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Exhibit R-2, RDT&E Budget Item Justification: PB 2025 Office of the Secretary Of Defense **Date:** March 2024

Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide I BA 1: Basic Research</i>	R-1 Program Element (Number/Name) PE 0601228D8Z I <i>Historically Black Colleges and Universities and Minority-Serving Institutions</i>
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COST (\$ in Millions)	Prior Years	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
Total Program Element	-	96.858	100.467	99.792	-	99.792	99.907	99.998	100.099	102.101	Continuing	Continuing
448: <i>Historically Black Colleges and Universities and Minority-Serving Institutions</i>	-	96.858	100.467	99.792	-	99.792	99.907	99.998	100.099	102.101	Continuing	Continuing

Note

New Start (Y/N): No

A. Mission Description and Budget Item Justification

The Historically Black Colleges and Universities and Minority-Serving Institutions (HBCU/MI) program provides support in fields of science and engineering that are important to national defense. The Department of Defense (DoD) HBCU/MI Program encourages participation of small minority schools and large minority research institutions. The program is authorized by 10 U.S.C. § 4144. This competitive program provides support through grants, cooperative agreements, or contracts for research, education assistance, and instrumentation purchases.

Work in this program provides a foundation to enhance participation of HBCUs/MIs in DoD research. Programs are structured to: build infrastructure; strengthen research and educational opportunities at HBCUs/MIs and increase the number of minority graduates in the science, technology, engineering, and mathematics (STEM) disciplines; and build a more diverse pool of scientists and engineers to meet future workforce needs.

The program includes funding for Centers of Excellence (COEs) established at HBCUs/MIs to focus on DoD science and technology priorities. Centers currently funded through cooperative agreements include Quantum Science, Fully Networked Command, Control, Communications, and Computer (C4), Artificial Intelligence/Machine Learning, Aerospace, Biotechnology, Materials Science, Renewable Energy, Future Wireless Technology, Advanced Computing and Software, and Integrated Sensors and Cyber. The Centers are administered by the Army Research Laboratory.

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0400: <i>Research, Development, Test & Evaluation, Defense-Wide I BA 1: Basic Research</i>	PE 0601228D8Z I <i>Historically Black Colleges and Universities and Minority-Serving Institutions</i>

B. Program Change Summary (\$ in Millions)	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
Previous President's Budget	100.500	100.467	100.596	-	100.596
Current President's Budget	96.858	100.467	99.792	-	99.792
Total Adjustments	-3.642	0.000	-0.804	-	-0.804
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-3.632	-			
• Program Adjustments	-0.010	-	-1.006	-	-1.006
• Economic Assumptions	-	-	0.202	-	0.202

Congressional Add Details (\$ in Millions, and Includes General Reductions)

Project: 448: *Historically Black Colleges and Universities and Minority-Serving Institutions*

Congressional Add: *HBCU/MI Program Increase*

Congressional Add: *Integrated Research and Training in Artificial Intelligence and Machine Learning for ROTC Students*

Congressional Add Subtotals for Project: 448

Congressional Add Totals for all Projects

	FY 2023	FY 2024
	66.712	-
	0.500	-
	67.212	-
	67.212	-

Change Summary Explanation

A reduction of \$1.006 million in FY 2025 was applied to meet DoD overall funding reductions, which were spread to mitigate impact. Funding increase of \$0.202 million in FY 2025 for Economic Assumptions.

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Appropriation/Budget Activity 0400 / 1				R-1 Program Element (Number/Name) PE 0601228D8Z / <i>Historically Black Colleges and Universities and Minority-Serving Institutions</i>				Project (Number/Name) 448 / <i>Historically Black Colleges and Universities and Minority-Serving Institutions</i>				
COST (\$ in Millions)	Prior Years	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
<i>448: Historically Black Colleges and Universities and Minority-Serving Institutions</i>	-	96.858	100.467	99.792	-	99.792	99.907	99.998	100.099	102.101	Continuing	Continuing

A. Mission Description and Budget Item Justification

The Historically Black Colleges and Universities and Minority-Serving Institutions (HBCU/MI) program provides support in fields of science and engineering that are important to national defense. The Department of Defense (DoD) HBCU/MI Program encourages participation of small minority schools and large minority research institutions. The program is authorized by 10 U.S.C. § 4144. This competitive program provides support through grants or contracts for research, education assistance, instrumentation purchases, and technical assistance as described below.

