important to the battalion's Marines, who not only conduct their own missions, but regularly augment other units in the field. (U.S. Marine Corps photo by Cpl. Shawn Valosin) (Photo by Cpl. Shawn Valosin)

Photo 4: Ammunition belts cover the tables of the SR-8 range aboard Camp Lejeune, N.C., while Marines with Alpha Company, 8th Engineer Support Battalion, 2nd Marine Logistics Group distribute it amongst themselves April 14, 2014. Marines with the company used M-249 Squad Automatic Weapons and other machine guns to lay waste to targets at varying distances. (U.S. Marine Corps photo by Cpl. Shawn Valosin) (Photo by Cpl. Shawn Valosin)

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4. Bridging Gap: 7th ESB Marines Train in Colorado River

By Lance Cpl. Keenan Zelazoski | 1st Marine Logistics Group | March 28, 2014

LAUGHLIN, Nev. - Metal scraped against dirt as a Rubber-Tired, Articulated-Steering, and Multipurpose Tractor [TRAM] broke down dirt barricades, granting more than 60 Marines with Bridge Company, 7th Engineer Support Battalion, 1st Marine Logistics Group, access to the Colorado River after a 16-hour long convoy. This was just the beginning of a week-long training exercise to familiarize the Marines with crossing a flowing body of water while transporting heavy equipment.

The Marines traveled 300 miles to Laughlin, Nev., for the opportunity to face the challenging current of the river, and put their training to the test.

"If we get deployed somewhere, and we need to cross a river, the bridge has been taken out and the other side is impassible, we can put equipment on the raft, move it up-river to an area that is passible, and maintain movement forward in an expeditionary environment," said Gunnery Sgt. Jeremy King, company first sergeant with Bridge Co., 7th ESB, 1st MLG.

Without this resource, moving equipment over rapid waters would be significantly more difficult. The ability to bridge equipment across water is a valuable asset for Marines as an amphibious fighting force.

"Part of our mission in Bridge Co. is to provide bridging capabilities for the 1st Marine Expeditionary Force," said Capt. Jonathan Hudson, company commander, Bridge Co., 7th ESB, 1st MLG. "Part of that includes rafting. It wasn't easy to travel 300 miles to train out here, but we wanted a challenge … so it was definitely worth the trip."

As the Marines prepared to dive head first into the exercise, on rough waters, many had their doubts in how productive they would be in transporting gear up stream.

"We did the bridge reconnaissance right after we arrived, and I'll admit I was a little skeptical," said Cpl. Anderson Krieger, raft commander with Bridge Co., 7th ESB, 1st MLG. "I didn't think we could ferry equipment against the current. We weren't used to operating in a current at all."

In the early stages of the exercise, the Marines driving the boats navigated the river, both with the current and against it, in order to get a feel for how they should be operating in the new environment.

"It was definitely a crawl, walk, run approach to the exercise," said King. "Safety is paramount when we are out here training on a public river."

As the days went on, the improved ribbon bridge, a multi-piece bridge that functions as a raft, was inserted into the river. The Colorado River's current moved at an average speed of five feet per second. This kind of momentum was a far cry from the relatively-calm conditions in the Del Mar boat basin where the Marines usually conduct this training.

"Marines have to move significantly faster than they had to in a boat basin," said Krieger. "The current carries the equipment downstream until everyone is in position and pushing it upstream. When we work on a river with expensive civilian houses on the other side, the last thing we want is to be too slow and ruin one of their boat ramps by crashing a very heavy piece of equipment into their property."

The Marines went from not being sure what they could do against the current, to being confident that they could operate in even tougher conditions if they had to. Throughout the week, the Marines ferried a substantial amount of weight up the river. The Marines transported a Humvee, a TRAM, and two 7-tons, weighing approximately 60,000 pounds, in just three trips.

"I couldn't ask for anything to go any better on the water, and that was the main challenge and focus of this training," said Hudson, a native of Lima, Ohio. "My Marines moved fast, did what they practiced, and this has been a huge success."

Photo 1: Marines with Bridge Company, 7th Engineer Support Battalion, 1st Marine Logistics Group, march to their training site for a rafting exercise on the Colorado River in Laughlin, Nev., March 17-21, 2014. More than 60 Marines trained in moving heavy equipment, to include 7-tons and Humvees, across a flowing body of water using Bridge Erection Boats and an Improved Ribbon Bridge. The IRB is a multi-piece floating bridge that can function as a raft. Despite being accustomed to training in a bay with little to no current, these Marines managed to transport two 7-tons up the river at the same time. (Photo by Lance Cpl. Keenan Zelazoski)

Photo 2: Marines with Bridge Company, 7th ESB operate Bridge Erection Boats as part of a rafting exercise on the Colorado River in Laughlin, Nev., March 17-21, 2014. More than 60 Marines trained in moving heavy equipment, to include 7-tons and Humvees, across a flowing body of water utilizing BEBs and an Improved Ribbon Bridge. The IRB is a multi-piece floating bridge that can function as a raft. The BEBs were used to push the raft against the current. Despite being accustomed to training in a bay with little to no current, these Marines managed to transport two 7-tons up the river at the same time. (Photo by Lance Cpl. Keenan Zelazoski)

