

**UNCLASSIFIED**

**Exhibit R-2, RDT&E Budget Item Justification:** PB 2023 Office of the Secretary Of Defense **Date:** April 2022

<b>Appropriation/Budget Activity</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide I BA 5: System Development &amp; Demonstration (SDD)</i>	<b>R-1 Program Element (Number/Name)</b> PE 0604165D8Z I <i>Prompt Global Strike Capability Development</i>
--	--

COST (\$ in Millions)	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	Cost To Complete	Total Cost
Total Program Element	99.233	89.156	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	-	-
065: <i>Joint Hypersonics</i>	99.233	89.156	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	-	-

**Note**

New Start (Y/N): No

Beginning in FY 2022 Joint Hypersonics Transition Office (JHTO) activities will be administered through the newly-created Joint Hypersonic Technology Development & Transition Program Element (PE) (0603183D8Z), a budget activity three (BA-3) PE. The new PE better aligns to the intended budget activity, the JHTO mission, and congressional intent.

In FY 2020 and FY 2021, the Joint Hypersonics Transition Office (JHTO) was funded via Congressional Add to better synchronize hypersonic technology development and workforce development. Those funds were administered through the Prompt Global Strike Capability Development Program Element (PE) - (0604165D8Z), a budget activity five (BA-5) PE. In FY 2022, the Office of the Secretary of Defense established the Joint Hypersonic Technology Development & Transition Program Element (0603183D8Z), a budget activity three (BA-3) PE, to administer JHTO funds. The new PE better aligns to the intended budget activity, the JHTO mission, and congressional intent.

**A. Mission Description and Budget Item Justification**

This Program Element (PE) was established to develop and demonstrate technologies and applications that advance Conventional Prompt Global Strike (CPGS) warfighting capabilities. The program uses a national team with participation from multiple Services, Agencies, national research laboratories, and industry partners selected on a competitive basis. Program emphasis is on demonstrating component and subsystem technology maturity with risk reduction initiatives highlighted by flight tests. The program funds the design, development, and experimentation of boosters, payload delivery vehicles (PDVs), non-nuclear warheads, thermal protection systems, guidance systems, test range modernization, and mission planning and enabling capabilities. To support these development activities, the program procures modeling and simulation capabilities, ground testing, command and control interfaces, test range support, and launch system infrastructure. Additionally, expert resources address strategic policy and treaty issues. Flight and ground test outcomes drive program timing and DoD hypersonic budget investments.

The Prompt Global Strike Capability Development Program Element supports the National Defense Strategy's focus on technological advancements that enhance deterrence and increase strategic flexibility, freedom of action, and Joint Force lethality.

**UNCLASSIFIED**

**Exhibit R-2, RDT&E Budget Item Justification:** PB 2023 Office of the Secretary Of Defense **Date:** April 2022

<b>Appropriation/Budget Activity</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide I BA 5: System Development &amp; Demonstration (SDD)</i>	<b>R-1 Program Element (Number/Name)</b> PE 0604165D8Z I <i>Prompt Global Strike Capability Development</i>
--	--

<b>B. Program Change Summary (\$ in Millions)</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023 Base</b>	<b>FY 2023 OCO</b>	<b>FY 2023 Total</b>
Previous President's Budget	89.863	0.000	0.000	-	0.000
Current President's Budget	89.156	0.000	0.000	-	0.000
Total Adjustments	-0.707	0.000	0.000	-	0.000
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.689	-			
• Other Program Adjustments	-0.018	-	-	-	-

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

**Project:** 065: *Joint Hypersonics*

Congressional Add: *University Consortium for Applied Hypersonics*

Congressional Add: *HyFly2 Initial Risk Mitigation Program*

Congressional Add: *Navigation, Guidance and Controls (NGC) Science and Technology Development*

Congressional Add: *Propulsion Science and Technology Development*

Congressional Add: *Systems Engineering, Design and Analysis (SEDA) Science and Technology Development*

