



Army Aviators gain tilt-rotor experience in the MV-22 (Osprey) to shape MV-75 doctrine. U.S. Army photo by Dr. Leslie Herlick.

The Future Long Range Assault Aircraft Program: Building Readiness for the MV-75

By CW3 Joshua D. Baker

The Directorate of Training and Doctrine (DOTD), Fort Rucker, Alabama, serves as the proponent for all aviation doctrine and training. This includes new systems training development. For several years now, DOTD, specifically the New Systems Integration Branch, alongside several other organizations at Fort Rucker, have been conducting extremely detailed training

needs analyses to determine how to get after training for the Army's first new aircraft in nearly 40 years.

Since the Army selected Bell Textron, Inc.'s (Bell) V-280 Valor to become the next Army multi-role platform, there has been a mad dash to determine how the first unit will be fielded and trained on the MV-75. Currently, the two contenders are new equipment training teams and a centralized fielding and training site. Both options have strong advantages but also some costly downsides. The DOTD, working with G 3/5/7, the Capability Development and Integration Directorate, the Army Capabilities Manager-Lift/Fixed Wing, and U.S. Forces Command, have conducted quarterly working groups focused on answering questions like "Where do we train, how do we train, and how do we get the right people to train?" However, the reality is that until the Army gets a chance to test prototype aircraft, all our analyses revolve around some facts and a lot of assumptions. All the agencies mentioned

above are working diligently alongside the original equipment manufacturer and program manager (PM) Future Long Range Assault Aircraft (FLRAA) to change assumptions to facts.

Next, we need to determine the institutional training strategy. This is a massive undertaking without prototypes to gain much needed analyses, but the Army has been quietly leveraging our oldest sister-service over the past year. It's no secret that the V-22 is employed by the Navy, Marine Corps, and Air Force; however, after site visits to their respective training squadrons and talking with cadre, we have found that the Marine Corps most closely aligns with how the Army does business. We fully acknowledge that no other service is a mirror image of how the Army operates, but it doesn't get any closer than Marine Medium Tiltrotor Squadrons. After we made this determination, we took a hard look at how the Marines train their aviators and maintainers. We also conducted numerous site visits to operational squadrons

The U.S. Army has chosen Bell's V-280 for the Future Long Range Assault Aircraft program and officially designated as MV-75. The "MV" stands for Multi-Mission Vertical Takeoff and the number "75" honors their birth year, 1775. (Bell Textron, Inc., 2025).



Army Chief Warrant Officer 3, Joshua Baker, receives a crew brief from Marine Corps Capt. John Albertini on the MV-22 Osprey. U.S. Army photo by Dr. Leslie Herlick.

to observe how they conduct everything from routine training flights to operational deployments. All these analyses will be used to make decisions on how to stand up institutional training, which we're planning on occurring early during the fielding process. While the first unit begins to receive its aircraft, deliveries will also begin at the institution, allowing a cadre base to begin training and aid in program of instruction development.

Ahead of these aircraft deliveries, cadre

for operator and maintenance training will take delivery of training aids, devices, simulators, and simulations. This enables our pool of cadre for the respective institutions to begin learning systems, procedures, and developing training plans long before aircraft arrive, allowing us to get ahead of the curve.

Beginning in January 2025, DOTD sent two pilots and one non-rated crewmember to Marine Corps Air Station New River, North Carolina, to attend V-22

familiarization training and audit the non-rated crewmember training pipeline and maintenance training. During this training, we participated in the full academic syllabus that all Marine and Air Force pilots attend, as well as 60 hours of simulation. The maintainer training included concepts new to the Army, such as advanced composite and fiber optic repair. The culminating event was a 2-hour flight for each of the DOTD training developers in the MV-22, which really tied together the concepts we were exposed to during the familiarization course.

A distinct advantage the Army has with the MV-75 over the Osprey program is the ability to leverage 25 years of tilt-rotor experience. As we build a pool of tilt crewmembers through familiarization training, the next logical step is to integrate several of these individuals into Marine units to learn how to actually employ the aircraft. The Army and Marine Corps are working through what an exchange program would look like, but the idea is that a small number of Army pilots would get the unique opportunity to receive a full MV-22 qualification. They would then become assigned to an operational Osprey unit, culminating in a deployment to gain real-world experience. The trade-off



MV-75 special user evaluation at Redstone Arsenal highlights operational relevance. U.S. Army photo by Matthew Ryan.

would be pulling a small group of Marine aviators into key events like critical task site selection boards (CTSSB), test events, and early tactics development events to lend their expertise, while we build our own.