Photo 3: A Bridge Erection Boat faces the current of the Colorado River. (Photo by Lance Cpl. Keenan Zelazoski)

Photo 4: Marines with Bridge Company, 7th ESB, drive a Combat Rubber Raiding Craft onto the back of an Improved Ribbon Bridge during a training exercise on the Colorado River in Laughlin, Nev. (Photo by Lance Cpl. Keenan Zelazoski)

Photo 5: Marines with Bridge Company, 7th ESB, push an Improved Ribbon Bridge against the current of the Colorado River during a rafting exercise aboard Laughlin, Nev. (Photo by Lance Cpl. Keenan Zelazoski)

Photo 6: Marines with Bridge Company, 7th ESB, ensure that an Improved Ribbon Bridge is not carried down river, while waiting for equipment to dismantle the IRB, during a training exercise on the Colorado River in Laughlin, Nev. (Photo by Lance Cpl. Keenan Zelazoski)

Photo 7: Marines with Bridge Company, 7th ESB, secure an Improved Ribbon Bridge, to extract it from the Colorado River.(Photo by Lance Cpl. Keenan Zelazoski)

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5. Combat Engineer Marines Conduct Transfer of Authority Ceremony in Afghanistan

By Cpl. Cody Haas | Marine Expeditionary Brigade - Afghanistan | April 29, 2014

Marines and sailors with 2nd Combat Engineer Battalion relieved 1st CEB during a transfer of authority ceremony aboard Camp Leatherneck, Afghanistan, April 20.

"Our transfer of authority ceremony was relatively low key," said Lt. Col. John Osborne, commander of 2nd Combat Engineer Battalion, Regional Command (Southwest). "The reality is our transition has been very smooth. We stay in touch with each other when we're not in theater."

The Marines and sailors of 2nd CEB, stationed at Camp Lejeune, North Carolina, deployed to Afghanistan in support of Operation Enduring Freedom to continue where 1st CEB left off. Stationed at Camp Pendleton, California, 1st CEB has been conducting route clearing assistance in Helmand province in order for local Afghans and coalition forces to travel safely through the area since their deployment began in October.

Route clearance is the act of verifying a certain route or roadway is clear of hazards such as improvised explosive devices.

“We plan to continue to sustain the operations of the Marine Air Ground Task Force and continue to support retrograding operations, route clearance and ensure the security patrol elements won’t be impeded by IEDs and are able to complete their mission,” said Osborne.

A route clearance unit is composed of Marine operators, several mine- sweeping vehicles and IED Detection Dogs with their handlers. A route clearance unit is a necessity for any security patrol or convoy leaving Camp Leatherneck. Improvised explosive devices are the main threat for coalition forces operating in Helmand province and the surrounding areas.

“There has been a lot of bloodshed and effort put into our mission’s success,” said Lt. Col. Andrew Winthrop, commanding officer, 1st CEB. “We have done our job up to this point and we have done it well. Second Combat Engineer Battalion has been set up for success, and it will be a remarkable success story once it’s completed.”

The engineer Marines are constantly conducting maintenance and double-checking their equipment to verify optimal working conditions every time they conduct a route-clearing task.

“The Marines are hard working and compassionate, but at the same time they are firm and fair, and look out for each other,” said 1st Sgt. Paul Costa, acting battalion sergeant major with 2nd CEB. “The bond with these guys is very strong. We trained really hard before we deployed, and I am confident in these guys.”

The Marines with 2nd CEB will continue to provide route clearance for the duration of the time coalition forces are deployed in Afghanistan.

“The Marines here are awesome,” said Osborne. “They are extremely competent, motivated and ready to get the job done.”
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6. Combat Engineers Build Bridge over Muddy Water for World Famous Mud Run

By Lance Cpl. Keenan Zelazoski | 1st Marine Logistics Group | June 02, 2014

Every year the Marines of Bridge Company, 7th Engineer Support Battalion, 1st Marine Logistics Group, construct a bridge for The World Famous Mud Race, aboard Camp Pendleton, Calif., May 29, 2014. The Mud Run is an annual 10-kilometer race with several obstacles, which can be negotiated individually or as a team. This year they built a bridge spanning 71 feet and weighing about nine tons.

“Building the bridge was a little bit more difficult than usual, due to the terrain, but we did an engineering reconnaissance before we came out here,” said Lance Cpl. Christopher De Casanova, combat engineer, Bridge Company.

Scouting the construction site beforehand is ordinarily done by more senior Marines, who know what to look for, to formulate a plan and ensure their Marines are safe during the construction, allowing the bridge to be built efficiently. However, their platoon sergeant wanted to provide the junior Marines with a unique learning experience. Sergeant Samuel Diaz, the platoon sergeant, said it was important for developing the leadership of junior Marines who will one day be in a leadership position.