- **Research:** The research grants further knowledge in the basic scientific disciplines through theoretical and experimental activities. Collaborative research allows university professors to work directly with military laboratories or other universities.
- **Education:** Education assistance funds are used by minority institutions to strengthen their academic programs in science, technology, engineering, and mathematics (STEM), thereby increasing the number of under-represented minorities obtaining undergraduate and graduate degrees in these fields. These grants provide equipment, scholarships, cooperative work/study opportunities, visiting faculty programs, summer internship programs, and a variety of other enhancements designed to support students and to encourage them to pursue careers in STEM.
- **Instrumentation purchases:** The program allows universities to purchase basic laboratory equipment, such as lasers and spectrometers, for enhancements to the basic research efforts.
- **Technical assistance:** The funds are used to design programs that enhance the ability of minority institutions to successfully compete for future Defense funding by assisting the HBCU/MI community in areas such as proposal writing and administration of grants and contracts.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2023	FY 2024	FY 2025
Title: Historically Black Colleges and Universities and Minority-Serving Institutions (HBCU/MI)	29.646	100.467	99.792
Description: The HBCU/MI program provides support for research, education, and collaboration with DoD facilities and personnel. The research grants further knowledge in the basic scientific and engineering disciplines through theoretical and empirical activities. Collaborative research allows university professors to work directly with DoD laboratories or other universities.			
FY 2024 Plans:			

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B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2023	FY 2024	FY 2025
<p>Conduct annual competition of the Historically Black Colleges and Minority-Serving Institutions (HBCU/MI) program for basic research, student support, and/or equipment/instrumentation. Continue research and educational collaboration with the DoD laboratories. Continue the summer internship and faculty fellowship programs. Continue Centers of Excellence in support of the Under Secretary of Defense for Research and Engineering (USD(R&E)) critical technology areas and the National Defense Strategy in the areas needed to expand Science, Technology, Engineering, and Mathematics (STEM) opportunities for underrepresented minorities. Conduct annual review of the Centers. Conduct outreach activities, to include one webinar and two technical assistance workshops to expose HBCUs/MIs to opportunities in the DoD. Maintain minority STEM recruitment efforts in partnership with the Science, Mathematics and Research for Transformation (SMART) Scholarship for Service Program as encouraged by Section 250 of the National Defense Authorization Act (NDAA) for FY 2021. Continue support of HBCU/MI Pilot Initiative with the SMART Scholarship Program to develop and train the next generation of STEM leaders. Encourage HBCU/MI students to apply for SMART scholarships through targeted outreach including joint webinars focused on fostering a community of diversity and the STEM workforce. Continue to examine recommendations provided by the National Academies of Sciences, Engineering, and Medicine (NAEM) in the report to Congress on defense research at HBCUs and other MIs as required by Section 262 of the NDAA for FY 2020. Support efforts for R-2 HBCUs/MIs with high potential to elevate research activity in science and engineering disciplines critical to the national security functions of DoD and attain R-1 status on the Carnegie Classification scale. Collaborate with the Air Force for the establishment of the first HBCU university affiliated research center in tactical autonomy to foster HBCU R-1 Research Classification and generate STEM scholar interest in DoD science and technology priorities. Collaborate with the Office of Naval Research (ONR) on STEM, education, and workforce programs to diversify the available pool of scientists and engineers available to DoD in critical technology areas. Team with ONR to expand fellowship programs that engage HBCU/MI faculty in DoD research, including both the 10-week Summer Fellows program and the Distinguished Fellows Program supporting appointments ranging from one semester to one year. Collaborate with the Air Force Research Laboratory Minority Leaders Program to assist HBCUs/MIs in developing both the research and contracting skills necessary to compete for DoD research opportunities. Issue two discrete funding opportunities for basic research awards and equipment awards to increase research and educational capability of HBCUs/MIs. Expand the HBCU/MI internship program to increase basic research ecosystem of additional underrepresented minorities pursuing STEM disciplines important to national defense.</p> <p>Provide funding supplement to the multidisciplinary university research initiative (MURI) program specifically for HBCU/MI participation in defense research and to strengthen collaboration between university teams proposing MURI projects. Establish a center of excellence focusing on DoD S&T critical technology area to strengthen HBCU/MI involvement in defense research activities.</p> <p>FY 2025 Plans:</p>			

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B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2023	FY 2024	FY 2025
<p>Conduct annual competition of the HBCU/MI program for basic research, student support, and/or equipment/instrumentation. Continue research and educational collaboration with the DoD laboratories. Continue the summer internship and faculty fellowship programs. Continue Centers of Excellence in support of the Under Secretary of Defense for Research and Engineering (USD(R&E)) critical technology areas and the National Defense Strategy in the areas needed to expand Science, Technology, Engineering, and Mathematics (STEM) opportunities for underrepresented minorities. Conduct annual review of the Centers. Conduct outreach activities, to include one webinar and two technical assistance workshops to expose Historically Black Colleges and Minority-Serving Institutions (HBCU/MIs) to opportunities in the DoD. Maintain minority STEM recruitment efforts in partnership with the Science, Mathematics and Research for Transformation (SMART) Scholarship for Service Program as encouraged by Section 250 of the National Defense Authorization Act (NDAA) for FY 2021. Continue to examine and implement recommendations provided by the National Academies of Sciences, Engineering, and Medicine (NASEM) in the report to Congress on defense research at HBCUs and other MIs as required by Section 262 of the NDAA for FY 2020. Support efforts for R-2 HBCUs/MIs with high potential to elevate research activity in science and engineering disciplines critical to the national security functions of DoD and attain R-1 status on the Carnegie Classification scale. Continue collaboration with the Air Force for the sustainment of the first HBCU university affiliated research center at Howard University in tactical autonomy to foster HBCU R-1 Research Classification and generate STEM scholar interest in DoD science and technology priorities. Collaborate with the Office of Naval Research (ONR) on STEM, education, and workforce programs to diversify the available pool of scientists and engineers available to DoD in critical technology areas. Team with ONR to expand fellowship programs that engage HBCU/MI faculty in DoD research, including both the 10-week summer Fellows program and the Distinguished Fellows Program supporting appointments ranging from one semester to one year. Collaborate with the Air Force Research Laboratory Minority Leaders Program to assist HBCUs/MIs in developing both the research and contracting skills necessary to compete for DoD research opportunities. Issue two discrete funding opportunities for basic research awards and equipment awards to increase research and educational capability of HBCUs/MIs. Expand the HBCU/MI internship program to increase basic research ecosystem of additional underrepresented minorities pursuing STEM disciplines important to national defense. Continue funding supplement to support HBCU/MI participation in the Multidisciplinary University Research Initiative (MURI) program on defense research topics and to strengthen collaboration between university teams proposing MURI projects.</p> <p>FY 2024 to FY 2025 Increase/Decrease Statement: The decrease of \$0.675 million between FY 2024 and FY 2025 will result in a reduction of two research grants awarded to HBCUs/MIs through the annual research and education funding opportunity. Although the \$0.675 million decrease will impact the number of grant awards provided to the universities, the remaining program funds still allow DoD to conduct the annual research and education program for grants supporting research and instrumentation.</p>			
Accomplishments/Planned Programs Subtotals	29.646	100.467	99.792

