

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2024 Army **Date:** March 2023

Appropriation / Budget Activity / Budget Sub Activity: 2033A: Procurement of W&TCV, Army / BA 02: Weapons and Other Combat Vehicles / BSA 30: Support Equipment & Facilities	P-1 Line Item Number / Title: 3270GC0050 / Production Base Support (WOCV-WTCV)
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ID Code (A=Service Ready, B=Not Service Ready):	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
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Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	399.586	118.504	225.220	115.024	-	115.024	119.237	95.788	75.874	75.948	Continuing	Continuing
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	399.586	118.504	225.220	115.024	-	115.024	119.237	95.788	75.874	75.948	Continuing	Continuing
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	399.586	118.504	225.220	115.024	-	115.024	119.237	95.788	75.874	75.948	Continuing	Continuing

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Thousands</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Thousands</i>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

This program provides funding to establish, modernize, expand, or replace Army-owned industrial facilities and equipment used in production and production testing of Weapons and Tracked Combat Vehicles (WTCV) and their components. The program also provides for the preserving, storing, and disposing for facilities and equipment that are either not required for current active production or are not needed by the Army.

Production Base Support occurs at Watervliet Arsenal (WVA), NY; the Joint Systems Manufacturing Center (JSMC), also known as the Lima Army Tank Plant located in Lima, Ohio, and the Joint Manufacturing and Technology Center (JMTC) at Rock Island Arsenal (RIA), IL. This program also provides funding for the Arsenal 5-Year Plan(s) for sustainment and modernization.

This program also provides funding to the Army Test and Evaluation Command (ATEC) to establish, modernize, expand, or replace test facilities used in production testing of Weapons and Tracked Combat Vehicles and their components. It sustains Army production test capabilities through upgrade and replacement of instrumentation and equipment that is technologically and/or economically obsolete.

Modernization of test instrumentation and equipment provides increased automation and efficiencies, improved data quality and quantity and cost avoidance to Army Program Managers. Programmed funding will be used to upgrade or replace production test instrumentation and equipment at Aberdeen Test Center (ATC), Aberdeen Proving Ground, MD; White Sands Test Center (WSTC), White Sands Missile Range, NM, and Yuma Test Center (YTC), Yuma Proving Ground, AZ.

Secondary Distribution	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028
Army									
Quantity	-	-	-	-	-	-	-	-	-
Total Obligation Authority	118.504	225.220	115.024	-	115.024	119.237	95.788	75.874	75.948
Total:									
Secondary Distribution									
Quantity	-	-	-	-	-	-	-	-	-
Total Obligation Authority	118.504	225.220	115.024	-	115.024	119.237	95.788	75.874	75.948

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ID Code (A=Service Ready, B=Not Service Ready): **Program Elements for Code B Items:** N/A **Other Related Program Elements:** N/A

Line Item MDAP/MAIS Code: N/A

Project Schedule		Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Exhibit Type	Project	Total Cost (\$ M)	Total Cost (\$ M)	Total Cost (\$ M)	Total Cost (\$ M)	Total Cost (\$ M)	Total Cost (\$ M)
(Uncategorized)		-	118.504	225.220	115.024	-	115.024
	BAE Production Facility	-	27.500	-	-	-	-
P-25	BAE-001 - BAE York Facilitation to increase and accelerate Armored Multi Purpose Vehicle (AMPV) production	-	27.500	-	-	-	-
	Watervliet Arsenal (WVA)	-	25.662	221.539	32.680	-	32.680
P-25	WVA0001 - Mortar Production Modernization	-	10.662	-	-	-	-
P-25	WVA0005 - New Paint Booth	-	15.000	-	-	-	-
P-25	WVA0008 - Radial Forge Replacement	-	-	65.000	-	-	-
P-25	WVA0009 - Electro-Chemical Machining System for Cannon Rifling	-	-	10.000	-	-	-
P-25	WVA0010 - Hex-Trivalent Process Verification	-	-	3.850	-	-	-
P-25	WVA0011 - Rifled WaterJet and Verification	-	-	10.000	-	-	-
P-25	WVA0012 - ECM Facility Transition (Rifled Tubes)	-	-	4.500	-	-	-
P-25	WVA0013 - ECM Tooling and Profile Verification	-	-	4.200	-	-	-
P-25	WVA0014 - Convert disused Hexavalent Chrome plating facility to Trivalent Chrome	-	-	7.000	-	-	-
P-25	WVA0015 - Chrome Tooling (Anodes & Cathodes)	-	-	3.000	-	-	-
P-25	WVA0016 - Rifled Cold-Spray System (Spindle Lathe, Facilities, System)	-	-	14.250	-	-	-
P-25	WVA0017 - Anodize Line (Reconstitute in-house process)	-	-	2.000	-	-	-
P-25	WVA0018 - Cannon Production High Voltage Substation Modernization	-	-	3.000	-	-	-
P-25	WVA0019 - Inspection Gauges - XM35	-	-	2.000	-	-	-
P-25	WVA0020 - Cannon Billet Pre-Heat Induction Furnace System	-	-	7.000	-	-	-
P-25	WVA0021 - Guided Bore System for ERCA Length Cannon	-	-	10.000	-	-	-
P-25	WVA0022 - External Cylindrical Grinder	-	-	3.400	-	-	-
P-25	WVA0023 - Overhead Cannon Transport Crane Modernization (Buildings 20, 35, 220, and 135)	-	-	17.000	-	-	-
P-25	WVA0024 - ERCA Vertical Turning Lathe Set (Breech Manufacture)	-	-	6.800	-	-	-
P-25	WVA0025 - Cannon Production Compressed Air Distribution Modernization	-	-	5.000	-	-	-
P-25	WVA0026 - Cannon Production High Voltage Power Distribution Modernization	-	-	10.000	-	-	-
P-25	WVA0027 - WVA Miscellaneous Small Projects	-	-	4.268	2.680	-	2.680
P-25	WVA0035 - Horizontal Milling Center	-	-	1.000	-	-	-
P-25	WVA0037 - Excess Equipment, Floor Repairs, Relocate Equipment	-	-	0.971	-	-	-
P-25	WVA0038 - Filament Winder 1/2 (120mm Bore Evacuator)	-	-	1.000	-	-	-
P-25	WVA0039 - Filament Winder 2/2 (120mm Bore Evacuator)	-	-	1.000	-	-	-
P-25	WVA0040 - 2nd M256 Cold Spray System	-	-	4.400	-	-	-
P-25	WVA0041 - ID Grinder 1/2	-	-	2.850	-	-	-
P-25	WVA0042 - ID Grinder 2/2	-	-	2.850	-	-	-
P-25	WVA0043 - Hone 1/2	-	-	0.900	-	-	-

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Appropriation / Budget Activity / Budget Sub Activity:
 2033A: Procurement of W&TCV, Army / BA 02: Weapons and Other Combat Vehicles / BSA 30: Support Equipment & Facilities

P-1 Line Item Number / Title:
 3270GC0050 / Production Base Support (WOCV-WTCV)

ID Code (A=Service Ready, B=Not Service Ready): **Program Elements for Code B Items:** N/A **Other Related Program Elements:** N/A

Line Item MDAP/MAIS Code: N/A

Project Schedule		Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Exhibit Type	Project	Total Cost (\$ M)	Total Cost (\$ M)	Total Cost (\$ M)	Total Cost (\$ M)	Total Cost (\$ M)	Total Cost (\$ M)
P-25	WVA0044 - Hone 2/2	-	-	0.900	-	-	-
P-25	WVA0045 - M256 Waterjet	-	-	3.200	4.200	-	4.200
P-25	WVA0046 - M256 Waterjet Foundation	-	-	1.000	-	-	-
P-25	WVA0047 - Gymnasticator	-	-	2.200	-	-	-
P-25	WVA0049 - Horizontal Machining Center	-	-	1.000	-	-	-
P-25	WVA0050 - Hollow Spindle Lathe	-	-	6.000	-	-	-
P-25	WVA0051 - Two (2) Surface Grinders	-	-	-	3.200	-	3.200
P-25	WVA0052 - Tube Runout Table	-	-	-	1.200	-	1.200
P-25	WVA0053 - Wire Electric Discharge Machine	-	-	-	1.400	-	1.400
P-25	WVA0054 - Quality Control Inspection Equipment	-	-	-	5.400	-	5.400
P-25	WVA0055 - Tri-Chrome Conversion	-	-	-	9.400	-	9.400
P-25	WVA0056 - Cannon Preform Advanced Material Purchase	-	-	-	1.200	-	1.200
P-25	WVA0057 - Minor Plating Reconstitution	-	-	-	4.000	-	4.000
	Joint Systems Manufacturing Center (JSMC) - Lima	-	46.692	-	60.306	-	60.306
P-25	JSMC001 - JSMC Miscellaneous Small Projects	-	7.485	-	16.263	-	16.263
P-25	JSMC008 - Remove TM004 and Install New Machine at TM005 Location	-	6.500	-	-	-	-
P-25	JSMC009 - Replace CE92 & CE96 Vertical Machining Centers (VMCs)	-	2.500	-	-	-	-
P-25	JSMC010 - Remove TR76 and TR77 and Replace with (1) Vertical Machining Center (VMC)	-	1.750	-	-	-	-
P-25	JSMC011 - Replace SB13 with Robotic Blast Booth	-	5.500	-	-	-	-
P-25	JSMC012 - RFID Asset Tracking	-	1.653	-	-	-	-
P-25	JSMC013 - Robotic Machine Tending Systems	-	1.000	-	-	-	-
P-25	JSMC014 - Repair/Refurbish/Replace Locomotive(s)	-	2.381	-	-	-	-
P-25	JSMC015 - Autonomous Material Handling	-	2.000	-	-	-	-
P-25	JSMC016 - Build 351 - Rehab South End Office Complex	-	2.000	-	-	-	-
P-25	JSMC017 - Water Tower Piping Renovation	-	7.540	-	-	-	-
P-25	JSMC018 - Replace Arch Beam Cranes - Safety Recall	-	4.121	-	-	-	-
P-25	JSMC020 - Building 281 Replace Drag Line	-	1.102	-	-	-	-
P-25	JSMC021 - Replace Cooling Tower in Power House	-	1.160	-	-	-	-
P-25	JSMC022 - Rehabilitate Hardstand Pavement	-	-	-	1.061	-	1.061
P-25	JSMC023 - B147 Replace Drag Line	-	-	-	1.180	-	1.180
P-25	JSMC024 - Replace Fire Sprinkler System Components	-	-	-	3.609	-	3.609
P-25	JSMC025 - Structural Repair of B142	-	-	-	1.785	-	1.785
P-25	JSMC026 - 480V Substation Work	-	-	-	1.817	-	1.817
P-25	JSMC027 - Upgrade Cranes CO0112 and CO0431 Turret Line Station 0	-	-	-	1.850	-	1.850

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Appropriation / Budget Activity / Budget Sub Activity: 2033A: Procurement of W&TCV, Army / BA 02: Weapons and Other Combat Vehicles / BSA 30: Support Equipment & Facilities	P-1 Line Item Number / Title: 3270GC0050 / Production Base Support (WOCV-WTCV)
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ID Code (A=Service Ready, B=Not Service Ready):	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
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Line Item MDAP/MAIS Code: N/A