“This is the first time we are building on a slope like this,” said Diaz, a native of Houston. “There were a few hiccups along the way, but now we have a sturdy bridge, and my Marines gained a lot of confidence when it comes to working in a less-than optimal environment.” Adding that the junior Marines gained insight to what they will do as leaders, Diaz said they were able to identify the difficulties involved with the bridging procedure. The most significant of which, were the unstable slope and narrow passage they worked in.

Unlike the majority of the bridges they build when training, this one will need to remain standing for the duration of the races.

“Usually we build a bridge and tear it down right after,” said De Casanova. “This time hundreds of people will run across it, including us. It is satisfying to see our hard work pay off in a real situation.”

On June 6, the Marines who built the bridge plan to participate in the Mud Run, as a unit, to increase morale. They will also be volunteering to support the event.

Photos: Combat engineers with Bridge Platoon, Bridge Company, 7th Engineer Support Battalion, 1st Marine Logistics Group, work together to move a roller beam that will support a bridge, May 29, 2014 for the World Famous Camp Pendleton Mud Run aboard Camp Pendleton, Calif. The annual Mud Run is a 10-kilometer race with several obstacles, which can be negotiated individually or as a team. This year they built a bridge spanning nearly 71 feet and weighing almost nine tons. On June 6, the Marines who built the bridge plan to participate in Mud Run, as a unit to increase, morale. They will also be volunteering to support the event. (Photos by Lance Cpl. Keenan Zelazoski)

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7. Engineer Company Marines Learn C-IED Fundamentals

By Lance Cpl. Unique B. Roberts | Marine Corps Air Station Cherry Point | March 17, 2014

More than 100 Marines with Engineer Company, Marine Wing Support Squadron 271, conducted counter-improvised explosive device training at Marine Corps Base Camp Lejeune, N.C., March 11 – 12.

During the training, the Marines learned the necessary skills to recognize and help eliminate IEDs in a combat environment.

In Iraq and Afghanistan, IEDs caused more casualties than all other weapon systems combined, according to Staff Sgt. Jessie C. McDonald, an engineer assistant with MWSS-271.

“The skills these Marines are learning are important because it reinforces the training the Marines have already had,” said McDonald. “The training also prepares them for operations in a forward environment.”

The Marines learned how to properly use detection equipment, such as holly sticks and compact metal detectors, to confirm IED placement, said McDonald. “The gear is essential because it confirms the presence of an IED.”

The Marines also reviewed how to conduct mounted patrols, weapons safety and IED awareness techniques.

During combat operations, Marines constantly look for threats that would affect the mission. IEDs are usually hidden from plain view, so Marines look for signs of IED placement, such as disturbed earth or out-of-place items.

Once a Marine has identified a possible IED, the area is cleared of personnel and equipment. A trained Marine then uses IED detection equipment to confirm the IED before requesting assistance from explosive ordnance disposal technicians.

While the Marines learned of IED awareness and responsiveness, they also grew closer as a unit, which increases their effectiveness in their overall mission.

“By reinforcing small unit leadership, team building skills, and overall comprehension of IED detection and mounted and un-mounted patrols, it allows the Marines to strengthen unit cohesion,” said McDonald.

The culminating event consisted of a vehicle-mounted patrol, where the Marines encountered multiple IED scenarios.

“The training has been going pretty well,” said Cpl. Johnnie D. Raulerson, a metalworker with MWSS-271.

“We don’t get the opportunity to train like this all the time, but it teaches our junior Marines things that are essential in the Marine Corps.”

C-IED training is important not just for the Marines of Engineer Company but for each Marine deployed in a combat environment, according to Raulerson.

“This information is important to everyone in the Marine Corps,” said Raulerson. “It could save everyone’s life. As a welder, I have deployed twice to Afghanistan – you never know when you’re going to get pulled to fight overseas and that’s why it’s important.”

Photo 1: Lance Cpl. Creston Wood practices techniques for marking the exact placement of an improvised explosive device at Marine Corps Base Camp Lejeune, March 11. Marine Wing Support Squadron 271 conducted squadron training March 3-12, focusing on strategies and techniques for countering IED attacks. Wood is a combat engineer with MWSS-271. (Photo by Lance Cpl. Unique B. Roberts)

Photo 2: Marines with Marine Wing Support Squadron 271 learn proper use of a holly stick from a counter-improvised explosive device instructor at Marine Corps Base Camp Lejeune, March 11. The training was a part of the Engineer Company C-IED training. (Photo by Lance Cpl. Unique B. Roberts)

Photo 3: Sgt. Trumaine Holmes (left) instructs Lance Cpl. Creston Wood (right) on proper use of a compact metal detector at Marine Corps Base Camp Lejeune, March 11. During the training, the Marines with Marine Wing Support Squadron 271 learned the basics of counter-improvised explosive device operations. Holmes and Wood are combat engineers with MWSS-271. (Photo by Lance Cpl. Unique B. Roberts)

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8. *”Equipping the Warfighter to Win”* Marines Learn Fundamentals of Improved Ribbon Bridge

By Cpl. Anne K. Henry, Okinawa Marine staff | Marine Corps Systems Command | February 14, 2014

Marines with 9th Engineer Support Battalion learned the fundamentals of the new Improved Ribbon Bridge and the Marine Corps Bridge Pallet system through a week of hands-on training at Camp Schwab Feb. 3-7.