Congressional Add: *Materials, Structures and Manufacturing (MSM) Science and Technology Development*

Congressional Add: *Ordnance Science and Technology Development*

Congressional Add: *Mission Planning Science and Technology Development*

Congressional Add: *Aerodynamics and Aerothermodynamics Science and Technology Development*

Congressional Add: *JHTO Systems Engineering Field Activity at NSWC Crane*

Congressional Add Subtotals for Project: 065

Congressional Add Totals for all Projects

	<b>FY 2021</b>	<b>FY 2022</b>
	7.584	0.000
	13.406	0.000
	15.075	0.000
	9.570	0.000
	8.750	0.000
	14.223	0.000
	9.615	0.000
	1.800	0.000
	4.448	0.000
	4.685	0.000
Congressional Add Subtotals for Project: 065	89.156	0.000
Congressional Add Totals for all Projects	89.156	0.000

**UNCLASSIFIED**

**Exhibit R-2, RDT&E Budget Item Justification:** PB 2023 Office of the Secretary Of Defense **Date:** April 2022

**Appropriation/Budget Activity**  
0400: *Research, Development, Test & Evaluation, Defense-Wide / BA 5: System Development & Demonstration (SDD)*

**R-1 Program Element (Number/Name)**  
PE 0604165D8Z / *Prompt Global Strike Capability Development*

**Change Summary Explanation**

Beginning in FY 2022 Joint Hypersonics Transition Office (JHTO) activities will be administered through the newly-created Joint Hypersonic Technology Development & Transition Program Element (PE) (0603183D8Z), a budget activity three (BA-3) PE. The new PE better aligns to the intended budget activity, the JHTO mission, and congressional intent.

**UNCLASSIFIED**

**Exhibit R-2A, RDT&E Project Justification:** PB 2023 Office of the Secretary Of Defense **Date:** April 2022

<b>Appropriation/Budget Activity</b> 0400 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604165D8Z / <i>Prompt Global Strike Cap ability Development</i>	<b>Project (Number/Name)</b> 065 / <i>Joint Hypersonics</i>
--	---	--

COST (\$ in Millions)	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	Cost To Complete	Total Cost
065: <i>Joint Hypersonics</i>	99.233	89.156	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	-	-
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

**Note**

Beginning in FY 2022 Joint Hypersonics Transition Office (JHTO) activities will be administered through the newly-created Joint Hypersonic Technology Development & Transition Program Element (PE) (0603183D8Z), a budget activity three (BA-3) PE. The new PE better aligns to the intended budget activity, the JHTO mission, and congressional intent.

In FY 2020 and FY 2021, the Joint Hypersonics Transition Office (JHTO) was funded via Congressional Add to better synchronize hypersonic technology development and workforce development. Those funds were administered through the Prompt Global Strike Capability Development Program Element (PE) - (0604165D8Z), a budget activity five (BA-5) PE. In FY 2022, the Office of the Secretary of Defense established the Joint Hypersonic Technology Development & Transition Program Element (0603183D8Z), a budget activity three (BA-3) PE, to administer JHTO funds. The new PE better aligns to the intended budget activity, the JHTO mission, and congressional intent.

**A. Mission Description and Budget Item Justification**

The Joint Hypersonics Transition Office (JHTO) within the Office of the Under Secretary of Defense for Research and Engineering (OUSD(R&E)) was created to establish a university consortium for hypersonics research; support workforce development; expedite testing, evaluation, and acquisition of hypersonic technologies to meet the stated needs of the warfighter, including flight testing, ground-based-testing, and underwater launch testing; ensure that prototyping demonstration programs on hypersonic systems integrate advanced technologies to speed the maturation and deployment of future hypersonic systems; develop strategies and roadmaps for hypersonic technologies to enable the transition of such technologies to future operational capabilities for the warfighter; and, develop and implement a strategy for enhancing the current and future hypersonics workforce.