Project Schedule		Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Exhibit Type	Project	Total Cost (\$ M)	Total Cost (\$ M)	Total Cost (\$ M)	Total Cost (\$ M)	Total Cost (\$ M)	Total Cost (\$ M)
P-25	JSMC028 - Replacement of Government Owned Mobile Equipment (Forklifts, Walk behind, Pallet Jack)	-	-	-	1.500	-	1.500
P-25	JSMC030 - B147 Shaw Box Overhead Cranes	-	-	-	5.000	-	5.000
P-25	JSMC031 - Building 351 Outside Utilities Replacement	-	-	-	6.857	-	6.857
P-25	JSMC032 - Replace (2) Turret Machines (TM) TM006/TM007	-	-	-	7.909	-	7.909
P-25	JSMC033 - Building 147 South Side Underground Infrastructure Improvement	-	-	-	8.570	-	8.570
P-25	JSMC035 - Electronic Fabrication & Assembly Inspection	-	-	-	0.952	-	0.952
P-25	JSMC036 - Electronic Final Inspection Records	-	-	-	0.976	-	0.976
P-25	JSMC037 - Level/Alignment of Hull Machines (HM) HM0035 & HM0036	-	-	-	0.977	-	0.977
	Rock Island Arsenal - Joint Manufacturing and Technology Center (RIA-JTMC)	-	14.982	-	18.222	-	18.222
P-25	JMTC002 - Thick Plate Machining Line Equipment	-	10.169	-	-	-	-
P-25	JMTC003 - Tool Room Modernization	-	0.938	-	-	-	-
P-25	JMTC004 - CNC Cutting Table and Spreader	-	0.375	-	-	-	-
P-25	JMTC005 - Bridge Mill (Thick plate machining line)	-	3.500	-	-	-	-
P-25	JMTC006 - JMTC Miscellaneous Small Projects	-	-	-	1.750	-	1.750
P-25	JMTC007 - Flexible Plating Line	-	-	-	1.236	-	1.236
P-25	JMTC008 - Sand Handling System	-	-	-	1.236	-	1.236
P-25	JMTC009 - Upgrade Existing Paint Booths	-	-	-	4.500	-	4.500
P-25	JMTC010 - Sand Printing Package	-	-	-	2.000	-	2.000
P-25	JMTC011 - Large, Multi-Axis Machining	-	-	-	7.500	-	7.500
	Army Test and Evaluation Command (ATEC) Facilities	-	3.668	3.681	3.816	-	3.816
P-25	ATEC - ATEC Facilities	-	3.668	3.681	3.816	-	3.816
Total Gross/Weapon System Cost		-	118.504	225.220	115.024	-	115.024

*For the P-17 and P-25, the Project column displays a three-level indentation: Project Category (e.g., Environmental), followed by the Facility, followed by the Project Name. Exhibits with no Project Category are included under the "Uncategorized" category. For the P-26, the Project column displays a two-level indentation: Project Type (e.g., Inactive Plants, Inactive Lines at Contractor Plants and Inactive Lines at Active Plants), followed by the Facility. Note also that although all P-17, P-25 and P-26 projects are shown in the project schedule, not all projects will have a corresponding exhibit. A P-17 or P-25 exhibit is only included if data beyond the Project Number, Project Title and Cost are included (for example: for the P-17, Description, Manufacturer, etc.; for the P-25, Narrative Explanation, Cost Elements, Principle Milestones, etc.). A P-26 exhibit is only included if data beyond Project Type and Total Cost are included (for example, Description, Contractor, Maintenance/Recurring/Environmental/Other costs, etc.).

Justification:
 FY 2024 Base procurement dollars in the amount of \$115.024 million supports Army Production Base Support activities at Watervliet Arsenal (WVA) in Watervliet, NY; Joint Systems Manufacturing Center (JSMC) in Lima, OH, Joint Manufacturing and Technology Center (JMTC) at Rock Island Arsenal (RIA), IL, and the Army Test and Evaluation Command (ATEC). The significant investment in WVA, JSMC, and JMTC is due to aging infrastructure and the increased organic industrial base capabilities, the manufacturing of equipment, and facility improvements. The objective is to advance industrial base capabilities in order to implement risk mitigation strategies that ensure production capacities meet required aggregate demand.

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Exhibit P-40, Budget Line Item Justification: PB 2024 Army		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 2033A: Procurement of W&TCV, Army / BA 02: Weapons and Other Combat Vehicles / BSA 30: Support Equipment & Facilities		P-1 Line Item Number / Title: 3270GC0050 / Production Base Support (WOCV-WTCV)
ID Code (A=Service Ready, B=Not Service Ready):	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
Line Item MDAP/MAIS Code: N/A		
<p>The activities of the Army Production Base Support are as follows:</p> <p>Production Base Support activities:</p> <ul style="list-style-type: none"> - Watervliet Arsenal (WVA): \$32.680M Supports organic industrial base upgrades and improvement at WVA to optimize production of 120mm gun tubes. Major efforts include replacement of critical production equipment such as surface grinders, wire electric discharge, quality control inspection equipment and conversion from hexavalent chromium plating to trivalent chromium plating. - Joint Systems Manufacturing Center (JSMC) - Lima: \$60.306M supports organic industrial base upgrades and improvement at JSMC to optimize Abrams M1A2 production. Major efforts include replacement of end of life equipment and production infrastructure used in the manufacture of M1A2 tanks, modernization of equipment and infrastructure used in the manufacture of M1A2 tanks, and upgrade of real property at JSMC. - Rock Island Arsenal-Joint Manufacturing and Technology Center (RIA-JMTC): \$18.222M supports organic industrial base upgrades and improvements at RIA to optimize production. Major efforts include a bridge mill, modernized paint booth, waterjet cutter, land laser cutter, FY 2024 PBS will further support engineering hours, manufacturing feasibility studies, and equipment design efforts associated with planned out-year projects at critical Organic Industrial Base (OIB) production sites. This will reduce contracting lead times, address long lead items, and reduce production risk. These efforts include engineering hours and materials associated with gun tube manufacturing capability, utility upgrades, overhead cranes and lifting devices, maintenance and upgrade to hull and turret machining operations, and maintenance and upgrade of weld capabilities. <p>Army Test and Evaluation Command (ATEC): \$3.816 million supports:</p> <ul style="list-style-type: none"> - Aberdeen Test Center (ATC) continued modernization of fire control instrumentation required to assess weapon system fire control performance on a wide range of test items. Aberdeen Test Center will continue replacing and upgrading weapon, sight, and target scoring high-definition video cameras, recorders, digital video processing systems, fiber optic converters, and telemetry systems. Replacement equipment is scheduled to address obsolescence issues, software compatibility gaps, and deterioration of existing hardware while ensuring test equipment maintains pace with technological advances of test items to preclude lack of test support. Aberdeen Test Center will also procure new instrumentation that will allow Electromagnetic Interference (EMI) testing of current and future military platforms, including autonomous vehicles. - White Sands Test Center (WSTC), ATEC will continue to maintain and upgrade existing equipment and instrumentation for the developing and evolving White Sands Missile Range (WSMR) to include directed energy, High-Power Microwave (HPM), Electromagnetic Pulse (EMP) and lightning effects test simulators. These items include sensors, oscilloscopes, fiber optic links, vacuum systems, cryogenic superconducting magnets, waveguides, antennas, cathodes, insulators, and various cabling and subassemblies. These efforts will help the White Sands Test Center meet regulatory, customer, and/or evolving mission requirements. - Yuma Test Center (YTC) will acquire upgrades sensors, sensor positioning equipment, control hardware, signal conditioners, and other data acquisition equipment and software to modernize and improve accuracy and efficiency of ballistics data acquisition. 		

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: PB 2024 Army **Date:** March 2023

Appropriation / Budget Activity / Budget Sub Activity: 2033A / 02 / 30 **P-1 Line Item Number / Title:** 3270GC0050 / Production Base Support (WOCV-WTCV)

Project Title: BAE York Facilitation to increase and accelerate Armored Multi Purpose Vehicle (AMPV) production **Project Number:** BAE-001 **Project Category:**

End Item Supported Model: AMPV **Annual Capacity Before / After (1-8-5):** 12 / 16

Cost Elements <i>(\$ in Millions)</i>	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	Facility Name: BAE Production Facility Facility Location: York, PA Facility Type (GOGO, GOCO, COCO): COCO						
A. Construction Cost	-	-	-	-	-	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Initial/Final Project Award: Construction Complete: Equipment Installation Complete: Prove Out Begins: Prove Out Complete:						
B. Equipment Cost	-	-	-	-	-							
C. Equipment Installation Cost	-	-	-	-	-							
D. Contractor Support Cost	-	-	-	-	-							
E. Corps of Engineers Support Cost	-	-	-	-	-							
F. Other In-House Support Cost	-	-	-	-	-							
G. Total Facility Project Cost	27.500	-	-	-	-							
H. Other Costs	-	-	-	-	-							
Total Project Cost	27.500	-	-	-	-	Related Projects						
						Project Number	Title	FY & Appn	Value (\$ M)	Facing	Start Date	Compl Date

Narrative Explanation:
 There is no FY 2024 budget request for this project.

 FY 2022 funding supports the Armored Multi Purpose Vehicle industrial base at the BAE Systems Contractor-Owned Contractor-Operated facilities in York, PA in support of the acceleration in production capacity of the AMPV vehicles.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: PB 2024 Army **Date:** March 2023

Appropriation / Budget Activity / Budget Sub Activity: 2033A / 02 / 30 **P-1 Line Item Number / Title:** 3270GC0050 / Production Base Support (WOCV-WTCV)

Project Title: Mortar Production Modernization **Project Number:** WVA0001 **Project Category:**

End Item Supported Model: Mortar Production **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	Facility Name: Watervliet Arsenal (WVA) Facility Location: Watervliet, NY Facility Type (GOGO, GOCO, COCO): GOGO						
A. Construction Cost	6.662	-	-	-	-	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Jun 2022 Initial/Final Project Award: Apr 2021 Construction Complete: Jan 2024 Equipment Installation Complete: May 2023 Prove Out Begins: Prove Out Complete:						
B. Equipment Cost	1.600	-	-	-	-							
C. Equipment Installation Cost	2.400	-	-	-	-							
D. Contractor Support Cost	-	-	-	-	-							
E. Corps of Engineers Support Cost	-	-	-	-	-							
F. Other In-House Support Cost	-	-	-	-	-							
G. Total Facility Project Cost	-	-	-	-	-							
H. Other Costs	-	-	-	-	-							
Total Project Cost	10.662	-	-	-	-	Related Projects						
						Project Number	Title	FY & Appn	Value (\$ M)	Facing	Start Date	Compl Date

Narrative Explanation:
There is no FY 2024 budget request for this project.

FY 2022 Base procurement dollars in the amount of \$10.662 million supports construction, as well as, procurement and installation of equipment to continue modernization of Building 125, originally constructed in the early 1900s, into a dedicated mortar factory at Watervliet Arsenal (WVA), NY. This project will provide for a focused factory concept with a consolidated manufacturing line and dedicated team to support the production of all mortar systems. This project will reduce manufacturing lead time by at least 50% and provided increased throughput by 200% - 400%.

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Appropriation / Budget Activity / Budget Sub Activity: 2033A / 02 / 30 **P-1 Line Item Number / Title:** 3270GC0050 / Production Base Support (WOCV-WTCV)

Project Title: New Paint Booth **Project Number:** WVA0005 **Project Category:**

End Item Supported Model: **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	Facility Name: Watervliet Arsenal (WVA) Facility Location: Watervliet, NY Facility Type (GOGO, GOCO, COCO): GOGO						
A. Construction Cost	-	-	-	-	-	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Initial/Final Project Award: Construction Complete: Equipment Installation Complete: Prove Out Begins: Prove Out Complete:						
B. Equipment Cost	-	-	-	-	-							
C. Equipment Installation Cost	-	-	-	-	-							
D. Contractor Support Cost	-	-	-	-	-							
E. Corps of Engineers Support Cost	-	-	-	-	-							
F. Other In-House Support Cost	-	-	-	-	-							
G. Total Facility Project Cost	-	-	-	-	-							
H. Other Costs	15.000	-	-	-	-	Related Projects						
Total Project Cost	15.000	-	-	-	-							
						Project Number	Title	FY & Appn	Value (\$ M)	Facing	Start Date	Compl Date

Narrative Explanation:
 There is no FY 2024 budget request for this project.