The IRB is an improvement to the older, improved floating bridge and will allow the Marines quickly assembly it in harsher conditions. Marine Corps Bridge Pallet system launches the IRB into the ocean and is compatible with existing Marine Corps vehicles.

“The IRB will give the Marines a faster turnaround rate,” said Master Sgt. Timothy M. Bogie, the project manager with Marine Corps Systems Command. “The old bridges would take around 20-30 minutes to assemble. The IRB takes about 12 minutes. These bridges can also be assembled in a faster river current than the old ones could.”

The five days of training enabled the Marines to build on their previous knowledge on bridges and learn the fundamentals of the IRB, according to Joshua Junge, a training instructor with Training and Education Command.

“The way the (new) bridges are designed is much different,” Junge said. “We have to ensure that the Marines understand how to deploy them, connect them together and all of the different components.”

The IRB consists of two components, a ramp bay, which forms the end of the bridge, and the interior bay, forming the center. For this system each interior bay and ramp bay is tracked individually providing a better readiness picture to the commander.

With the new capabilities, the IBR has to offer, it contributes heavily to the Marine Corps being a fast moving, force in readiness, according to 1st Lt. James J. McGeady, a combat engineer with the unit.

“Bridging has always been a vital part of engineering in every war and theater we have fought in as Marines,” said McGeady. “With the IBR, we do not only need to rely on helicopters or ships. This improves infrastructure and the ability to get supplies out to areas that do not have bridges in place. These bridges can be deployed rapidly and in an expeditious nature allowing us to be a force in readiness.”

With the new IBR, the Marines using it will be provided with new capabilities allowing them to progress with the technology provided as an expeditious force, according to Junge.

“As technology increases, the equipment will continue to improve,” Junge said. “This new system is going to greatly benefit the Marines using it.”

Photo 1: Marines observe as a bay from the new improved ribbon bridge splashes open at Camp Schwab, Feb. 6 during new equipment training. The five days of training enabled the Marines to build on their previous knowledge of bridges and learn the fundamentals of the IRB and Marine Corps bridge pallet system. The Marines are with 9th Engineer Support Battalion, 3rd Marine Logistics Group, III Marine Expeditionary Force. (Photo by Cpl. Anne K. Henry)

Photo 2: Marines battle heavy seas Feb. 7 to assemble an Improved Ribbon Bridge during new equipment training at Camp Schwab. The IRB consists of two components, a ramp bay, which forms the end of the bridge, and the interior bay, forming the center. The Marines are with 9th Engineer Support Group, 3rd Marine Logistics Group, III Marine Expeditionary Force. (Photo by Cpl. Anne K. Henry)

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9. Marine Corps Engineer School Welcomes Baldwin, Bids Farewell Johnson

By Lance Cpl. Jared Lingafelt | Camp Lejeune, NC | July 10, 2014

Col. Jeffrey J. Johnson retired and relinquished command of the Marine Corps Engineer School to Col. Scott Baldwin during a change of command and retirement ceremony aboard Marine Corps Base Camp Lejeune, July 2.

Colonel Jeffrey J. Johnson

Colonel Scott A. Baldwin

Johnson served 24 years in the Marine Corps and served as the commanding officer of the Marine Corps Engineer School since 2012.

“I know I have some huge shoes to fill while I am here, and I know I have some mentorship here that I can tap into at any time,” said Baldwin, commanding officer of the Marine Corps Engineer School. “Now it’s up to us as instructors to treat every day as if it is a brand new day and tap into that energy these young Marines have when they come here and give them what they expect.”

Johnson deployed in support of Operations Enduring Freedom and Iraqi Freedom.

“We are here to honor a wonderful Marine family who is departing our ranks after 24 years and to welcome another Marine family who is coming in to take over the engineer school,” said Brig. Gen. Edward D. Banta, commanding general of 2nd Marine Logistics Group. “You can rest assured that even though you’re leaving the Corps now, you never really leave it, because you have left your impression on tens of thousands of Marines. They are the next generation that is going to carry on your legacy.”

Johnson graduated from the University of Memphis in 1990 receiving his commission and earning a Bachelor’s degree in construction management. Throughout the ceremony, Johnson thanked friends and family in attendance for their continued support throughout his career and ensured the next generation will continue to carry the legacies of those that came before them, Marines always do.

