DEPARTMENT OF THE ARMY
PROGRAM EXECUTIVE OFFICE, MISSILES AND SPACE
5250 MARTIN ROAD
REDSTONE ARSENAL AL 35898-8000

REPLY TO
ATTENTION OF

2 AUG 2019

SFAE-MSL

MEMORANDUM FOR Mr. Craig Spisak, Director, U.S. Army Acquisition Support Center, 9900 Belvoir Road, Building 201, Suite 101, Fort Belvoir, Virginia 22060-5567

SUBJECT: Nomination for the 2019 Army Acquisition Executive's (AAE) Excellence in Leadership Award for Engineer and Systems Integrator of the Year

1. I am pleased to nominate Mr. Carl Stoops for the 2019 Army Acquisition Executive's (AAE) Excellence in Leadership Award for Engineer and Systems Integrator of Year. As Software Development Director for the Integrated Air and Missile Defense Project Office within the Program Executive Office, Missiles and Space he is responsible for the software development efforts for the Army Integrated Air and Missile Defense (AIAMD) Program, an Acquisition Category (ACAT) 1D program valued at $7B total life cycle cost. The AIAMD software effort includes integration of three major prime contractors (Lockheed, Raytheon, and Northrop Grumman) and development of a software baseline that includes over 10 million lines of code integrating Patriot radars, Sentinel radars, and Patriot launchers and interceptors with the IAMD Battle Command System (IBCS) into a coherent, defensive capability to detect, identify, engage, and defeat enemy air and missile threats.

2. As a direct result of Mr. Stoops' leadership, all three software builds were delivered early, and met cost and performance goals. The actions that Mr. Stoops completed this year have set the Army on a path to regain overmatch in Air and Missile Defense by providing a flexible, tailorable, and resilient capability to defeat air and missile threats in Multi-Domain Operations. His consistent display of technical expertise has made a profound and lasting positive impact on our Nation's military with tireless focus on the Warfighter's need and ability to counter evolving threats.

3. Mr. Stoops is current with DAWIA acquisition career field certification and continuous learning points.

4. The point of contact for this action is Ms. Doris Low, 256-876-8794, doris.s.low.civ@mail.mil.

ROBERT A. RASCH, Jr.
Major General, USA
Program Executive Officer,
Missiles and Space

Assistant Secretary of the Army for Acquisition, Logistics, and Technology

2019 Army Acquisition Executive's (AAE) Excellence in Leadership Award

ENGINEER AND SYSTEM INTEGRATOR OF THE YEAR

Administrative Information

Nominating Organization

Organization's Name: Program Executive Office, Missiles and Space,
Integrated Air and Missile Defense Project Office
Mailing Address: SFAE-MSL-IA
Address (continued): 5250 Martin Road
City: Redstone Arsenal State: AL Zip: 35898

Primary Point of Contact
Name: Jessica Wilkerson
Title: IAMD Program Operations Director
Telephone: 256-313-3569
E-mail: jessica.l.wilkerson.civ@mail.mil

Name, Grade, and Position Title of Nominee
Name: Mr. Carl P. Stoops
Grade: NH-04
Title: Agile Software Development Director
E-mail: carl.p.stoops2.civ@mail.mil

Award Narrative

As Director of Software Development, Mr. Carl Stoops is responsible for the software development and integration efforts for the Army Integrated Air and Missile Defense (AIAMD), a $7B Acquisition Category 1D program. During the past year, Mr. Stoops led the effort that culminated in a software build that will demonstrate threshold capabilities at a Limited User Test, while simultaneously transitioning the program to Agile software development in accordance with the FY2019 National Defense Authorization Act. This extensive undertaking includes integration of three major contractors' products with Government-developed software into a common software baseline comprised of over 10 million lines of code. The IAMD Battle Command System (IBCS) integrates Sentinel radars, Patriot radars, launchers and interceptors into a coherent, defensive capability to detect, identify, engage, and defeat enemy threats.

Specific Achievements: IBCS software and system performance have improved dramatically under Mr. Stoops' leadership, as validated in air battle reliability and threat engagement performance demonstrations during Soldier Check-out Events. Mr. Stoops took the helm of AIAMD's Agile transformation and developed an Agile test case for scenario generation capabilities. He built a joint team with U.S. Army Training and Doctrine Command Capability Manager Soldiers, IAMD and Northrop Grumman that incorporated real-time user feedback and demonstrated successful implementation of Agile processes in software development. He rapidly gained the Army's and Office of the Secretary of Defense's approval of the AIAMD Agile Realignment Plan and his team's accomplishments were identified by Department of Defense leadership resulting in IAMD's designation as the only Army Agile Development, Security, and Operations (DevSecOps) Pathfinder program. By embracing DevSecOps, Mr. Stoops is transforming the AIAMD software development approach to maintain resiliency and overmatch against evolving cyber security and Air & Missile Defense (AMD) threats. Mr. Stoops' approach enables delivery of smaller, manageable builds in an incremental fashion that facilitates USG and contractor integration testing to ensure effective capability alignment at the system level. This allows the USG to identify issues early in the process and develop corrective actions much sooner than a traditional software development approach. Mr. Stoops' team delivered three software releases in the past year that effectively transitioned IBCS to an entirely new hardware platform with a new software architecture. As a result of his leadership, all IBCS software releases were delivered ahead of schedule and on cost, providing key performance capabilities and laying the groundwork for a successful test and training program.