FY 2022 Base procurement dollars in the amount of \$15.000 million support procurement of a new Paint Booth at Watervliet Arsenal (WVA), New York. The current booth is inefficient for cannon tubes and major components; the present booth can only accomodate up to (4) Extended Range Cannon Artillery (ERCA) cannon tubes or a larger number of smaller items. New Paint Booth technologies will include robotics and climate control which will enhance throughput, apply coatings to micron thickness and reduce rework. This project will also benefit other programs like Abrams and Mortars, which are painted at WVA.

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Appropriation / Budget Activity / Budget Sub Activity: 2033A / 02 / 30 **P-1 Line Item Number / Title:** 3270GC0050 / Production Base Support (WOCV-WTCV)

Project Title: Radial Forge Replacement **Project Number:** WVA0008 **Project Category:**

End Item Supported Model: Cannon Production **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	Facility Name: Watervliet Arsenal (WVA) Facility Location: Watervliet, NY Facility Type (GOGO, GOCO, COCO): GOGO						
A. Construction Cost	-	14.000	-	-	-	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Initial/Final Project Award: Construction Complete: Equipment Installation Complete: Prove Out Begins: Prove Out Complete:						
B. Equipment Cost	-	25.000	-	-	-							
C. Equipment Installation Cost	-	7.000	-	-	-							
D. Contractor Support Cost	-	-	-	-	-							
E. Corps of Engineers Support Cost	-	6.000	-	-	-							
F. Other In-House Support Cost	-	-	-	-	-							
G. Total Facility Project Cost	-	8.000	-	-	-							
H. Other Costs	-	5.000	-	-	-							
Total Project Cost	-	65.000	-	-	-	Related Projects						
						Project Number	Title	FY & Appn	Value (\$ M)	Facing	Start Date	Compl Date

Narrative Explanation:
 There is no FY 2024 budget request for this project.

FY 2023 Base procurement dollars in the amount of \$65.000 million supports the procurement and installation of replacement Radial Forge for use at Watervliet Arsenal, NY. The existing Radial Forge was installed and has been in operation since 1974. Across the five decades of operation, several refurbishments and modifications the system is reaching end of life. Component failures are increasing, and the Watervliet Arsenal must often manufacture replacement parts because they are not available elsewhere. The existing forge requires a two step procedure to manufacture Extended Range Cannon Artillery (ERCA) length and longer cannons. The Replacement Radial Forge supports manufacture of cannons exceeding the length of current ERCA in a single manufacturing step. The new system applies greater force during forging, allowing the forge to draw and shape a Cannon Preform Billet into a Cannon Rough Shape in less than 80% of the time required by the current system. The new systems incorporates additional automation and machine control to the forging process, producing more conformal rough shapes that reduce the amount of subsequent time and machining steps needed to produce a cannon.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: PB 2024 Army **Date:** March 2023

Appropriation / Budget Activity / Budget Sub Activity: 2033A / 02 / 30 **P-1 Line Item Number / Title:**
3270GC0050 / Production Base Support (WOCV-WTCV)

Project Title: Electro-Chemical Machining System for Cannon Rifling **Project Number:** WVA0009 **Project Category:**

End Item Supported Model: Rifled Cannon Production **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	Facility Name: Watervliet Arsenal (WVA) Facility Location: Watervliet, NY Facility Type (GOGO, GOCO, COCO): GOGO						
A. Construction Cost	-	-	-	-	-	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Initial/Final Project Award: Construction Complete: Equipment Installation Complete: Prove Out Begins: Prove Out Complete:						
B. Equipment Cost	-	7.000	-	-	-							
C. Equipment Installation Cost	-	3.000	-	-	-							
D. Contractor Support Cost	-	-	-	-	-							
E. Corps of Engineers Support Cost	-	-	-	-	-							
F. Other In-House Support Cost	-	-	-	-	-							
G. Total Facility Project Cost	-	-	-	-	-							
H. Other Costs	-	-	-	-	-							
Total Project Cost	-	10.000	-	-	-	Related Projects						
						Project Number	Title	FY & Appn	Value (\$ M)	Facing	Start Date	Compl Date

Narrative Explanation:
 There is no FY 2024 budget request for this project.

FY 2023 Base procurement dollars in the amount of \$10.000 million supports the procurement and installation of an Electro Chemical Machining systems to be used for cannon rifling. Electro Chemical Machining is a highly automated process, using electrically controlled fluid removal of metal to surface finish quality. Electro Chemical Machining is mature commercial manufacturing technology being adapted to improve the accuracy and reduce the time needed to rifle cannon tubes. Electro Chemical Machining uses electrically conductive fluids passing under moderate pressures with easily fabricated anodes to precisely and rapidly remove metal molecules from the inside of the cannon barrel. This systems will be able to rifle ERCA length and specialty steel barrels in less than 2/3 the time required using the current broaching technique. Electro Chemical Machining costs per barrel are projected to be less than half of the current broach method, requiring less time to rifle cannon barrels with greater precision.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: PB 2024 Army **Date:** March 2023

Appropriation / Budget Activity / Budget Sub Activity: 2033A / 02 / 30 **P-1 Line Item Number / Title:** 3270GC0050 / Production Base Support (WOCV-WTCV)

Project Title: Hex-Trivalent Process Verification **Project Number:** WVA0010 **Project Category:**

End Item Supported Model: Cannon Production **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	Facility Name: Watervliet Arsenal (WVA) Facility Location: Watervliet, NY Facility Type (GOGO, GOCO, COCO): GOGO														
A. Construction Cost	-	-	-	-	-	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Initial/Final Project Award: Construction Complete: Equipment Installation Complete: Prove Out Begins: Prove Out Complete: <div align="center">Related Projects</div> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 10%;">Project Number</th> <th style="width: 30%;">Title</th> <th style="width: 10%;">FY & Appn</th> <th style="width: 10%;">Value (\$ M)</th> <th style="width: 10%;">Facing</th> <th style="width: 10%;">Start Date</th> <th style="width: 10%;">Compl Date</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>	Project Number	Title	FY & Appn	Value (\$ M)	Facing	Start Date	Compl Date							
Project Number	Title	FY & Appn	Value (\$ M)	Facing	Start Date		Compl Date													
B. Equipment Cost	-	0.750	-	-	-															
C. Equipment Installation Cost	-	-	-	-	-															
D. Contractor Support Cost	-	-	-	-	-															
E. Corps of Engineers Support Cost	-	-	-	-	-															
F. Other In-House Support Cost	-	-	-	-	-															
G. Total Facility Project Cost	-	2.100	-	-	-															
H. Other Costs	-	1.000	-	-	-															
Total Project Cost	-	3.850	-	-	-															

Narrative Explanation:
There is no FY 2024 budget request for this project.

FY 2023 Base procurement dollars in the amount of \$3.850 million supports production process verification of the use of Trivalent Chromium plating for cannon bores and cannon minor parts. Trivalent Chromium, a more environment and occupational health safe material is replacing the use of the more hazardous Hexavalent Chromium plating process used for over 5 decades. This project provides materials and effort required to verify plating processes and demonstrate performance of Trivalent Chromium on plated surfaces. This project builds upon other efforts, including the repair of the Watervliet Arsenal chrome plating facility and conversion of the disused commercial plating facility back to Arsenal use. This project introduces and verifies new processes to qualify Trivalent Chromium for cannon bore and minor parts plating.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: PB 2024 Army **Date:** March 2023

Appropriation / Budget Activity / Budget Sub Activity: 2033A / 02 / 30 **P-1 Line Item Number / Title:** 3270GC0050 / Production Base Support (WOCV-WTCV)

Project Title: Rifled WaterJet and Verification **Project Number:** WVA0011 **Project Category:**

End Item Supported Model: Cannon Production **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	Facility Name: Watervliet Arsenal (WVA) Facility Location: Watervliet, NY Facility Type (GOGO, GOCO, COCO): GOGO						
A. Construction Cost	-	0.950	-	-	-	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Initial/Final Project Award: Construction Complete: Equipment Installation Complete: Prove Out Begins: Prove Out Complete:						
B. Equipment Cost	-	4.750	-	-	-							
C. Equipment Installation Cost	-	0.500	-	-	-							
D. Contractor Support Cost	-	0.250	-	-	-							
E. Corps of Engineers Support Cost	-	-	-	-	-							
F. Other In-House Support Cost	-	2.500	-	-	-							
G. Total Facility Project Cost	-	-	-	-	-							
H. Other Costs	-	1.050	-	-	-							
Total Project Cost	-	10.000	-	-	-	Related Projects						
						Project Number	Title	FY & Appn	Value (\$ M)	Facing	Start Date	Compl Date

Narrative Explanation:
 There is no FY 2024 budget request for this project.

FY 2023 Base procurement dollars in the amount of \$10.000 million supports procurement and installation of a complete Waterjet System to be used for the production of Rifled Cannons. The Waterjet is being procured to serve as a combined rifling and surface finishing tool. Waterjet rifling uses high pressure slurry to precisely cut groves into the cannon bore steel. Waterjet surface finishing provides precise material removal to provide required inner diameter dimensions and required surface smoothness. Waterjet finishing is necessary to allow the use of Cold-Spray coatings in rifled cannon barrels. Waterjet rifling introduces a new capability to Watervliet Arsenal (WVA) to replace some traditional cannon production processes and complement other new technologies such as Electro Chemical Machining and Cold-Spray applied coatings.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: PB 2024 Army **Date:** March 2023

Appropriation / Budget Activity / Budget Sub Activity: 2033A / 02 / 30 **P-1 Line Item Number / Title:** 3270GC0050 / Production Base Support (WOCV-WTCV)

Project Title: ECM Facility Transition (Rifled Tubes) **Project Number:** WVA0012 **Project Category:**

End Item Supported Model: Cannon Production **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	Facility Name: Watervliet Arsenal (WVA) Facility Location: Watervliet, NY Facility Type (GOGO, GOCO, COCO): GOGO						
A. Construction Cost	-	1.900	-	-	-	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Initial/Final Project Award: Construction Complete: Equipment Installation Complete: Prove Out Begins: Prove Out Complete:						
B. Equipment Cost	-	-	-	-	-							
C. Equipment Installation Cost	-	1.600	-	-	-							
D. Contractor Support Cost	-	-	-	-	-							
E. Corps of Engineers Support Cost	-	-	-	-	-							
F. Other In-House Support Cost	-	0.700	-	-	-							
G. Total Facility Project Cost	-	-	-	-	-							
H. Other Costs	-	0.300	-	-	-							
Total Project Cost	-	4.500	-	-	-	Related Projects						
						Project Number	Title	FY & Appn	Value (\$ M)	Facing	Start Date	Compl Date

Narrative Explanation:

There is no FY 2024 budget request for this project.

FY 2023 Base procurement dollars in the amount of \$4.500 million supports the conversion of the prototype Electro Chemical Machining (ECM) System to production capability for rifled cannon up to Extended Range Cannon Artillery (ERCA) tube length. The Electro Chemical Machining (ECM) System provides precise removal of metal to rifle and finish cannon bores. This system replaces the traditional cannon rifling process that pulls broaches through the tube to cut and finish lands and grooves. Electro Chemical Machining (ECM) reduces mechanical stresses broaching introduces into cannon tubes. Electro Chemical Machining (ECM) will be the primary method to rifle Extended Range Cannon Artillery (ERCA) cannon tubes and is expected to replace broach rifling for large cannon. This machine compliments new capability to Watervliet Arsenal (WVA).