“This is truly meant for the Marines who came before us,” said Johnson. “Marines, it has been my honor to serve you over the last 24 years.”

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10. Marines Tackle Border Road Construction Project

By Sgt. Paul Peterson |Joint Task Force North, El Centro, CA | May 07, 2014

It's a construction mission far removed from the deserts of Iraq and the mountains of Afghanistan. They've done those too, of course, but spring brought a welcome change of pace for the 40 Marines and sailors with the 8th Engineer Support Battalion, 2nd Marine Logistics Group in El Centro, Calif. This time, the Marines threw their toil and sweat into a project much closer to home.

The detachment arrived in March to kick off a 54-day road construction project near the U.S.-Mexico border. Approximately 1,800 feet of road and five precision-engineered culverts lay ahead of them as the Marines settled into the venture.

"In typical Marine Corps fashion, they said, 'Here's what we want as the end state. You figure out how to get there,'" said 1st Lt. Joseph Comiskey, the mission commander for the detachment.

"We're building [the road] for the Border Patrol so they can better protect the area," said Comiskey, a Washington, D.C. native. "The roads have been beaten down … They haven't been able to drive past this section the Marines have built over the last three weeks since around 1976. That was the last time vehicular traffic went across these roads."

In collaboration with Joint Task Force North, based out of Fort Bliss, Texas, the Marines volunteered their labor and skills to expand the tactical mobility of the area's Border Patrol and open up the route to more than just all-terrain vehicles.

JTF-North, a joint service command comprised of active duty and reserve personnel from across the Department of Defense, supports federal law enforcement agencies in counterdrug operations.

For the Marines and sailors on the ground, the work was not only a unique opportunity to apply their craft in a domestic environment, but also a chance to gain first-hand experience with procedures and standards used by their civilian counterparts.

"We're working off a set of blueprints from a firm that contracted the design for the road," said Gunnery Sgt. David Poole, one of the lead Marines for the project. "We're executing off their plan, making small adjustments here and there with the different conditions out here that we have to adapt around."

The Marines usually work 10-hour stretches in the arid environment, with temperatures near 90 degrees. They spend their daylight hours carefully grading and compacting the road to the rigorous standards used by commercial construction agencies.

One of the biggest challenges has been maintaining moisture levels along the roadway during the compacting and grading process in the dry climate, said Poole, a Knightdale, N.C. native.

"We're making good progress every day," he added. "We do a lot of road and construction work deployed, but we don't get too many opportunities like this … It takes our heavy equipment operators [working] with our surveyors, who tell them how high or low we need to go in certain spots, to meet certain compaction levels for the road to make sure it doesn't wash away."

The work is taxing and precise. It's also the first chance many of the Marines have had to work with civilian contracting agencies to complete such a large project.

"It definitely is controlled, slow, steady and exact [work], more along the lines of commercial projects," said Cpl. Wil Whidden, a heavy equipment operator, who completed similar projects during his time in Afghanistan.

"I'm actually gaining a lot more of the overall picture, learning more along the lines of a project manager or site foreman," said Whidden, a Fort Myers, Fla. native. "It's along the same lines of what we do forward deployed in theater … I've been directing my junior Marines on backfilling and excavating the culvert sites and compacting to make sure we have enough hydration and compaction on the road itself."

The team was already ahead of schedule by the end of March and expected to wrap up their mission more than a week ahead of schedule.

"Everything we're doing out here definitely falls within the scope of [our specialties]," said Comiskey. "Putting in culverts, building roads and moving dirt, that's what we do. This definitely falls right in with what the Marines do on a daily basis. It's just to a larger extent."

Another benefit of the operation was the chance to familiarize the Marines with commercial construction equipment they don't normally get to work with, said Comiskey.

"It's not necessarily the exact same, but it's very similar to what we have," he said. "They've been able to use a lot of the civilian versions of what we use, which will definitely help them in the long run by broadening their skills."

Photo 1: Marines with 8th Engineer Support Battalion, 2nd Marine Logistics Group build a cement culvert during a two-month project with Joint Task Force North in El Centro, Calif., March - April, 2014. The project gave service members the opportunity to use skills they learned in the military while also helping to improve border patrol's access to the area by opening the route to more than just all-terrain vehicles. (Photo by Courtesy Photo)

Photo 2: Marines with 8th ESB receive a class from a border patrol agent during a two-month project with Joint Task Force North in El Centro, Calif. (Photo by Courtesy Photo)

Photo 3: Marines with 8th ESB receive training from a certified Caterpillar Heavy Equipment instructor. The project, which spanned approximately 54 days, gave service members the opportunity to apply their construction skills in a non-combat environment. (Photo by Courtesy Photo)

Photo 4: Marines with 8th ESB pose for a photo during a two-month project with Joint Task Force North in El Centro, Calif., March – April, 2014. Service members constructed approximately 1,800 feet of road and five culverts, allowing border patrol agents to expand their tactical mobility when patrolling the area. (Photo by Courtesy Photo)

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11. 2nd Combat Engineer Battalion Tests New Combat Earth-Mover

By Cpl. Michael Dye | 2nd Marine Division | March 03, 2014

Marines, with 2nd Combat Engineer Battalion, 2nd Marine Division, were able to familiarize themselves with a new and improved piece of equipment that will better help them stay in the fight Feb. 26, 2014, aboard Camp Lejeune, NC.