In July 2025, ahead of Industry Days at Fort Rucker, we received a virtual prototype (VP) at both Fort Rucker and Redstone Arsenal in Huntsville, Alabama. You might consider the VP a simulator of sorts; however, it's a very rudimentary first look at early aircraft design. As the program matures and production aircraft begin rolling off the line, the purpose of the VP is to inform design early on, as well as allow us to begin task analysis ahead of prototype aircraft. We are currently using the VP to start developing the foundation for what will become the aircrew training manual (ATM) for the MV-75. Along with ATM development, tactics, techniques, and procedures development is the other major focus for the VP. Cruising en route between 240–280 knots brings a paradigm shift to Army Aviation. The incredible capability of the tilt-rotor platform will require us to rework our tactics in the Army as a whole. Aside from the new ATM, we'll be required to update several publications including, but not limited to, Field Manual 3-04, *Army Aviation*; Army Techniques Publication 3-04.1, *Aviation Tactical Employment*; and Training Circular 3-04.4, *Fundamentals of Flight*, concerning aviation employment, air assault tactics, and medical evacuation doctrine (Department of the Army [DA], 2025; DA, 2020; DA, 2022). The VP allows us to get in on these changes at the ground floor as opposed to waiting for aircraft. Procedures developed in the VP will be codified once we get production aircraft to validate tactics. Another major undertaking is the doctrinal updates needed to encompass a new platform and new tactics. The Army has cracked the code on helicopter tactics.



Army designates MV-75 as mission design series for Future Long Range Assault Aircraft. U.S. Army photo by Matthew Ryan.

We dominate what has been referred to as the low-tier air domain. However, the answer may not always be 200 feet and below. The advantage we gain from the MV-75's speed and range quickly becomes negligible if we are forced to operate below 200 feet at helicopter speeds. The MV-75 isn't a helicopter, it's a plane that takes off and lands vertically. The sooner we adopt this mindset, the sooner we can exploit the potential that tilt-rotor offers. Doctrine **must** and **will** change to incorporate future tactics and how the Army does business. Along with this tactical change, Army aircrews, planners, and staff must step outside our foxholes and leverage joint enablers to allow us to get to the fight. It's no surprise that anti-access and area denial in the form of integrated air defense systems, cyber effects, and electronic warfare pose a significant threat to the way we conduct operations. We must incorporate our advanced sensors and enablers, which will allow us to rapidly transition to the operational environment and accomplish our mission.

Everything DOTD has worked on up to this point is to inform training needs analysis leading up to CTSSBs for MV-75 aviators, non-rated crewmembers, and backshops maintainers. The CTSSB is typically conducted every 3 years to determine if changes to the critical task list are necessary. The CTSSBs for the above-mentioned military occupational specialty, however, represent a massive muscle movement because of the

system's newness. During a CTSSB, a group of subject matter experts come together to make these determinations and provide a recommended critical task list, likely in the form of an ATM, as well as which tasks are taught in institutional training. Because this is a completely new system, our subject matter experts will be comprised of a mix of fixed- and rotary-wing aviators and crewmembers, as well as tilt-rotor pilots from across our sister services. While the Army has some learning to do with this platform, we have 25 years of experience across the Department of War to leverage, so we're not starting from scratch.

Finally, as the program matures and becomes larger, we need more expertise where we can best leverage it. Currently, we only have a handful of experts on our team at Fort Rucker, but that changes with the introduction of the operational development team (ODT). Some may already be familiar with this concept, but the ODT will serve as the primary go-between for MV-75 development. Members will have the distinct responsibility of drawing on their own unique expertise based on a wide range of experiences to help guide informed decisions on the project. They'll also be tasked with liaising between Bell, Program Manager FLRAA, Redstone Test Center, and other entities at Fort Rucker.

The DOTD will continue to work with program offices and Bell to ensure development isn't completed in a vacuum. User input and analyses over the next couple of years are critical to this program's success. As we drive forward with ODT establishment, we will continue to lean on sister services to ensure we don't ignore their hard-learned lessons from 20 plus years of operational employment.

Biography:

CW3 Josh Baker is a UH-60 A/L/M pilot and Aviation Mission Survivability Officer presently assigned to DOTD as a FLRAA Training Developer.

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