Value of the Nominee's Contributions During the Award Period to the Mission of One's Organization in Supporting One or More of the ASA(ALT)'s Priorities: Mr. Stoops led the AIAMD program to deliver software capability that meets threshold requirements two years earlier than expected which enables a potential for Early Operational Capability. He successfully led early convergence efforts with Air and Missile Defense Planning and Control System (AMDPCS) components to provide integrated capability on an accelerated timeline through reuse of existing software components. The Fires Gateway software within AMDPCS is directly integrated into AIAMD and provides front-end processing for Force Operations messages. Mr. Stoops' team also led the development and integration of sensors beyond baseline requirements, including Joint Sensors that will significantly enhance lethality and AMD capability in Multi-Domain Operations (MDO). His implementation of Agile development represents a significant shift from traditional waterfall development and enables delivery of

valuable capabilities within short development timelines to meet emerging threat and capability needs. AIAMD's Agile development leads the Army in a change to the acquisition of large, real-time, safety critical systems, and delivers value by collaboratively prioritizing and defining demonstrable work products. Since Agile development effects the entire Army enterprise, Mr. Stoops initiated a DAU-led training effort that empowers user representatives, Army Test and Evaluation Command personnel, Materiel Release decision authorities, and Logistics Planning Elements to support fielding of rapidly developed capability. His actions set the Army on a path to regain AMD overmatch by providing tailorable and resilient capabilities to defeat threats in MDO.

Demonstration of Leadership: Mr. Stoops is a key leader in the AIAMD program and within Program Executive Office (PEO) Missiles and Space. He empowers his team to make decisions that meet commander's intent while he collaborated across other PEO programs to enable capability development with AIAMD. He and his team fostered an effective working relationship with the prime contractors, user representatives, and stakeholders that resulted in stable software and development of capabilities that support delivery of a new generation of Command and Control for AIAMD. He set the standard for leadership and positive collaboration among the AIAMD team and external stakeholders to prepare for key program events, while leading change with the transition to Agile development. His positive attitude and tireless work ethic inspired the joint team and established a collaborative culture that enables the transformation currently underway. This lays the groundwork for the joint enterprise to develop two major software releases over the next 28 months in an Agile cadence to rapidly provide new capability to the Warfighter.

Engineer and System Integrator Specific Criteria: Mr. Stoops' prior experience rapidly fielding a complex System-of-Systems under urgent materiel release, provides him a keen sense for eliminating unnecessary efforts from systems engineering processes and project execution. His streamlined engineering approach consistently mitigates requirements creep and avoids wasted effort. Mr. Stoops established a new software/system test verification process at the Government Systems Integration Lab to enable system check-out and verification through simulation. He streamlined the strategy for requirements verification that utilizes a joint test approach between IAMD and the contractor to reduce duplication of effort and enable rapid verification, resulting in significant cost savings. Mr. Stoops is redefining Systems Engineering within AIAMD to meet the development requirements for Agile. This includes bringing together personnel entrenched in traditional systems to collapse the timelines for defining and integrating capabilities. His extensive background in Modular Open Systems Architecture (MOSA) enabled him to successfully transform a legacy, standalone system into a modular, component-based architecture that can be fielded as a client-server or standalone configuration using Agile Scrum development methodology. Selection of Open Virtualization Format has reduced deployment time and introduced flexibility of the products to be used in a Hyper Visor or VM Ware environment, reducing operating system, hardware dependencies, and lifecycle cost. A key advantage of MOSA in support of PEO software convergence is software reuse, which has been accomplished with the integration of Mr. Stoops' Fires Gateway and Map Server components into IBCS. AIAMD's Agile transition provides a basis for DevSecOps that will lead to rapid delivery of AMD advances to the Soldier in the field at the speed of relevance. These innovations will expedite acquisition and fielding of Warfighter capability across the Army and

DoD. His team is leading and maintaining a transformational capability that will pay tremendous dividends for Army AMD as a direct result of his leadership and engineering expertise.

Award Citation

For exceptionally meritorious performance serving as the Director for the Software Development Directorate within the Army Integrated Air and Missile Defense Project Office. Mr. Stoops demonstrated superb leadership through his actions to redefine systems engineering within the Army Integrated Air and Missile Defense Project Office to meet Agile development requirements. His consistent display of technical expertise, ability to collaborate across organizations and unrelenting determination to provide Warfighter capability resulted in the development of a complete software build that demonstrates threshold capabilities at a Limited User Test, while simultaneously transitioning the program to Agile software development in accordance with the National Defense Authorization Act for Fiscal Year 2019. Mr. Stoops' influence impacts the entire Air and Missile Defense enterprise and supports the Army Integrated Air and Missile Defense Project Office, as well as, the intent of the National Defense Authorization Act. As a leader, Subject Matter Expert and innovator, Mr. Stoops is leading the software development efforts that are the foundation for the future of Army and Joint Air and Missile Defense. His achievements are a great credit to himself, the Integrated Air and Missile Defense Project Office, the Program Executive Office, Missiles and Space, and the United States Army.