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

	FY 2021	FY 2022
<b>Congressional Add:</b> University Consortium for Applied Hypersonics	7.584	0.000
<b>FY 2021 Accomplishments:</b> The JHTO established the University Consortium for Applied Hypersonics (UCAH) and solicited research projects through the Consortium to address priorities and gaps identified by the JHTO Hypersonics Science and Technology (S&T) Roadmap, focusing on workforce development, applied research and advanced technology development related to the hypersonics mission. These solicitations led to the award of 17 three-year S&T projects valued at approximately \$8.5 million dollars per year. Additionally, the Consortium		

**UNCLASSIFIED**

<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2023 Office of the Secretary Of Defense		<b>Date:</b> April 2022
<b>Appropriation/Budget Activity</b> 0400 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604165D8Z / <i>Prompt Global Strike Cap ability Development</i>	<b>Project (Number/Name)</b> 065 / <i>Joint Hypersonics</i>
<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>	<b>FY 2021</b>	<b>FY 2022</b>
hosted Spring and Fall Forums for all UCAH members, conducted six technical seminars, and briefed the UCAH governance board on the Hypersonics Science and Technology Roadmapping Process. <b>FY 2022 Plans:</b> Beginning in FY 2022 Joint Hypersonics Transition Office (JHTO) activities will be administered through the newly-created Joint Hypersonic Technology Development & Transition Program Element (PE) (0603183D8Z), a budget activity three (BA-3) PE. The new PE better aligns to the intended budget activity, the JHTO mission, and congressional intent.		
<b>Congressional Add:</b> HyFly2 Initial Risk Mitigation Program <b>FY 2021 Accomplishments:</b> Continued the work initiated with FY 2020 funds, paving the way for a viable hypersonic cruise missile. Additional details regarding this project are sensitive and/or classified and can be provided upon request. <b>FY 2022 Plans:</b> Beginning in FY 2022 Joint Hypersonics Transition Office (JHTO) activities will be administered through the newly-created Joint Hypersonic Technology Development & Transition Program Element (PE) (0603183D8Z), a budget activity three (BA-3) PE. The new PE better aligns to the intended budget activity, the JHTO mission, and congressional intent.	13.406	0.000
<b>Congressional Add:</b> Navigation, Guidance and Controls (NGC) Science and Technology Development <b>FY 2021 Accomplishments:</b> Continued activities initiated with FY 2020 funds. Additional details regarding FY 2021 NGC projects are sensitive and/or classified and can be provided upon request. <b>FY 2022 Plans:</b> Beginning in FY 2022 Joint Hypersonics Transition Office (JHTO) activities will be administered through the newly-created Joint Hypersonic Technology Development & Transition Program Element (PE) (0603183D8Z), a budget activity three (BA-3) PE. The new PE better aligns to the intended budget activity, the JHTO mission, and congressional intent.	15.075	0.000
<b>Congressional Add:</b> Propulsion Science and Technology Development <b>FY 2021 Accomplishments:</b> Continued activities initiated with FY 2020 funds. Additional details regarding FY 2021 propulsion projects are sensitive and/or classified and can be provided upon request. <b>FY 2022 Plans:</b> Beginning in FY 2022 Joint Hypersonics Transition Office (JHTO) activities will be administered through the newly-created Joint Hypersonic Technology Development & Transition Program Element (PE)	9.570	0.000