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: PB 2024 Army **Date:** March 2023

Appropriation / Budget Activity / Budget Sub Activity: 2033A / 02 / 30 **P-1 Line Item Number / Title:** 3270GC0050 / Production Base Support (WOCV-WTCV)

Project Title: ECM Tooling and Profile Verification **Project Number:** WVA0013 **Project Category:**

End Item Supported Model: Cannon Production **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	Facility Name: Watervliet Arsenal (WVA) Facility Location: Watervliet, NY Facility Type (GOGO, GOCO, COCO): GOGO						
A. Construction Cost	-	-	-	-	-	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Initial/Final Project Award: Construction Complete: Equipment Installation Complete: Prove Out Begins: Prove Out Complete:						
B. Equipment Cost	-	0.900	-	-	-							
C. Equipment Installation Cost	-	0.300	-	-	-							
D. Contractor Support Cost	-	0.600	-	-	-							
E. Corps of Engineers Support Cost	-	-	-	-	-							
F. Other In-House Support Cost	-	1.750	-	-	-							
G. Total Facility Project Cost	-	-	-	-	-							
H. Other Costs	-	0.650	-	-	-							
Total Project Cost	-	4.200	-	-	-	Related Projects						
						Project Number	Title	FY & Appn	Value (\$ M)	Facing	Start Date	Compl Date

Narrative Explanation:
 There is no FY 2024 budget request for this project.

FY 2023 Base procurement dollars in the amount of \$4.200 million supports production Electro Chemical Machining (ECM) tooling procurement and process verification for 155mm cannon including Extended Range Cannon Artillery (ERCA). This project procures the production required Electro Chemical Machining (ECM) heads, guides, and other cannon specific items needed to perform rifling for M777, M109A7, and XM1299 ERCA cannons. This project verifies that the Electro Chemical Machining (ECM) processes used to rifle each cannon provide required inner diameter, surface finish, and required service performance. This project compliments other cannon production modernization investments at Watervliet Arsenal (WVA).

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: PB 2024 Army **Date:** March 2023

Appropriation / Budget Activity / Budget Sub Activity: 2033A / 02 / 30 **P-1 Line Item Number / Title:** 3270GC0050 / Production Base Support (WOCV-WTCV)

Project Title: Convert disused Hexavalent Chrome plating facility to Trivalent Chrome **Project Number:** WVA0014 **Project Category:**

End Item Supported Model: ERCA and other Cannon Production **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	Facility Name: Watervliet Arsenal (WVA) Facility Location: Watervliet, NY Facility Type (GOGO, GOCO, COCO): GOGO														
A. Construction Cost	-	-	-	-	-	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Initial/Final Project Award: Construction Complete: Equipment Installation Complete: Prove Out Begins: Prove Out Complete:														
B. Equipment Cost	-	-	-	-	-															
C. Equipment Installation Cost	-	-	-	-	-															
D. Contractor Support Cost	-	-	-	-	-															
E. Corps of Engineers Support Cost	-	-	-	-	-															
F. Other In-House Support Cost	-	-	-	-	-															
G. Total Facility Project Cost	-	6.500	-	-	-															
H. Other Costs	-	0.500	-	-	-															
Total Project Cost	-	7.000	-	-	-															
							Related Projects													
						<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 10%;">Project Number</th> <th style="width: 30%;">Title</th> <th style="width: 10%;">FY & Appn</th> <th style="width: 10%;">Value (\$ M)</th> <th style="width: 10%;">Facing</th> <th style="width: 10%;">Start Date</th> <th style="width: 10%;">Compl Date</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>	Project Number	Title	FY & Appn	Value (\$ M)	Facing	Start Date	Compl Date							
Project Number	Title	FY & Appn	Value (\$ M)	Facing	Start Date	Compl Date														

Narrative Explanation:
 There is no FY 2024 budget request for this project.

FY 2023 Base procurement dollars in the amount of \$7.000 million supports the conversion of not currently-in-use Chrome plating tanks to operational condition and filling with Trivalent Chrome (CrI3). This set of plating tanks will be used to qualify Trivalent Chrome for Extended Range Cannon Artillery (ERCA) cannon bore plating at Watervliet Arsenal, NY. This conversion is a risk reduction measure being performed in conjunction with the larger U.S. Army Tank Automotive and Armaments Command (TACOM) sponsored repair of the Watervliet cannon bore Chrome Plating facility. Army directed conversion to Trivalent chrome requires the development of new tooling and plating techniques to achieve equal-to or better-than performance compared to existing Hexavalent Chrome (Cr6). The conversion of these tanks allows full length plating of Extended Range Cannon Artillery (ERCA) length cannon bores with Trivalent chrome while the repaired plating facility continues using Hexavalent Chrome. Multiple cannon tubes will be coated and subjected to live fire and laboratory testing as part of this effort. This plating facility may have future utility in the production of other howitzers, tank cannons, and weapons.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: PB 2024 Army **Date:** March 2023

Appropriation / Budget Activity / Budget Sub Activity: 2033A / 02 / 30 **P-1 Line Item Number / Title:** 3270GC0050 / Production Base Support (WOCV-WTCV)

Project Title: Chrome Tooling (Anodes & Cathodes) **Project Number:** WVA0015 **Project Category:**

End Item Supported Model: Cannon Production **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	Facility Name: Watervliet Arsenal (WVA) Facility Location: Watervliet, NY Facility Type (GOGO, GOCO, COCO): GOGO						
A. Construction Cost	-	-	-	-	-	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Initial/Final Project Award: Construction Complete: Equipment Installation Complete: Prove Out Begins: Prove Out Complete:						
B. Equipment Cost	-	0.857	-	-	-							
C. Equipment Installation Cost	-	2.143	-	-	-							
D. Contractor Support Cost	-	-	-	-	-							
E. Corps of Engineers Support Cost	-	-	-	-	-							
F. Other In-House Support Cost	-	-	-	-	-							
G. Total Facility Project Cost	-	-	-	-	-							
H. Other Costs	-	-	-	-	-							
Total Project Cost	-	3.000	-	-	-							
						Related Projects						
						Project Number	Title	FY & Appn	Value <i>(\$ M)</i>	Facing	Start Date	Compl Date

Narrative Explanation:
 There is no FY 2024 budget request for this project.

FY 2023 Base procurement dollars in the amount of \$3.000 million supports procurement and configuration costs to procure new anodes, cathodes, and associated tooling required to chrome plate cannon bores. This equipment is needed to provide optimum plating performance when the Chrome Plating facility is replaced.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: PB 2024 Army **Date:** March 2023

Appropriation / Budget Activity / Budget Sub Activity: 2033A / 02 / 30 **P-1 Line Item Number / Title:** 3270GC0050 / Production Base Support (WOCV-WTCV)

Project Title: Rifled Cold-Spray System (Spindle Lathe, Facilities, System) **Project Number:** WVA0016 **Project Category:**

End Item Supported Model: Cannon Production **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	Facility Name: Watervliet Arsenal (WVA) Facility Location: Watervliet, NY Facility Type (GOGO, GOCO, COCO): GOGO						
A. Construction Cost	-	1.500	-	-	-	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Initial/Final Project Award: Construction Complete: Equipment Installation Complete: Prove Out Begins: Prove Out Complete:						
B. Equipment Cost	-	7.600	-	-	-							
C. Equipment Installation Cost	-	1.680	-	-	-							
D. Contractor Support Cost	-	0.600	-	-	-							
E. Corps of Engineers Support Cost	-	-	-	-	-							
F. Other In-House Support Cost	-	1.500	-	-	-							
G. Total Facility Project Cost	-	-	-	-	-							
H. Other Costs	-	1.370	-	-	-							
Total Project Cost	-	14.250	-	-	-	Related Projects						
						Project Number	Title	FY & Appn	Value (\$ M)	Facing	Start Date	Compl Date

Narrative Explanation:
 There is no FY 2024 budget request for this project.

FY 2023 Base procurement dollars in the amount of \$14.250 million supports procurement and installation of a Cold-Spray production system for use in bore coating rifled cannon. The Cold-Spray system is used to apply a multi-layer coating to the cannon bore in lieu of chromium plating. The coating is more resistant to wear compared to chromium plating, increasing cannon operation life. The Cold-Spray system will support coating of rifled cannons up to Extended Range Cannon Artillery (ERCA) length. This project procures the Cold-Spray System, supporting spindle lathes, and the tooling required to coat the cannon lengths now or planned for production. The projects funds verification of the production coating processes and durability when the cannon is fired. The rifled cannon Cold-Spray system introduces a new capability to Watervliet Arsenal (WVA), complimenting other cannon production modernization projects..

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: PB 2024 Army **Date:** March 2023

Appropriation / Budget Activity / Budget Sub Activity: 2033A / 02 / 30 **P-1 Line Item Number / Title:** 3270GC0050 / Production Base Support (WOCV-WTCV)

Project Title: Anodize Line (Reconstitute in-house process) **Project Number:** WVA0017 **Project Category:**

End Item Supported Model: Cannon Production **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	Facility Name: Watervliet Arsenal (WVA) Facility Location: Watervliet, NY Facility Type (GOGO, GOCO, COCO): GOGO						
A. Construction Cost	-	-	-	-	-	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Initial/Final Project Award: Construction Complete: Equipment Installation Complete: Prove Out Begins: Prove Out Complete:						
B. Equipment Cost	-	1.600	-	-	-							
C. Equipment Installation Cost	-	0.400	-	-	-							
D. Contractor Support Cost	-	-	-	-	-							
E. Corps of Engineers Support Cost	-	-	-	-	-							
F. Other In-House Support Cost	-	-	-	-	-							
G. Total Facility Project Cost	-	-	-	-	-							
H. Other Costs	-	-	-	-	-							
Total Project Cost	-	2.000	-	-	-							
						Related Projects						
						Project Number	Title	FY & Appn	Value <i>(\$ M)</i>	Facing	Start Date	Compl Date

Narrative Explanation:
 There is no FY 2024 budget request for this project.

FY 2023 Base procurement dollars in the amount of \$2.000 million supports the procurement and installation of Anodization equipment at Watervliet Arsenal (WVA) New York. This system will allow the Arsenal to anodize metal parts to provide corrosion and wear resistance. Bringing this capability into WVA will increase cannon production rates by eliminating the delays caused by long lead times at outside vendors.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: PB 2024 Army **Date:** March 2023

Appropriation / Budget Activity / Budget Sub Activity: 2033A / 02 / 30 **P-1 Line Item Number / Title:** 3270GC0050 / Production Base Support (WOCV-WTCV)

Project Title: Cannon Production High Voltage Substation Modernization **Project Number:** WVA0018 **Project Category:**

End Item Supported Model: ERCA and other Cannon Production **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	Facility Name: Watervliet Arsenal (WVA) Facility Location: Watervliet, NY Facility Type (GOGO, GOCO, COCO): GOGO						
A. Construction Cost	-	-	-	-	-	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Initial/Final Project Award: Construction Complete: Equipment Installation Complete: Prove Out Begins: Prove Out Complete:						
B. Equipment Cost	-	2.000	-	-	-							
C. Equipment Installation Cost	-	0.800	-	-	-							
D. Contractor Support Cost	-	-	-	-	-							
E. Corps of Engineers Support Cost	-	-	-	-	-							
F. Other In-House Support Cost	-	-	-	-	-							
G. Total Facility Project Cost	-	-	-	-	-							
H. Other Costs	-	0.200	-	-	-							
Total Project Cost	-	3.000	-	-	-	Related Projects						
						Project Number	Title	FY & Appn	Value (\$ M)	Facing	Start Date	Compl Date

Narrative Explanation:
 This is no FY 2024 budget request for this project.