The M9 Armored Combat Earthmover is a highly mobile, armored tracked vehicle that provides combat engineer support to front-line Marine forces. It's capabilities include eliminating enemy obstacles, maintaining and repairing of roads and supply routes and construction of fighting positions.

The preexisting 'Legacy ACE' has been torn down, re-mapped, redesigned and turned into the modernized M9 ACE.

“The new M9 ACE has an upgraded hull, improved hydraulic system, bigger engine and an added front camera system so now the operator can see what is going on in front of him,” said Capt. Gregory B. Procaccini, the M9 ACE project officer out of Marine Corps Systems Command in Quantico, Va. “I believe the Marines are going to enjoy the way this equipment operates and how much easier it is going to be to maintain.”

Procaccini went on to say that it took six to eight years to fully develop the upgraded system.
“The M9 ACE is a lot better than the old one,” said Sgt. Robert Kubach, the operations chief for the battalion and Cleveland native. “The upgraded engine really gives this machine more power and it’s able to move dirt more efficiently.”

With more power, the M9 ACE is able to keep up during convoy operations, and does not require being loaded onto a truck, which gives it more of a tactical use. Also, with an added camera the M9 ACE is able to be more exact with its movements.

“On the old system it was pretty much done by feel,” said Kubach. “You would have to know your machine, how it feels, how it’s sitting, the sound of the engine; everything played a factor when you were moving dirt. Now with the camera system, it takes a lot of the ‘guess’ work out of it and gives it more of an exact feel.”

The Legacy M9 ACE machines are currently on a rotational schedule to be turned into the production site in Albany, Ga., so they can make the transformation into modernized M9 ACE.

The first four M9 ACE systems off the production line are currently at Camp Lejeune. Three are for 2nd Combat Engineer Battalion and one is for 8th Engineer Support Battalion.

This is the first new equipment training course for the modernized ACE, and with this past training event being such a success, it won’t be the last.

Photo 1: The cockpit of the new and improved M9 Armored Combat Earth-Mover provides the operator with several camera systems that allow the operator a 360 degree view of what’s around the equipment. The M9 ACE is the improved version of the Legacy ACE, it has an upgraded and reinforced hull, more powerful engine and improved hydraulic system. (Photo by Cpl. Michael Dye)

Photo 2: A Marine in 2nd Combat Engineer Battalion operates the improved M9 Armored Combat Earth-mover during a familiarization exercise Feb. 26, 2014. (Photo by Cpl. Michael Dye)

Photo 3: The M9 ACE is the improved version of the Legacy ACE; it has an upgraded and reinforced hull, more powerful engine and improved hydraulic system. (Photo by Cpl. Michael Dye)

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12. New Commanding Officer Takes 7th Engineer Support Battalion Helm

By Lance Cpl. Shaltiel Dominguez | 1st Marine Logistics Group | July 07, 2014

“You’re the backbone of what we do, and I’m proud of every one of you,” said Lt. Col. John Martinko during a change of command ceremony to his family, which includes not only his wife and three children, but also his Marines. “Each and every one of you made me a better person and leader. For that, I’ll always be grateful.”

Martinko, outgoing commanding officer of 7th Engineer Support Battalion, 1st Marine Logistics Group, relinquished command of the unit to incoming commanding officer, Lt. Col. Eric Penrod, during a change of command ceremony aboard Camp Pendleton, Calif., July 1, 2014.

Martinko's poignant speech was preceded by a ceremony, conducted by a formation of Marines with Headquarters and Support Company, Explosive Ordnance Disposal Company, Alpha Company, Bravo Company, Engineering Support Company and Bridge Company, complemented by the 1st Marine Division Band.

At the height of the ceremony, Martinko handed the unit's colors to Penrod, symbolizing the transition of command of 7th ESB. Martinko will pursue further studies at the National War College, Ft. Lesley McNair, Wash., which prepares officers for higher command positions in the future.

Brig. Gen. Vincent A. Coglianese, 1st MLG Commanding General, addressed everyone in attendance, recognizing the Marines in formation for their outstanding presentation and both commanding officers for their hard work. He lightheartedly mentioned that if he had a chance to become an enlisted Marine, he would choose to be a combat engineer.

Penrod, a former engineer occupational field sponsor with Headquarters Marine Corps, Arlington, Va., said he is eager to assume his new duties and responsibilities as the commanding officer of 7th ESB.