**UNCLASSIFIED**

<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2023 Office of the Secretary Of Defense		<b>Date:</b> April 2022
<b>Appropriation/Budget Activity</b> 0400 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604165D8Z / <i>Prompt Global Strike Cap ability Development</i>	<b>Project (Number/Name)</b> 065 / <i>Joint Hypersonics</i>
<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>	<b>FY 2021</b>	<b>FY 2022</b>
(0603183D8Z), a budget activity three (BA-3) PE. The new PE better aligns to the intended budget activity, the JHTO mission, and congressional intent.		
<b>Congressional Add:</b> Systems Engineering, Design and Analysis (SEDA) Science and Technology Development <b>FY 2021 Accomplishments:</b> Continued activities initiated with FY 2020 funds. Additional details regarding FY 2021 SEDA projects are sensitive and/or classified and can be provided upon request. <b>FY 2022 Plans:</b> Beginning in FY 2022 Joint Hypersonics Transition Office (JHTO) activities will be administered through the newly-created Joint Hypersonic Technology Development & Transition Program Element (PE) (0603183D8Z), a budget activity three (BA-3) PE. The new PE better aligns to the intended budget activity, the JHTO mission, and congressional intent.	8.750	0.000
<b>Congressional Add:</b> Materials, Structures and Manufacturing (MSM) Science and Technology Development <b>FY 2021 Accomplishments:</b> Continued activities initiated with FY 2020 funds. Additional details regarding FY 2021 MSM projects are sensitive and/or classified and can be provided upon request. <b>FY 2022 Plans:</b> Beginning in FY 2022 Joint Hypersonics Transition Office (JHTO) activities will be administered through the newly-created Joint Hypersonic Technology Development & Transition Program Element (PE) (0603183D8Z), a budget activity three (BA-3) PE. The new PE better aligns to the intended budget activity, the JHTO mission, and congressional intent.	14.223	0.000
<b>Congressional Add:</b> Ordnance Science and Technology Development <b>FY 2021 Accomplishments:</b> Continued activities initiated with FY 2020 funds. Additional details regarding FY 2021 Ordnance projects are sensitive and/or classified and can be provided upon request. <b>FY 2022 Plans:</b> Beginning in FY 2022 Joint Hypersonics Transition Office (JHTO) activities will be administered through the newly-created Joint Hypersonic Technology Development & Transition Program Element (PE) (0603183D8Z), a budget activity three (BA-3) PE. The new PE better aligns to the intended budget activity, the JHTO mission, and congressional intent.	9.615	0.000
<b>Congressional Add:</b> Mission Planning Science and Technology Development <b>FY 2021 Accomplishments:</b> Continued activities initiated with FY 2020 funds. Additional details regarding FY 2021 Mission Planning projects are sensitive and/or classified and can be provided upon request. <b>FY 2022 Plans:</b> Beginning in FY 2022 Joint Hypersonics Transition Office (JHTO) activities will be administered through the newly-created Joint Hypersonic Technology Development & Transition Program Element (PE)	1.800	0.000

**UNCLASSIFIED**

<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2023 Office of the Secretary Of Defense		<b>Date:</b> April 2022	
<b>Appropriation/Budget Activity</b> 0400 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604165D8Z / <i>Prompt Global Strike Capability Development</i>	<b>Project (Number/Name)</b> 065 / <i>Joint Hypersonics</i>	
<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>		<b>FY 2021</b>	<b>FY 2022</b>
(0603183D8Z), a budget activity three (BA-3) PE. The new PE better aligns to the intended budget activity, the JHTO mission, and congressional intent.			
<b>Congressional Add:</b> Aerodynamics and Aerothermodynamics Science and Technology Development		4.448	0.000
<b>FY 2021 Accomplishments:</b> Continued activities initiated with FY 2020 funds. Additional details regarding FY 2021 Aerodynamics and Aerothermodynamics projects are sensitive and/or classified and can be provided upon request.			
<b>FY 2022 Plans:</b> Beginning in FY 2022 Joint Hypersonics Transition Office (JHTO) activities will be administered through the newly-created Joint Hypersonic Technology Development & Transition Program Element (PE) (0603183D8Z), a budget activity three (BA-3) PE. The new PE better aligns to the intended budget activity, the JHTO mission, and congressional intent.			
<b>Congressional Add:</b> JHTO Systems Engineering Field Activity at NSWC Crane		4.685	0.000
<b>FY 2021 Accomplishments:</b> Continued to support cross-service systems engineering, technology transition, and workforce development.			
<b>FY 2022 Plans:</b> Beginning in FY 2022 Joint Hypersonics Transition Office (JHTO) activities will be administered through the newly-created Joint Hypersonic Technology Development & Transition Program Element (PE) (0603183D8Z), a budget activity three (BA-3) PE. The new PE better aligns to the intended budget activity, the JHTO mission, and congressional intent.			
<b>Congressional Adds Subtotals</b>		89.156	0.000
<b>C. Other Program Funding Summary (\$ in Millions)</b>			
N/A			
<b>Remarks</b>			
<b>D. Acquisition Strategy</b>			
NA			