FY 2023 Base procurement dollars in the amount of \$3.000 million supports the procurement and installation of a High Voltage Substation system to convert electric grid power for cannon production at Watervliet Arsenal, NY. This system replaces obsolete equipment with more automated and reliable power conversion to support cannon production. The new substation will provide more reliable and consistent power conversion needed by modern production equipment being procured and installed. This system is scaled to support production of current and planned extended range artillery cannons, howitzers, tank cannons, and other weapons.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: PB 2024 Army **Date:** March 2023

Appropriation / Budget Activity / Budget Sub Activity: 2033A / 02 / 30 **P-1 Line Item Number / Title:** 3270GC0050 / Production Base Support (WOCV-WTCV)

Project Title: Inspection Gauges - XM35 **Project Number:** WVA0019 **Project Category:**

End Item Supported Model: XM35 **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	Facility Name: Watervliet Arsenal (WVA) Facility Location: Watervliet, NY Facility Type (GOGO, GOCO, COCO): GOGO						
A. Construction Cost	-	-	-	-	-	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Initial/Final Project Award: Construction Complete: Equipment Installation Complete: Prove Out Begins: Prove Out Complete:						
B. Equipment Cost	-	1.500	-	-	-							
C. Equipment Installation Cost	-	0.250	-	-	-							
D. Contractor Support Cost	-	0.250	-	-	-							
E. Corps of Engineers Support Cost	-	-	-	-	-							
F. Other In-House Support Cost	-	-	-	-	-							
G. Total Facility Project Cost	-	-	-	-	-							
H. Other Costs	-	-	-	-	-							
Total Project Cost	-	2.000	-	-	-							
						Related Projects						
						Project Number	Title	FY & Appn	Value (\$ M)	Facing	Start Date	Compl Date

Narrative Explanation:

There is no FY 2024 budget request for this project.

FY 2023 Base procurement dollars in the amount of \$2.000 million supports the inspection gauges for XM35 components. The equipment replaces obsolete equipment and supports newer metrology technologies.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: PB 2024 Army **Date:** March 2023

Appropriation / Budget Activity / Budget Sub Activity: 2033A / 02 / 30 **P-1 Line Item Number / Title:** 3270GC0050 / Production Base Support (WOCV-WTCV)

Project Title: Cannon Billet Pre-Heat Induction Furnace System **Project Number:** WVA0020 **Project Category:**

End Item Supported Model: ERCA and other Cannon Production **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	Facility Name: Watervliet Arsenal (WVA) Facility Location: Watervliet, NY Facility Type (GOGO, GOCO, COCO): GOGO					
A. Construction Cost	-	-	-	-	-	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Initial/Final Project Award: Construction Complete: Equipment Installation Complete: Prove Out Begins: Prove Out Complete:					
B. Equipment Cost	-	4.500	-	-	-						
C. Equipment Installation Cost	-	2.250	-	-	-						
D. Contractor Support Cost	-	-	-	-	-						
E. Corps of Engineers Support Cost	-	-	-	-	-						
F. Other In-House Support Cost	-	-	-	-	-						
G. Total Facility Project Cost	-	-	-	-	-						
H. Other Costs	-	0.250	-	-	-						
Total Project Cost	-	7.000	-	-	-						
Related Projects											
	Project Number	Title	FY & Appn	Value (\$ M)	Facing	Start Date	Compl Date				

Narrative Explanation:
 There is no FY 2024 budget request for this project.

FY 2023 Base procurement dollars in the amount of \$7.000 million supports the procurement and installation of a set of 5 automated Electric Induction Furnaces to pre-heat cannon steel billets prior to shaping in the Radial Forge. This set of furnaces will replace the natural gas powered furnace currently in use at Watervliet Arsenal, NY. These Induction Furnaces will reduce energy demand and waste heat generated during cannon billet preheating and reduce combustion gas emissions on the arsenal. The furnaces will more rapidly heat the billets and reduce exposure to contaminants, better preserving the material properties of the Extended Range Cannon Artillery (ERCA) cannon steel. The induction furnaces will be used in the production of other howitzers, tank cannons, and weapons.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: PB 2024 Army **Date:** March 2023

Appropriation / Budget Activity / Budget Sub Activity: 2033A / 02 / 30 **P-1 Line Item Number / Title:** 3270GC0050 / Production Base Support (WOCV-WTCV)

Project Title: Guided Bore System for ERCA Length Cannon **Project Number:** WVA0021 **Project Category:**

End Item Supported Model: ERCA and other Cannon Production **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	Facility Name: Watervliet Arsenal (WVA) Facility Location: Watervliet, NY Facility Type (GOGO, GOCO, COCO): GOGO						
A. Construction Cost	-	1.000	-	-	-	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Initial/Final Project Award: Construction Complete: Equipment Installation Complete: Prove Out Begins: Prove Out Complete:						
B. Equipment Cost	-	7.700	-	-	-							
C. Equipment Installation Cost	-	1.000	-	-	-							
D. Contractor Support Cost	-	-	-	-	-							
E. Corps of Engineers Support Cost	-	-	-	-	-							
F. Other In-House Support Cost	-	-	-	-	-							
G. Total Facility Project Cost	-	-	-	-	-							
H. Other Costs	-	0.300	-	-	-							
Total Project Cost	-	10.000	-	-	-	Related Projects						
						Project Number	Title	FY & Appn	Value (\$ M)	Facing	Start Date	Compl Date

Narrative Explanation:
 There is no FY 2024 budget request for this project.

FY 2023 Base procurement dollars in the amount of \$10.000 million supports the procurement an automated guided bore cutting system scaled to support Extended Range Cannon Artillery (ERCA) length cannon production at Watervliet Arsenal, NY. This equipment is required to precisely machine the inner bore of the cannon prior to rifling and coating. This system is scaled to support production of the ERCA cannons. The system may have utility in the production of other howitzers, tank cannons, and weapons.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: PB 2024 Army **Date:** March 2023

Appropriation / Budget Activity / Budget Sub Activity: 2033A / 02 / 30 **P-1 Line Item Number / Title:** 3270GC0050 / Production Base Support (WOCV-WTCV)

Project Title: External Cylindrical Grinder **Project Number:** WVA0022 **Project Category:**

End Item Supported Model: Cannon Production **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	Facility Name: Watervliet Arsenal (WVA) Facility Location: Watervliet, NY Facility Type (GOGO, GOCO, COCO): GOGO						
A. Construction Cost	-	-	-	-	-	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Initial/Final Project Award: Construction Complete: Equipment Installation Complete: Prove Out Begins: Prove Out Complete:						
B. Equipment Cost	-	2.720	-	-	-							
C. Equipment Installation Cost	-	0.680	-	-	-							
D. Contractor Support Cost	-	-	-	-	-							
E. Corps of Engineers Support Cost	-	-	-	-	-							
F. Other In-House Support Cost	-	-	-	-	-							
G. Total Facility Project Cost	-	-	-	-	-							
H. Other Costs	-	-	-	-	-							
Total Project Cost	-	3.400	-	-	-							
						Related Projects						
						Project Number	Title	FY & Appn	Value <i>(\$ M)</i>	Facing	Start Date	Compl Date

Narrative Explanation:

There is no FY 2024 budget request for this project.

FY 2023 Base procurement dollars in the amount of \$3.400 million supports the procurement and installation of an automated external cylindrical grinder with sufficient bed length to rough and finish the outside surfaces of cannons and other large cylindrical parts. This automated system supports production of longer cannon tubes in production and development, replacing obsolete and less capable equipment.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: PB 2024 Army **Date:** March 2023

Appropriation / Budget Activity / Budget Sub Activity: 2033A / 02 / 30 **P-1 Line Item Number / Title:** 3270GC0050 / Production Base Support (WOCV-WTCV)

Project Title: Overhead Cannon Transport Crane Modernization (Buildings 20, 35, 220, and 135) **Project Number:** WVA0023 **Project Category:**

End Item Supported Model: ERCA and other Cannon Production **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	Facility Name: Watervliet Arsenal (WVA) Facility Location: Watervliet, NY Facility Type (GOGO, GOCO, COCO): GOGO						
A. Construction Cost	-	-	-	-	-	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Initial/Final Project Award: Construction Complete: Equipment Installation Complete: Prove Out Begins: Prove Out Complete:						
B. Equipment Cost	-	10.000	-	-	-							
C. Equipment Installation Cost	-	5.000	-	-	-							
D. Contractor Support Cost	-	2.000	-	-	-							
E. Corps of Engineers Support Cost	-	-	-	-	-							
F. Other In-House Support Cost	-	-	-	-	-							
G. Total Facility Project Cost	-	-	-	-	-							
H. Other Costs	-	-	-	-	-							
Total Project Cost	-	17.000	-	-	-							
						Related Projects						
						Project Number	Title	FY & Appn	Value <i>(\$ M)</i>	Facing	Start Date	Compl Date

Narrative Explanation:
 There is no FY 2024 budget request for this project.

FY 2023 Base procurement dollars in the amount of \$17.000 million supports the procurement and installation of modern control systems in overhead cranes in buildings 20, 35, 110, and 135, which are used in cannon production at Watervliet Arsenal, NY. The new control equipment is required to provide higher reliability in crane operation and to improve precision in positioning of overhead cranes used to transport cannons through the production lines. Improved crane operation will have utility in the production of other howitzers, tank cannons, and weapons.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: PB 2024 Army **Date:** March 2023

Appropriation / Budget Activity / Budget Sub Activity: 2033A / 02 / 30 **P-1 Line Item Number / Title:** 3270GC0050 / Production Base Support (WOCV-WTCV)

Project Title: ERCA Vertical Turning Lathe Set (Breech Manufacture) **Project Number:** WVA0024 **Project Category:**

End Item Supported Model: ERCA and other Cannon Production **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	Facility Name: Watervliet Arsenal (WVA) Facility Location: Watervliet, NY Facility Type (GOGO, GOCO, COCO): GOGO					
A. Construction Cost	-	-	-	-	-	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Initial/Final Project Award: Construction Complete: Equipment Installation Complete: Prove Out Begins: Prove Out Complete:					
B. Equipment Cost	-	4.600	-	-	-						
C. Equipment Installation Cost	-	1.800	-	-	-						
D. Contractor Support Cost	-	-	-	-	-						
E. Corps of Engineers Support Cost	-	-	-	-	-						
F. Other In-House Support Cost	-	-	-	-	-						
G. Total Facility Project Cost	-	-	-	-	-						
H. Other Costs	-	0.400	-	-	-						
Total Project Cost	-	6.800	-	-	-						
Related Projects											
	Project Number	Title	FY & Appn	Value (\$ M)	Facing	Start Date	Compl Date				

Narrative Explanation:
 There is no FY 2024 budget request for this project.