"I'm honored and humbled in being chosen to lead a unit of this size and with such a diverse set of capabilities," said Penrod, of Windber, Penn. "I'm very excited to take command of such an excellent unit, and hopefully we can improve on what's already excellent."

Photo 1: Lieutenant Col. John Martinko, left, outgoing commanding officer, 7th Engineer Support Battalion, 1st Marine Logistics Group, and Lt. Col. Eric Penford, right, incoming commanding officer, salute Marines during a pass and review as part of a change of command ceremony aboard Camp Pendleton, Calif., July 1, 2014. Martinko is slated to pursue studies at the National War College, Ft. Lesley McNair, Wash., as a prerequisite for higher positions of command. (Photo by Lance Cpl. Shaltiel Dominguez)

Photo 2: Brigadier Gen. Vincent A. Coglianese, 1st Marine Logistics Group Commanding General, salutes Marines with 7th Engineer Support Battalion, 1st MLG, during a change of command ceremony where Lt. Col. John Martinko, outgoing commanding officer, relinquished control of 7th ESB to Lt. Col. Eric Penford, incoming commanding officer, aboard Camp Pendleton, Calif., July 1, 2014. (Photo by Lance Cpl. Shaltiel Dominguez)

Photo 3: Brigadier Gen. Vincent A. Coglianese, right, 1st Marine Logistics Group Commanding General, speaks with Lt. Col. John Martinko, left, outgoing commanding officer, 7th Engineer Support Battalion, 1st MLG, during a change of command ceremony where Martinko relinquished control of the unit to Lt. Col. Eric Penford, incoming commanding officer, aboard Camp Pendleton, Calif., July 1, 2014. (Photo by Lance Cpl. Shaltiel Dominguez)

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13. Marine Corps Engineer School Capabilities Branch Initiative

By Tom Roulund | Marine Corps Engineer School | July 21, 2014

One of the top items on the Engineer Community Priorities List is to improve the equipment to operator/maintainer ratio. In response to this, the Capabilities Branch at Marine Corps Engineer School, in coordination with I&L and MCSC, is analyzing the feasibility of developing a garrison equipment training allowance (T/A) for engineer specific units. The intent is that this equipment would be used for daily training/tasks in order to ensure the technical and tactical proficiencies of individual Marines and the collective unit readiness. We are in the early stages of the study and are looking for any creative ideas, factors, or suggestions that may help facilitate the analysis. Send us your ideas.

The POCs are Mr. Tom Roulund or Mr. Sammy Hammonds at (910) 440-7594/7590.

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14. Marine Corps Engineer Association Update

Submitted by Ken Frantz | Marine Corps Engineer Association | 2014

Our Marine Corps Engineer Association Engineer Monument is installed and was formally dedicated 14 May, 2014! It was a perfect day to dedicate the Marine Corps Engineer Association Monument at the National Museum of the Marine Corps!

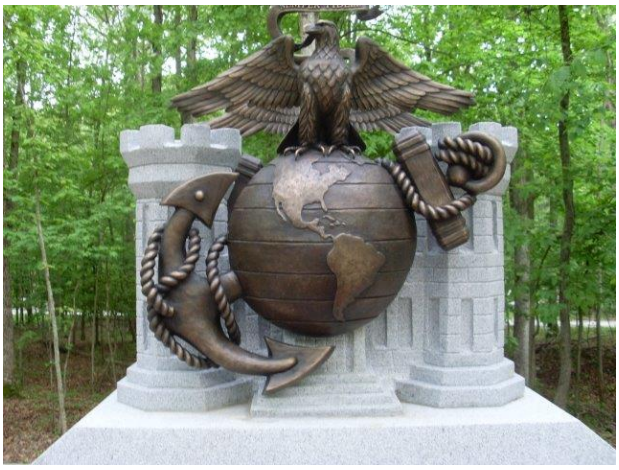
The monument is dedicated to the patriotism, valor and sacrifices of Marine Corps Engineers, past and present. It was the idea of the Marine Corps Engineer Association and made possible by donations from more than 200 individuals and organizations.

Attended by over 160, many current and former Marines, family and friends, other retired service members, and distinguished guests, among them, former Commandant of the Marine Corps, General Al Gray; President of the Marine Corps Heritage Foundation, Lt. Gen. Robert Blackman; and our Guest Speaker, MCEA member, Lt. Gen. Frank Panter, the event began with a ceremony in the chapel.

The ceremony was highlighted by Marine Corps engineers representing World War II, the Korean War, Vietnam War, Operation Desert Storm and Operations Enduring Freedom/Iraqi Freedom. Each veteran shared their recollections of serving as Marine Corps Engineers during these conflicts and what it meant to them to be a part of such a noble fraternity, while proudly being “Marines first, Engineers second.”

Following the chapel ceremony, a bagpiper led a processional down the hill to site 38 on the Marine section of the Semper Fidelis path. A dedication prayer, placement of a wreath and sounding of Anchors Aweigh and The Marines’ Hymn brought the morning to a close.