**UNCLASSIFIED**

**Exhibit R-3, RDT&E Project Cost Analysis: PB 2023 Office of the Secretary Of Defense** **Date:** April 2022

<b>Appropriation/Budget Activity</b> 0400 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604165D8Z / <i>Prompt Global Strike Capability Development</i>	<b>Project (Number/Name)</b> 065 / <i>Joint Hypersonics</i>
--	--	--

<b>Product Development (\$ in Millions)</b>				FY 2021		FY 2022		FY 2023 Base		FY 2023 OCO		FY 2023 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
University Consortium for Applied Hypersonics	C/FFP	Texas A&M Engineering Experiment Station : College Station, TX	10.683	7.584		-		-		-		-	Continuing	Continuing	-
University Science and Technology Research Grants	Grant	Multiple : Multiple	4.248	0.000		-		-		-		-	Continuing	Continuing	-
HyFly2 Initial Risk Mitigation Program	MIPR	Boeing Defense and Aerospace : St. Charles, MO	34.621	13.406		-		-		-		-	Continuing	Continuing	-
Navigation, Guidance and Controls Science and Technology Development	MIPR	Sandia Natl. Labs; Johns Hopkins University Applied Research Lab; MITRE; DARPA : Albuquerque, NM; Laurel, MD; McClean/Arlington, VA	13.371	15.075		-		-		-		-	Continuing	Continuing	-
Propulsion Science and Technology Development	MIPR	Air Force Research Labs; DARPA; MDA; Lockheed Martin; Aerojet Rocketdyne : Edwards, CA; Dayton, OH; Baytown, TX; Tucson, AZ	11.523	9.570		-		-		-		-	Continuing	Continuing	-
Systems Engineering, Design and Analysis Science and Technology Development	MIPR	U.S. Army Aviation & Missile Center : Huntsville, AL	5.150	8.750		-		-		-		-	Continuing	Continuing	-
Materials, Structures and Manufacturing Science and Technology Development	MIPR	NSWC Carderock; NASA; Air Force Research Labs : Bethesda, MD;	2.500	14.223		-		-		-		-	Continuing	Continuing	-

**UNCLASSIFIED**

**Exhibit R-3, RDT&E Project Cost Analysis: PB 2023 Office of the Secretary Of Defense** **Date:** April 2022

<b>Appropriation/Budget Activity</b> 0400 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604165D8Z / <i>Prompt Global Strike Capability Development</i>	<b>Project (Number/Name)</b> 065 / <i>Joint Hypersonics</i>
--	--	--

<b>Product Development (\$ in Millions)</b>				FY 2021		FY 2022		FY 2023 Base		FY 2023 OCO		FY 2023 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
		Hampton, VA; Dayton, OH													
Ordnance Science and Technology Development	MIPR	Air Force Research Labs; NSWC Carderock; NSWC Indian Head : Eglin AFB, FL; Bethesda, MD, Indian Head, MD	4.050	9.615		-		-		-		-	Continuing	Continuing	-
Mission Planning Science and Technology Development	MIPR	Sandia National Labs; Army Aviation & Missile Center; Johns Hopkins University Applied Research Lab; Air Force Research Labs : Albuquerque, NM; Huntsville, AL; Laurel, MD	3.750	1.800		-		-		-		-	Continuing	Continuing	-
Aerodynamics and Aerothermodynamics Science and Technology Development	MIPR	MDA : Huntsville, AL	2.500	4.448		-		-		-		-	Continuing	Continuing	-
JHTO Systems Engineering Field Activity at NSWC Crane	MIPR	Naval Surface Warfare Center Crane Division : Crane, IN	4.685	4.685		-		-		-		-	Continuing	Continuing	-
JHTO Manpower, Support and Administration	Option/ Various	Frontier Technology, Inc.; Johns Hopkins University Applied Physics Laboratory : Yellow Springs, OH; Laurel, MD;	2.152	-		-		-		-		-	Continuing	Continuing	-
<b>Subtotal</b>			99.233	89.156		-		-		-		-	Continuing	Continuing	N/A