FY 2023 Base procurement dollars in the amount of \$6.800 million supports the procurement and installation of a modern Vertical Turning Lathe Set to be used for Extended Range Cannon Artillery (ERCA) cannon production at Watervliet Arsenal, NY. This equipment is required to perform ERCA cannon breech and other machining tasks that cannot be performed on 5 axis milling centers. This set is scaled to support production for current and planned extended range artillery cannons, howitzers, tank cannons, and other weapons.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: PB 2024 Army **Date:** March 2023

Appropriation / Budget Activity / Budget Sub Activity: 2033A / 02 / 30 **P-1 Line Item Number / Title:** 3270GC0050 / Production Base Support (WOCV-WTCV)

Project Title: Cannon Production Compressed Air Distribution Modernization **Project Number:** WVA0025 **Project Category:**

End Item Supported Model: ERCA and other Cannon Production **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	Facility Name: Watervliet Arsenal (WVA) Facility Location: Watervliet, NY Facility Type (GOGO, GOCO, COCO): GOGO						
A. Construction Cost	-	-	-	-	-	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Initial/Final Project Award: Construction Complete: Equipment Installation Complete: Prove Out Begins: Prove Out Complete:						
B. Equipment Cost	-	1.500	-	-	-							
C. Equipment Installation Cost	-	3.500	-	-	-							
D. Contractor Support Cost	-	-	-	-	-							
E. Corps of Engineers Support Cost	-	-	-	-	-							
F. Other In-House Support Cost	-	-	-	-	-							
G. Total Facility Project Cost	-	-	-	-	-							
H. Other Costs	-	-	-	-	-							
Total Project Cost	-	5.000	-	-	-							
						Related Projects						
						Project Number	Title	FY & Appn	Value <i>(\$ M)</i>	Facing	Start Date	Compl Date

Narrative Explanation:
 There is no FY 2024 budget request for this project.

FY 2023 Base procurement dollars in the amount of \$5.000 million supports the procurement and installation of a modern compressed air distribution system used for cannon production at Watervliet Arsenal, NY. This equipment replaces obsolete equipment with modern and more highly automated distribution of compressed air used for equipment operation, cleaning, and other purposes. This compressed air system is scaled to support production for current and planned extended range artillery cannons, howitzers, tank cannons, and other weapons.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: PB 2024 Army **Date:** March 2023

Appropriation / Budget Activity / Budget Sub Activity: 2033A / 02 / 30 **P-1 Line Item Number / Title:** 3270GC0050 / Production Base Support (WOCV-WTCV)

Project Title: Cannon Production High Voltage Power Distribution Modernization **Project Number:** WVA0026 **Project Category:**

End Item Supported Model: ERCA and other Cannon Production **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	Facility Name: Watervliet Arsenal (WVA) Facility Location: Watervliet, NY Facility Type (GOGO, GOCO, COCO): GOGO						
A. Construction Cost	-	-	-	-	-	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Initial/Final Project Award: Construction Complete: Equipment Installation Complete: Prove Out Begins: Prove Out Complete:						
B. Equipment Cost	-	7.000	-	-	-							
C. Equipment Installation Cost	-	3.000	-	-	-							
D. Contractor Support Cost	-	-	-	-	-							
E. Corps of Engineers Support Cost	-	-	-	-	-							
F. Other In-House Support Cost	-	-	-	-	-							
G. Total Facility Project Cost	-	-	-	-	-							
H. Other Costs	-	-	-	-	-							
Total Project Cost	-	10.000	-	-	-							
						Related Projects						
						Project Number	Title	FY & Appn	Value <i>(\$ M)</i>	Facing	Start Date	Compl Date

Narrative Explanation:
 There is no FY 2024 budget request for this project.

FY 2023 Base procurement dollars in the amount of \$10.000 million supports the procurement and installation of high voltage power distribution lines for cannon production manufacturing systems at Watervliet Arsenal, NY. This high voltage power distribution network replaces obsolete equipment to provide power required by manufacturing systems being installed to modernize cannon production. This power distribution network is scaled to support production of current and planned extended range artillery cannons, howitzers, tank cannons, and other weapons.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: PB 2024 Army **Date:** March 2023

Appropriation / Budget Activity / Budget Sub Activity: 2033A / 02 / 30 **P-1 Line Item Number / Title:** 3270GC0050 / Production Base Support (WOCV-WTCV)

Project Title: WVA Miscellaneous Small Projects **Project Number:** WVA0027 **Project Category:**

End Item Supported Model: Cannon Production **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	Facility Name: Watervliet Arsenal (WVA) Facility Location: Watervliet, NY Facility Type (GOGO, GOCO, COCO): GOGO																										
						Principal Milestones						Month & Year																				
A. Construction Cost	-	0.050	-	-	-	Concept Design Complete:																										
B. Equipment Cost	-	1.490	-	-	-	Final Design Complete:																										
C. Equipment Installation Cost	-	0.120	-	-	-	Initial/Final Project Award:																										
D. Contractor Support Cost	-	-	0.950	-	0.950	Construction Complete:																										
E. Corps of Engineers Support Cost	-	-	-	-	-	Equipment Installation Complete:																										
F. Other In-House Support Cost	-	0.220	-	-	-	Prove Out Begins:																										
G. Total Facility Project Cost	-	-	-	-	-	Prove Out Complete:																										
H. Other Costs	-	2.388	1.730	-	1.730	<table border="1"> <thead> <tr> <th colspan="7">Related Projects</th> </tr> <tr> <th>Project Number</th> <th>Title</th> <th>FY & Appn</th> <th>Value (\$ M)</th> <th>Facing</th> <th>Start Date</th> <th>Compl Date</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>						Related Projects							Project Number	Title	FY & Appn	Value (\$ M)	Facing	Start Date	Compl Date							
Related Projects																																
Project Number	Title	FY & Appn	Value (\$ M)	Facing	Start Date	Compl Date																										
Total Project Cost	-	4.268	2.680	-	2.680																											

Narrative Explanation:
 FY 2024 Base procurement dollars in the amount of \$2.480 million support the Production Process and Industrial Base by focusing on maintaining, improving, optimizing, and modernizing the manufacturing facilities located at Watervliet Arsenal (WVA), New York. These projects include but are not limited to: Engineering Design for FY 2025 PBS projects and project support contracts.

FY 2024 Base procurement dollars in the amount of \$0.200 million also support Self Propelled Howitzer System Portable RT Imaging Equipment: Procurement, setup, and training for portable 200 kilovolt (kV) X-ray Imaging equipment to support ongoing Extended Range Cannon Artillery Cab manufacturing efforts.

FY 2023 Base procurement dollars in the amount of \$4.268 million supported miscellaneous small projects at Watervliet Arsenal (WVA) which to included but were not limited to:

- FY 2023 Procurement of a small pit-type tempering furnace for use in treatment of small parts up to cannon breech and breech blocks.
- FY 2023 Procurement of an automated slant bed lathe scaled to fit up to ERCA length cannon.
- FY 2023 Procurement of a more efficient heat treatment furnace used to produce piece parts.
- FY 2023 Procurement of a more efficient endothermic generator to be used with the minor heat treatment furnace.
- FY 2023 Procurement of routine small projects to support facility modernization and overall facility improvements.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: PB 2024 Army **Date:** March 2023

Appropriation / Budget Activity / Budget Sub Activity: 2033A / 02 / 30 **P-1 Line Item Number / Title:** 3270GC0050 / Production Base Support (WOCV-WTCV)

Project Title: Horizontal Milling Center **Project Number:** WVA0035 **Project Category:**

End Item Supported Model: Majors/Minors **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	Facility Name: Watervliet Arsenal (WVA) Facility Location: Watervliet, NY Facility Type (GOGO, GOCO, COCO): GOGO						
A. Construction Cost	-	0.500	-	-	-	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Initial/Final Project Award: Construction Complete: Equipment Installation Complete: Prove Out Begins: Prove Out Complete:						
B. Equipment Cost	-	0.450	-	-	-							
C. Equipment Installation Cost	-	0.050	-	-	-							
D. Contractor Support Cost	-	-	-	-	-							
E. Corps of Engineers Support Cost	-	-	-	-	-							
F. Other In-House Support Cost	-	-	-	-	-							
G. Total Facility Project Cost	-	-	-	-	-							
H. Other Costs	-	-	-	-	-							
Total Project Cost	-	1.000	-	-	-							
						Related Projects						
						Project Number	Title	FY & Appn	Value (\$ M)	Facing	Start Date	Compl Date

Narrative Explanation:

There is no FY 2024 budget request for this project.

FY 2023 Base procurement dollars in the amount of \$1.000 million supports the procurement and installation of horizontal milling center. The machine replaces antiquated, worn equipment with modern, reliable machinery with increase capacity.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: PB 2024 Army **Date:** March 2023

Appropriation / Budget Activity / Budget Sub Activity: 2033A / 02 / 30 **P-1 Line Item Number / Title:** 3270GC0050 / Production Base Support (WOCV-WTCV)

Project Title: Excess Equipment, Floor Repairs, Relocate Equipment **Project Number:** WVA0037 **Project Category:**

End Item Supported Model: Excess Equipment, Floor Repairs, Relocate Equipment **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	Facility Name: Watervliet Arsenal (WVA) Facility Location: Watervliet, NY Facility Type (GOGO, GOCO, COCO): GOGO						
A. Construction Cost	-	-	-	-	-	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Initial/Final Project Award: Construction Complete: Equipment Installation Complete: Prove Out Begins: Prove Out Complete:						
B. Equipment Cost	-	-	-	-	-							
C. Equipment Installation Cost	-	-	-	-	-							
D. Contractor Support Cost	-	0.100	-	-	-							
E. Corps of Engineers Support Cost	-	-	-	-	-							
F. Other In-House Support Cost	-	0.020	-	-	-							
G. Total Facility Project Cost	-	-	-	-	-							
H. Other Costs	-	0.851	-	-	-							
Total Project Cost	-	0.971	-	-	-	Related Projects						
						Project Number	Title	FY & Appn	Value (\$ M)	Facing	Start Date	Compl Date

Narrative Explanation:
 There is no FY 2024 budget request for this project.

FY 2023 Base procurement dollars in the amount of \$0.971 million supports the removal of excess equipment, floor repairs and relocating beneficial Watervliet Arsenal (WVA) equipment. It is necessary to remove obsolete equipment by making room and prepping locations for new equipment arriving at WVA.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: PB 2024 Army **Date:** March 2023

Appropriation / Budget Activity / Budget Sub Activity: 2033A / 02 / 30 **P-1 Line Item Number / Title:** 3270GC0050 / Production Base Support (WOCV-WTCV)

Project Title: Filament Winder 1/2 (120mm Bore Evacuator) **Project Number:** WVA0038 **Project Category:**

End Item Supported Model: Bore Evacuators **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	Facility Name: Watervliet Arsenal (WVA) Facility Location: Watervliet, NY Facility Type (GOGO, GOCO, COCO): GOGO						
A. Construction Cost	-	-	-	-	-	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Initial/Final Project Award: Construction Complete: Equipment Installation Complete: Prove Out Begins: Prove Out Complete:						
B. Equipment Cost	-	0.850	-	-	-							
C. Equipment Installation Cost	-	0.100	-	-	-							
D. Contractor Support Cost	-	0.050	-	-	-							
E. Corps of Engineers Support Cost	-	-	-	-	-							
F. Other In-House Support Cost	-	-	-	-	-							
G. Total Facility Project Cost	-	-	-	-	-							
H. Other Costs	-	-	-	-	-							
Total Project Cost	-	1.000	-	-	-							
						Related Projects						
						Project Number	Title	FY & Appn	Value <i>(\$ M)</i>	Facing	Start Date	Compl Date

Narrative Explanation:
 There is no FY 2024 budget request for this project.