Raising the necessary funding, designing and procuring the monument has taken almost four years for the Marine Corps Engineer Association—but its efforts will endure to help properly remember those who served. The Marine Corps Engineer Association was established in 1991 to promote Marine Corps engineering; renew and perpetuate fellowship of retired, former and current U.S. Marines who served with Marine Corps engineer units and sister service members; preserve the memory of those who served; promote an accurate historical record of the contributions of Marine Corps engineers; foster solidarity; recognize achievement of active duty and reserve Marine Corps engineers; and provide financial assistance to Marines, next of kin or other deserving personnel.



For more pictures of the 2 day gathering and to learn more about the Marine Corps Engineer Association, go to their website: www.MarCorEngAsn.org.

Your Marine Corps Engineer Association leadership is working with the Marine Corps Heritage Foundation (MCHF) to procure engraved bricks to surround our MCEA Engineer Monument in Semper Fidelis Memorial Park overlooking the Museum's awesome structure.

For a tax deductible donation of $300, your name, or that of someone you wish to honor or remember, will be engraved on a brick. MCEA will solicit contributors to purchase brick(s) at the standard rate of $300/brick. There is no discount for multiple purchases. When we have enough orders, we’ll send one check to MCHF @$210/brick and MCEA retains the $90/brick, which will be applied to both the Monument Fund and our Fellows Program. We also will provide one excel spreadsheet with all required information for each brick to be engraved.

MCHF individual brick purchase program:

Your engraved brick will affirm for posterity your Esprit de Corps with the men and women who risk their lives for the freedom we value. And your gift will help the National Museum of the Marine Corps preserve

Corps history and heritage, and forever attest to the honor, courage, and commitment that embody America's "first to fight."

For each $300 gift, you will receive a special Certificate of Registration recognizing your contribution and confirming the inscription(s) you have submitted as they will appear on the engraved brick(s). All brick purchasers will have their name added to our MCEA website's donor list.

Space for our unique MCEA bricks surrounding our monument is limited to 600, and they will be installed in the order in which purchases are received. So please place your order immediately to add to our engineer history!

Additional Information

Each line is 20 characters in length; each brick can contain a total of up to three lines. **A character includes all letters, punctuations and spaces.** Each line must end with a full word or name (words and names will not be hyphenated and continued on the next line.) You may purchase as many bricks as you like. Bricks purchased separately may not be sited next to one another. You will receive a proof copy of your inscription before it is engraved into the brick.

If you'd like to use your PayPal account or credit card, go to our MCEA website and click on the DONATE button:
http://www.marcorengasn.org/modules/Monument/index.htm

Complete the attached form and email as attachment to Ken Frantz at: Frantz@consolidated.net

Or, fill in the required information on the form and mail, along with your check made payable to MCEA (annotate in the memo line: bricks) and mail to:

MCEA
807 Carriage Hills Blvd
Conroe, TX 77384
Any questions, call Ken at: 936-273-4830

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Purpose of the *Operational Engineer*

To provide a useful forum for open discussion and free exchange of ideas relating to the U.S. Marine Corps Engineer Community and it's capabilities that will be published semiannually for the benefit of the entire Marine Corps Engineer community. Thoughts, suggestions, and ideas from the operating forces are essential to achieving this purpose.

SUBMISSION POLICY

• **Commentary on published material:** Submit promptly. Comments normally appear as letters 6 months after published material (The next semi-annual publication). Be brief.

• **Feature articles:** Normally 750 to 1,000 words, dealing with topics of major significance. Ideas must be backed by hard facts. Evidence must be presented to support logical conclusions. In the case of articles that criticize, constructive suggestions are sought. Footnotes are not necessary, but a list of any source materials used is helpful. The Marine Corps Engineer School will call upon the operational units to provide specific commentary on issues that have relevance to the education of the occupational field.

• **Ideas and Issues:** Short articles, normally 200-300 words. This section can include the full gamut of professional topics so long as treatment of the subject is short, concise, and professional.

• **Letters:** Limit to 100 words or less. As in most newsletters, letters to the editors are an important clue as to how well or poorly ideas are being received. Letters are an excellent way to correct factual mistakes, reinforce ideas, outlining opposing points of view, identify problems, and suggest factors or important considerations that have been overlooked in previous articles. The best letters are sharply focused on one or two specific points.

• **Suggestions:** Write the way you speak. Organize your thoughts. Cut out excess words. Short is better than long.

How to submit your input: Submissions may be sent via email (preferred) or regular mail. If regular mail is used we request that you include a hard copy of the manuscript and a disk with the manuscript in Microsoft Word format. Photographs and illustrations must be in GIF, JPG or PNG format (300dpi, 5x7 inches, color preferred) and must not be embedded in the article. Please attach photos and illustrations in a separate file. You may include the text of the article where the photos are to be placed. Include the authors full name, mailing address, telephone number, and e-mail address.

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