**UNCLASSIFIED**

<b>Exhibit R-3, RDT&amp;E Project Cost Analysis:</b> PB 2023 Office of the Secretary Of Defense							<b>Date:</b> April 2022						
<b>Appropriation/Budget Activity</b> 0400 / 5			<b>R-1 Program Element (Number/Name)</b> PE 0604165D8Z / <i>Prompt Global Strike Capability Development</i>				<b>Project (Number/Name)</b> 065 / <i>Joint Hypersonics</i>						
	<b>Prior Years</b>	<b>FY 2021</b>		<b>FY 2022</b>		<b>FY 2023 Base</b>		<b>FY 2023 OCO</b>		<b>FY 2023 Total</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
<b>Project Cost Totals</b>	99.233	89.156		-		-		-		-	Continuing	Continuing	N/A

**Remarks**

**UNCLASSIFIED**

**Exhibit R-4, RDT&E Schedule Profile:** PB 2023 Office of the Secretary Of Defense **Date:** April 2022

<b>Appropriation/Budget Activity</b> 0400 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604165D8Z / <i>Prompt Global Strike Capability Development</i>	<b>Project (Number/Name)</b> 065 / <i>Joint Hypersonics</i>
--	--	--

FY 2014				FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020			
1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4

<b><i>University Consortium for Applied Hypersonics</i></b>	
Award Consortium Contract and Begin Consortium Activities	
<b><i>University Science and Technology Research Grants</i></b>	
Eight University Grants Research Conducted/ Completed, Technical Reports Received by JHTO.	█
<b><i>Hy Fly2 Initial Risk Mitigation Program</i></b>	
Inlet Risk Reduction, Dual Mod RamJet/ Scramjet Risk Reduction, Final Project Review	█
<b><i>Navigation, Guidance and Controls Science and Technology Development</i></b>	
Project Funding, Initiation, Review and Completion	█
<b><i>Propulsion Science and Technology Development</i></b>	
Project Funding, Initiation, Review and Completion	█
<b><i>Systems Engineering, Design and Analysis Science and Technology Development</i></b>	
Project Funding, Initiation, Review and Completion	█
<b><i>Materials, Structure and Manufacturing Science and Technology Development</i></b>	



**UNCLASSIFIED**

**Exhibit R-4, RDT&E Schedule Profile:** PB 2023 Office of the Secretary Of Defense **Date:** April 2022

<b>Appropriation/Budget Activity</b> 0400 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604165D8Z / <i>Prompt Global Strike Capability Development</i>	<b>Project (Number/Name)</b> 065 / <i>Joint Hypersonics</i>
--	--	--

	FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Award Consortium Contract and Begin Consortium Activities																												
<b>University Science and Technology Research Grants</b>																												
Eight University Grants Research Conducted/ Completed, Technical Reports Received by JHTO.																												
<b>Hy Fly2 Initial Risk Mitigation Program</b>																												
Inlet Risk Reduction, Dual Mod RamJet/ Scramjet Risk Reduction, Final Project Review																												
<b>Navigation, Guidance and Controls Science and Technology Development</b>																												
Project Funding, Initiation, Review and Completion																												
<b>Propulsion Science and Technology Development</b>																												
Project Funding, Initiation, Review and Completion																												
<b>Systems Engineering, Design and Analysis Science and Technology Development</b>																												
Project Funding, Initiation, Review and Completion																												
<b>Materials, Structure and Manufacturing Science and Technology Development</b>																												
Project Funding, Initiation, Review and Completion																												
<b>Ordnance Science and Technology Development</b>																												