FY 2023 Base procurement dollars in the amount of \$1.000 million supports the replacement of filament winders used for M120 bore evacuators. This system replaces obsolete equipment and will prevent single point of failures in the manufacturing process.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: PB 2024 Army **Date:** March 2023

Appropriation / Budget Activity / Budget Sub Activity: 2033A / 02 / 30 **P-1 Line Item Number / Title:** 3270GC0050 / Production Base Support (WOCV-WTCV)

Project Title: Filament Winder 2/2 (120mm Bore Evacuator) **Project Number:** WVA0039 **Project Category:**

End Item Supported Model: Bore Evacuators **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	Facility Name: Watervliet Arsenal (WVA) Facility Location: Watervliet, NY Facility Type (GOGO, GOCO, COCO): GOGO						
A. Construction Cost	-	-	-	-	-	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Initial/Final Project Award: Construction Complete: Equipment Installation Complete: Prove Out Begins: Prove Out Complete:						
B. Equipment Cost	-	0.850	-	-	-							
C. Equipment Installation Cost	-	0.100	-	-	-							
D. Contractor Support Cost	-	0.050	-	-	-							
E. Corps of Engineers Support Cost	-	-	-	-	-							
F. Other In-House Support Cost	-	-	-	-	-							
G. Total Facility Project Cost	-	-	-	-	-							
H. Other Costs	-	-	-	-	-							
Total Project Cost	-	1.000	-	-	-							
						Related Projects						
						Project Number	Title	FY & Appn	Value <i>(\$ M)</i>	Facing	Start Date	Compl Date

Narrative Explanation:
 There is no FY 2024 budget request for this project.

FY 2023 Base procurement dollars in the amount of \$1.000 million supports the replacement of filament winders used for M120 bore evacuators. This system replaces obsolete equipment and will prevent single point of failures in the manufacturing process

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: PB 2024 Army	Date: March 2023
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Appropriation / Budget Activity / Budget Sub Activity: 2033A / 02 / 30	P-1 Line Item Number / Title: 3270GC0050 / Production Base Support (WOCV-WTCV)
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Project Title: 2nd M256 Cold Spray System	Project Number: WVA0040	Project Category:
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End Item Supported Model: Cannon Production	Annual Capacity Before / After (1-8-5): /
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Cost Elements <i>(\$ in Millions)</i>	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	Facility Name: Watervliet Arsenal (WVA) Facility Location: Watervliet, NY Facility Type (GOGO, GOCO, COCO): GOGO						
A. Construction Cost	-	0.900	-	-	-	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Initial/Final Project Award: Construction Complete: Equipment Installation Complete: Prove Out Begins: Prove Out Complete:						
B. Equipment Cost	-	3.000	-	-	-							
C. Equipment Installation Cost	-	0.200	-	-	-							
D. Contractor Support Cost	-	0.100	-	-	-							
E. Corps of Engineers Support Cost	-	-	-	-	-							
F. Other In-House Support Cost	-	-	-	-	-							
G. Total Facility Project Cost	-	-	-	-	-							
H. Other Costs	-	0.200	-	-	-							
Total Project Cost	-	4.400	-	-	-							
Related Projects												
	Project Number	Title	FY & Appn	Value (\$ M)	Facing	Start Date	Compl Date					

Narrative Explanation:
 There is no FY 2024 budget request for this project.

FY 2023 Base procurement dollars in the amount of \$4.400 million supports procurement and installation of second cold spray system to eliminate a single point of failure and increase capacity for the cold spray technology currently being developed. This machine introduces additional capability for Watervliet Arsenal (WVA) and supports an alternate technology to chrome.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: PB 2024 Army **Date:** March 2023

Appropriation / Budget Activity / Budget Sub Activity: 2033A / 02 / 30 **P-1 Line Item Number / Title:** 3270GC0050 / Production Base Support (WOCV-WTCV)

Project Title: ID Grinder 1/2 **Project Number:** WVA0041 **Project Category:**

End Item Supported Model: Cannon Production **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	Facility Name: Watervliet Arsenal (WVA) Facility Location: Watervliet, NY Facility Type (GOGO, GOCO, COCO): GOGO						
A. Construction Cost	-	0.750	-	-	-	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Initial/Final Project Award: Construction Complete: Equipment Installation Complete: Prove Out Begins: Prove Out Complete:						
B. Equipment Cost	-	1.250	-	-	-							
C. Equipment Installation Cost	-	0.050	-	-	-							
D. Contractor Support Cost	-	0.050	-	-	-							
E. Corps of Engineers Support Cost	-	-	-	-	-							
F. Other In-House Support Cost	-	-	-	-	-							
G. Total Facility Project Cost	-	-	-	-	-							
H. Other Costs	-	0.750	-	-	-							
Total Project Cost	-	2.850	-	-	-	Related Projects						
						Project Number	Title	FY & Appn	Value (\$ M)	Facing	Start Date	Compl Date

Narrative Explanation:

There is no FY 2024 budget request for this project.

FY 2023 Base procurement dollars in the amount of \$2.850 million supports procurement and installation of ID Grinder to eliminate a single point of failure and increase capacity for the cold spray technology currently being developed. This machine introduces additional capability for Watervliet Arsenal (WVA) and supports an alternate technology to chrome.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: PB 2024 Army **Date:** March 2023

Appropriation / Budget Activity / Budget Sub Activity: 2033A / 02 / 30 **P-1 Line Item Number / Title:** 3270GC0050 / Production Base Support (WOCV-WTCV)

Project Title: ID Grinder 2/2 **Project Number:** WVA0042 **Project Category:**

End Item Supported Model: Cannon Production **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	Facility Name: Watervliet Arsenal (WVA) Facility Location: Watervliet, NY Facility Type (GOGO, GOCO, COCO): GOGO						
A. Construction Cost	-	0.750	-	-	-	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Initial/Final Project Award: Construction Complete: Equipment Installation Complete: Prove Out Begins: Prove Out Complete:						
B. Equipment Cost	-	1.250	-	-	-							
C. Equipment Installation Cost	-	0.050	-	-	-							
D. Contractor Support Cost	-	0.050	-	-	-							
E. Corps of Engineers Support Cost	-	-	-	-	-							
F. Other In-House Support Cost	-	-	-	-	-							
G. Total Facility Project Cost	-	-	-	-	-							
H. Other Costs	-	0.750	-	-	-							
Total Project Cost	-	2.850	-	-	-	Related Projects						
						Project Number	Title	FY & Appn	Value (\$ M)	Facing	Start Date	Compl Date

Narrative Explanation:

There is no FY 2024 budget request for this project.

FY 2023 Base procurement dollars in the amount of \$2.850 million supports procurement and installation of ID Grinder to eliminate a single point of failure and increase capacity for the cold spray technology currently being developed. This machine introduces additional capability for Watervliet Arsenal (WVA) and supports an alternate technology to chrome.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: PB 2024 Army **Date:** March 2023

Appropriation / Budget Activity / Budget Sub Activity: 2033A / 02 / 30 **P-1 Line Item Number / Title:** 3270GC0050 / Production Base Support (WOCV-WTCV)

Project Title: Hone 1/2 **Project Number:** WVA0043 **Project Category:**

End Item Supported Model: Cannon Production **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	Facility Name: Watervliet Arsenal (WVA) Facility Location: Watervliet, NY Facility Type (GOGO, GOCO, COCO): GOGO						
A. Construction Cost	-	-	-	-	-	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Initial/Final Project Award: Construction Complete: Equipment Installation Complete: Prove Out Begins: Prove Out Complete:						
B. Equipment Cost	-	0.700	-	-	-							
C. Equipment Installation Cost	-	0.150	-	-	-							
D. Contractor Support Cost	-	0.050	-	-	-							
E. Corps of Engineers Support Cost	-	-	-	-	-							
F. Other In-House Support Cost	-	-	-	-	-							
G. Total Facility Project Cost	-	-	-	-	-							
H. Other Costs	-	-	-	-	-							
Total Project Cost	-	0.900	-	-	-	Related Projects						
						Project Number	Title	FY & Appn	Value (\$ M)	Facing	Start Date	Compl Date

Narrative Explanation:
 There is no FY 2024 budget request for this project.

FY 2023 Base procurement dollars in the amount of \$0.900 million supports procurement and installation of Hone to eliminate a single point of failure and increase capacity for the cold spray technology currently being developed. This machine introduces additional capability for Watervliet Arsenal (WVA) and supports an alternate technology to chrome.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: PB 2024 Army **Date:** March 2023

Appropriation / Budget Activity / Budget Sub Activity: 2033A / 02 / 30 **P-1 Line Item Number / Title:**
3270GC0050 / Production Base Support (WOCV-WTCV)

Project Title: Hone 2/2 **Project Number:** WVA0044 **Project Category:**

End Item Supported Model: Cannon Production **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	Facility Name: Watervliet Arsenal (WVA) Facility Location: Watervliet, NY Facility Type (GOGO, GOCO, COCO): GOGO						
A. Construction Cost	-	-	-	-	-	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Initial/Final Project Award: Construction Complete: Equipment Installation Complete: Prove Out Begins: Prove Out Complete:						
B. Equipment Cost	-	0.700	-	-	-							
C. Equipment Installation Cost	-	0.150	-	-	-							
D. Contractor Support Cost	-	0.050	-	-	-							
E. Corps of Engineers Support Cost	-	-	-	-	-							
F. Other In-House Support Cost	-	-	-	-	-							
G. Total Facility Project Cost	-	-	-	-	-							
H. Other Costs	-	-	-	-	-							
Total Project Cost	-	0.900	-	-	-							
						Related Projects						
						Project Number	Title	FY & Appn	Value <i>(\$ M)</i>	Facing	Start Date	Compl Date

Narrative Explanation:
 There is no FY 2024 budget request for this project.

FY 2023 Base procurement dollars in the amount of \$0.900 million supports procurement and installation of Hone to eliminate a single point of failure and increase capacity for the cold spray technology currently being developed. This machine introduces additional capability for Watervliet Arsenal (WVA) and supports an alternate technology to chrome.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: PB 2024 Army **Date:** March 2023

Appropriation / Budget Activity / Budget Sub Activity: 2033A / 02 / 30 **P-1 Line Item Number / Title:** 3270GC0050 / Production Base Support (WOCV-WTCV)

Project Title: M256 Waterjet **Project Number:** WVA0045 **Project Category:**

End Item Supported Model: Cannon Production **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	Facility Name: Watervliet Arsenal (WVA) Facility Location: Watervliet, NY Facility Type (GOGO, GOCO, COCO): GOGO						
A. Construction Cost	-	1.000	1.000	-	1.000	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Initial/Final Project Award: Construction Complete: Equipment Installation Complete: Prove Out Begins: Prove Out Complete:						
B. Equipment Cost	-	2.000	3.000	-	3.000							
C. Equipment Installation Cost	-	0.100	0.100	-	0.100							
D. Contractor Support Cost	-	0.100	0.100	-	0.100							
E. Corps of Engineers Support Cost	-	-	-	-	-							
F. Other In-House Support Cost	-	-	-	-	-							
G. Total Facility Project Cost	-	-	-	-	-							
H. Other Costs	-	-	-	-	-							
Total Project Cost	-	3.200	4.200	-	4.200	Related Projects						
						Project Number	Title	FY & Appn	Value (\$ M)	Facing	Start Date	Compl Date

Narrative Explanation:
 FY 2024 Base procurement dollars in the amount of \$4.200 million supports the procurement and installation of a second Waterjet System to support cannon production located at Watervliet Arsenal (WVA), New York. The Waterjet is used to clean cannon bores and as a surface finishing tool. Advanced materials have proven to offer an alternative to the use hexavalent chromium in the Organic Industrial Base. Waterjet System attributes: Ability to remove deposited materials in the event of defect during manufacturing. Decreases honing and grinding operations and increases production capacity. This machine introduces a new capability and expands current manufacturing options at WVA.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: PB 2024 Army **Date:** March 2023

Appropriation / Budget Activity / Budget Sub Activity: 2033A / 02 / 30 **P-1 Line Item Number / Title:** 3270GC0050 / Production Base Support (WOCV-WTCV)

Project Title: M256 Waterjet Foundation **Project Number:** WVA0046 **Project Category:**

End Item Supported Model: Cannon Production **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	Facility Name: Watervliet Arsenal (WVA) Facility Location: Watervliet, NY Facility Type (GOGO, GOCO, COCO): GOGO						
A. Construction Cost	-	1.000	-	-	-	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Initial/Final Project Award: Construction Complete: Equipment Installation Complete: Prove Out Begins: Prove Out Complete:						
B. Equipment Cost	-	-	-	-	-							
C. Equipment Installation Cost	-	-	-	-	-							
D. Contractor Support Cost	-	-	-	-	-							
E. Corps of Engineers Support Cost	-	-	-	-	-							
F. Other In-House Support Cost	-	-	-	-	-							
G. Total Facility Project Cost	-	-	-	-	-							
H. Other Costs	-	-	-	-	-							
Total Project Cost	-	1.000	-	-	-							
						Related Projects						
						Project Number	Title	FY & Appn	Value <i>(\$ M)</i>	Facing	Start Date	Compl Date

Narrative Explanation:
 There is no FY 2024 budget request for this project.