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	FY 2023	FY 2024
Congressional Add: HBCU/MI Program Increase	66.712	-
<p>FY 2023 Accomplishments: Issue two discrete funding opportunities for basic research awards and equipment awards to increase research and educational capability of HBCUs/MIs. Continue research and educational collaboration with the DoD laboratories. Continue the summer internship and faculty fellowship programs. Continue Centers of Excellence in support of the USD(R&E) critical technology areas and the National Defense Strategy in the areas needed to expand STEM opportunities for underrepresented minorities. Conduct annual review of the Centers. Conduct outreach activities, to include one webinar and two technical assistance workshops to expose HBCUs/MIs to opportunities in the DoD. Maintain minority STEM recruitment efforts in partnership with the Science, Mathematics and Research for Transformation (SMART) Scholarship for Service Program as encouraged by Section 250 of the NDAA for FY 2021. Continue support of HBCU/MI Pilot Initiative with the SMART Scholarship Program to develop and train the next generation of STEM leaders. Encourage HBCU/MI students to apply for SMART scholarships through targeted outreach including joint webinars focused on fostering a community of diversity and the STEM workforce. Continue to examine recommendations provided by the National Academies of Sciences, Engineering, and Medicine (NASEM) in the report to Congress on defense research at HBCUs and other MIs as required by Section 262 of the NDAA for FY 2020. Continue efforts for R-2 HBCUs/MIs with high potential to elevate research activity in science and engineering disciplines critical to the national security functions of DoD and attain R-1 status on the Carnegie Classification scale. Continue collaboration with the Air Force for the establishment of the first HBCU university affiliated research center (UARC) in tactical autonomy to foster HBCU R-1 Research Classification and generate STEM scholar interest in DoD science and technology priorities. Collaborate with the Office of Naval Research (ONR) on STEM, education, and workforce programs to diversify the available pool of scientists and engineers available to DoD in critical technology areas. Team with ONR to expand fellowship programs that engage HBCU/MI faculty in DoD research, including both the 10-week Summer Fellows program and the Distinguished Fellows Program supporting appointments ranging from one semester to one year. Continue to collaborate with the Air Force Research Laboratory Minority Leaders Program to assist HBCUs/MIs in developing both the research and contracting skills necessary to compete for DoD research opportunities. Expand the HBCU/MI internship program to increase basic research ecosystem of additional underrepresented minorities pursuing STEM disciplines important to national defense. Provide funding supplement to the multidisciplinary university research initiative (MURI) program specifically for HBCU/MI participation in defense research and to strengthen</p>		

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	FY 2023	FY 2024
collaboration between university teams proposing MURI projects. Establish centers of excellence focusing on DoD S&T critical technology areas to strengthen HBCU/MI involvement in defense research activities.		
Congressional Add: Integrated Research and Training in Artificial Intelligence and Machine Learning for ROTC Students	0.500	-
FY 2023 Accomplishments: Funding will be used to increase STEM opportunities, collaboration, and training for HBCU/MI ROTC scholars to advance their skills in DoD critical technology areas. Funding will be used to increase ROTC students' research and training in AI/ML supporting the research activity at the Center of Excellence (COE) in Big Data Analytics established at Prairie View A&M University as stipulated in the Division C Defense Appropriations (requested by Rep. Michael McCaul (R-TX)). The execution is aligned with the objectives of the Big Data COE to increase students' competency in big data and AI/ML disciplines. The funding is consistent with DoD's continued partnership with the COE and the Department's goal of diversifying STEM education and workforce initiatives.		
Congressional Adds Subtotals	67.212	-

C. Other Program Funding Summary (\$ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A