**UNCLASSIFIED**

**Exhibit R-4, RDT&E Schedule Profile:** PB 2023 Office of the Secretary Of Defense **Date:** April 2022

<b>Appropriation/Budget Activity</b> 0400 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604165D8Z / <i>Prompt Global Strike Capability Development</i>	<b>Project (Number/Name)</b> 065 / <i>Joint Hypersonics</i>
--	--	--

	FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Project Funding, Initiation, Review and Completion																												
<b><i>Mission Planning Science and Technology Development</i></b>																												
Project Funding, Initiation, Review and Completion																												
<b><i>Aerodynamics and Aerothermodynamics Science and Technology Development</i></b>																												
Project Funding, Initiation, Review and Completion																												
<b><i>JHTO Systems Engineering Field Activity at NSWC Crane</i></b>																												
Systems Engineering, Integration and Workforce Development																												
<b><i>JHTO Manning, Administration, and Contract Support</i></b>																												
Establish Manpower, Develop Workplan, Initiate and Continue JHTO Operations																												

**UNCLASSIFIED**

**Exhibit R-4A, RDT&E Schedule Details:** PB 2023 Office of the Secretary Of Defense **Date:** April 2022

<b>Appropriation/Budget Activity</b> 0400 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604165D8Z / <i>Prompt Global Strike Capability Development</i>	<b>Project (Number/Name)</b> 065 / <i>Joint Hypersonics</i>
--	--	--

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<b><i>University Consortium for Applied Hypersonics</i></b>				
Award Consortium Contract and Begin Consortium Activities	1	2021	4	2025
<b><i>University Science and Technology Research Grants</i></b>				
Eight University Grants Research Conducted/Completed, Technical Reports Received by JHTO.	4	2020	4	2021
<b><i>Hy Fly2 Initial Risk Mitigation Program</i></b>				
Inlet Risk Reduction, Dual Mod RamJet/Scramjet Risk Reduction, Final Project Review	4	2020	4	2023
<b><i>Navigation, Guidance and Controls Science and Technology Development</i></b>				
Project Funding, Initiation, Review and Completion	4	2020	3	2023
<b><i>Propulsion Science and Technology Development</i></b>				
Project Funding, Initiation, Review and Completion	4	2020	4	2022
<b><i>Systems Engineering, Design and Analysis Science and Technology Development</i></b>				
Project Funding, Initiation, Review and Completion	4	2020	3	2023
<b><i>Materials, Structure and Manufacturing Science and Technology Development</i></b>				
Project Funding, Initiation, Review and Completion	4	2020	4	2022
<b><i>Ordnance Science and Technology Development</i></b>				
Project Funding, Initiation, Review and Completion	4	2020	4	2023
<b><i>Mission Planning Science and Technology Development</i></b>				
Project Funding, Initiation, Review and Completion	4	2020	4	2021
<b><i>Aerodynamics and Aerothermodynamics Science and Technology Development</i></b>				
Project Funding, Initiation, Review and Completion	4	2020	4	2021
<b><i>JHTO Systems Engineering Field Activity at NSW Crane</i></b>				

**UNCLASSIFIED**

**Exhibit R-4A, RDT&E Schedule Details:** PB 2023 Office of the Secretary Of Defense **Date:** April 2022

<b>Appropriation/Budget Activity</b> 0400 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604165D8Z / <i>Prompt Global Strike Capability Development</i>	<b>Project (Number/Name)</b> 065 / <i>Joint Hypersonics</i>
--	--	--

<b>Events by Sub Project</b>	<b>Start</b>		<b>End</b>	
	<b>Quarter</b>	<b>Year</b>	<b>Quarter</b>	<b>Year</b>
Systems Engineering, Integration and Workforce Development	4	2020	4	2023
<b><i>JHTO Manning, Administration, and Contract Support</i></b>				
Establish Manpower, Develop Workplan, Initiate and Continue JHTO Operations	2	2020	4	2023