FY 2023 Base procurement dollars in the amount of \$1.000 million supports procurement and installation of a second Waterjet System foundation to support cold spray production. The Waterjet is used to clean coatings from cannon bores and as a surface finishing tool. The Tantalum cold spray system uses hypersonic velocity air jets to deposit Tantalum onto the cannon bore. Tantalum has proven to be more erosion resistant than Chrome to protect and extend the life of cannon barrels. Waterjet System attributes: Stripping process of Tantalum (cold spray) in the event there is an issue with coating. Decreases honing and grinding operations and increases production capacity. This machine introduces a new capability to Watervliet Arsenal (WVA).

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: PB 2024 Army **Date:** March 2023

Appropriation / Budget Activity / Budget Sub Activity: 2033A / 02 / 30 **P-1 Line Item Number / Title:** 3270GC0050 / Production Base Support (WOCV-WTCV)

Project Title: Gymnasticator **Project Number:** WVA0047 **Project Category:**

End Item Supported Model: M12 Breech Block, Breech Mechanism **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	Facility Name: Watervliet Arsenal (WVA) Facility Location: Watervliet, NY Facility Type (GOGO, GOCO, COCO): GOGO														
A. Construction Cost	-	-	-	-	-	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Initial/Final Project Award: Construction Complete: Equipment Installation Complete: Prove Out Begins: Prove Out Complete:														
B. Equipment Cost	-	1.500	-	-	-															
C. Equipment Installation Cost	-	0.150	-	-	-															
D. Contractor Support Cost	-	0.150	-	-	-															
E. Corps of Engineers Support Cost	-	-	-	-	-															
F. Other In-House Support Cost	-	-	-	-	-															
G. Total Facility Project Cost	-	-	-	-	-															
H. Other Costs	-	0.400	-	-	-															
Total Project Cost	-	2.200	-	-	-															
							Related Projects													
						<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 10%;">Project Number</th> <th style="width: 30%;">Title</th> <th style="width: 15%;">FY & Appn</th> <th style="width: 10%;">Value <i>(\$ M)</i></th> <th style="width: 10%;">Facing</th> <th style="width: 10%;">Start Date</th> <th style="width: 10%;">Compl Date</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>	Project Number	Title	FY & Appn	Value <i>(\$ M)</i>	Facing	Start Date	Compl Date							
Project Number	Title	FY & Appn	Value <i>(\$ M)</i>	Facing	Start Date	Compl Date														

Narrative Explanation:
 There is no FY 2024 budget request for this project.

FY 2023 Base procurement dollars in the amount of \$2.200 million supports the ability to test M12 Breech Block, Breech Mechanism components in-house rather than having to send them to another facility. The system allows Watervliet Arsenal (WVA) to have this portion of the manufacturing process kept in-house to allow for faster and more efficient manufacturing durations.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: PB 2024 Army **Date:** March 2023

Appropriation / Budget Activity / Budget Sub Activity: 2033A / 02 / 30 **P-1 Line Item Number / Title:** 3270GC0050 / Production Base Support (WOCV-WTCV)

Project Title: Horizontal Machining Center **Project Number:** WVA0049 **Project Category:**

End Item Supported Model: Cannon Production **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	Facility Name: Watervliet Arsenal (WVA) Facility Location: Watervliet, NY Facility Type (GOGO, GOCO, COCO): GOGO						
A. Construction Cost	-	-	-	-	-	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Initial/Final Project Award: Construction Complete: Equipment Installation Complete: Prove Out Begins: Prove Out Complete:						
B. Equipment Cost	-	0.800	-	-	-							
C. Equipment Installation Cost	-	0.200	-	-	-							
D. Contractor Support Cost	-	-	-	-	-							
E. Corps of Engineers Support Cost	-	-	-	-	-							
F. Other In-House Support Cost	-	-	-	-	-							
G. Total Facility Project Cost	-	-	-	-	-							
H. Other Costs	-	-	-	-	-							
Total Project Cost	-	1.000	-	-	-	Related Projects						
						Project Number	Title	FY & Appn	Value (\$ M)	Facing	Start Date	Compl Date

Narrative Explanation:

There is no FY 2024 budget request for this project.

FY 2023 Base procurement dollars in the amount of \$1.000 million supports the procurement and installation of an automated Horizontal Machining Center, used to produce cannon piece parts. This systems replaces obsolete equipment.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: PB 2024 Army **Date:** March 2023

Appropriation / Budget Activity / Budget Sub Activity: 2033A / 02 / 30 **P-1 Line Item Number / Title:** 3270GC0050 / Production Base Support (WOCV-WTCV)

Project Title: Hollow Spindle Lathe **Project Number:** WVA0050 **Project Category:**

End Item Supported Model: Rifled Cannons **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	Facility Name: Watervliet Arsenal (WVA) Facility Location: Watervliet, NY Facility Type (GOGO, GOCO, COCO): GOGO						
A. Construction Cost	-	-	-	-	-	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Initial/Final Project Award: Construction Complete: Equipment Installation Complete: Prove Out Begins: Prove Out Complete:						
B. Equipment Cost	-	-	-	-	-							
C. Equipment Installation Cost	-	-	-	-	-							
D. Contractor Support Cost	-	-	-	-	-							
E. Corps of Engineers Support Cost	-	-	-	-	-							
F. Other In-House Support Cost	-	-	-	-	-							
G. Total Facility Project Cost	-	-	-	-	-							
H. Other Costs	-	6.000	-	-	-							
Total Project Cost	-	6.000	-	-	-	Related Projects						
						Project Number	Title	FY & Appn	Value (\$ M)	Facing	Start Date	Compl Date

Narrative Explanation:
 There is no FY 2024 budget request for this project.

FY 2023 Base procurement dollars in the amount of \$6.000 million procures two spindle lathes. The hollow spindle lathe will support up to Extended Range Cannon Artillery (ERCA)-Length cannon, at one existing location and one new location in the factory, specifically for a guided bore system.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: PB 2024 Army **Date:** March 2023

Appropriation / Budget Activity / Budget Sub Activity: 2033A / 02 / 30 **P-1 Line Item Number / Title:** 3270GC0050 / Production Base Support (WOCV-WTCV)

Project Title: Two (2) Surface Grinders **Project Number:** WVA0051 **Project Category:**

End Item Supported Model: Abrams **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	Facility Name: Watervliet Arsenal (WVA) Facility Location: Watervliet, NY Facility Type (GOGO, GOCO, COCO): GOGO						
A. Construction Cost	-	-	-	-	-	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Initial/Final Project Award: Construction Complete: Equipment Installation Complete: Prove Out Begins: Prove Out Complete:	Related Projects					
B. Equipment Cost	-	-	2.800	-	2.800							
C. Equipment Installation Cost	-	-	0.300	-	0.300							
D. Contractor Support Cost	-	-	0.100	-	0.100							
E. Corps of Engineers Support Cost	-	-	-	-	-							
F. Other In-House Support Cost	-	-	-	-	-							
G. Total Facility Project Cost	-	-	-	-	-							
H. Other Costs	-	-	-	-	-							
Total Project Cost	-	-	3.200	-	3.200							
						Project Number	Title	FY & Appn	Value (\$ M)	Facing	Start Date	Compl Date

Narrative Explanation:
 FY 2024 Base procurement dollars in the amount of \$3.200 million supports the procurement of two (2) surface grinders, which are a major component manufacturing of breech mechanism components located at Watervliet Arsenal (WVA), New York. Surface grinding is a required process for breech rings and breech blocks.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: PB 2024 Army **Date:** March 2023

Appropriation / Budget Activity / Budget Sub Activity: 2033A / 02 / 30 **P-1 Line Item Number / Title:** 3270GC0050 / Production Base Support (WOCV-WTCV)

Project Title: Tube Runout Table **Project Number:** WVA0052 **Project Category:**

End Item Supported Model: Abrams **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	Facility Name: Watervliet Arsenal (WVA) Facility Location: Watervliet, NY Facility Type (GOGO, GOCO, COCO): GOGO																		
A. Construction Cost	-	-	-	-	-	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Initial/Final Project Award: Construction Complete: Equipment Installation Complete: Prove Out Begins: Prove Out Complete: <div style="text-align: center;">Related Projects</div> <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 5px;"> <thead> <tr> <th style="width: 10%;">Project Number</th> <th style="width: 30%;">Title</th> <th style="width: 15%;">FY & Appn</th> <th style="width: 10%;">Value (\$ M)</th> <th style="width: 10%;">Facing</th> <th style="width: 10%;">Start Date</th> <th style="width: 15%;">Compl Date</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>					Project Number	Title	FY & Appn	Value (\$ M)	Facing	Start Date	Compl Date							
Project Number	Title	FY & Appn	Value (\$ M)	Facing	Start Date						Compl Date													
B. Equipment Cost	-	-	-	-	-																			
C. Equipment Installation Cost	-	-	1.000	-	1.000																			
D. Contractor Support Cost	-	-	0.150	-	0.150																			
E. Corps of Engineers Support Cost	-	-	0.050	-	0.050																			
F. Other In-House Support Cost	-	-	-	-	-																			
G. Total Facility Project Cost	-	-	-	-	-																			
H. Other Costs	-	-	-	-	-																			
Total Project Cost	-	-	1.200	-	1.200																			

Narrative Explanation:
 FY 2024 Base procurement dollars in the amount of \$1.200 million supports the procurement for a cannon tube runout table. This is required to measure Total Indicator Runout (TIR) on M256 cannon tubes throughout its manufacturing process located at Watervliet Arsenal (WVA), New York. The process is both a drawing and Quality Assurance Plan (QAP) requirement.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: PB 2024 Army **Date:** March 2023

Appropriation / Budget Activity / Budget Sub Activity: 2033A / 02 / 30 **P-1 Line Item Number / Title:** 3270GC0050 / Production Base Support (WOCV-WTCV)

Project Title: Wire Electric Discharge Machine **Project Number:** WVA0053 **Project Category:**

End Item Supported Model: Abrams **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	Facility Name: Watervliet Arsenal (WVA) Facility Location: Watervliet, NY Facility Type (GOGO, GOCO, COCO): GOGO																									
A. Construction Cost	-	-	-	-	-	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Initial/Final Project Award: Construction Complete: Equipment Installation Complete: Prove Out Begins: Prove Out Complete:	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th align="center" colspan="6">Related Projects</th> </tr> <tr> <th align="center">Project Number</th> <th align="center">Title</th> <th align="center">FY & Appn</th> <th align="center">Value <i>(\$ M)</i></th> <th align="center">Facing</th> <th align="center">Start Date</th> <th align="center">Compl Date</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>					Related Projects						Project Number	Title	FY & Appn	Value <i>(\$ M)</i>	Facing	Start Date	Compl Date							
Related Projects																															
Project Number	Title	FY & Appn	Value <i>(\$ M)</i>	Facing	Start Date							Compl Date																			
B. Equipment Cost	-	-	-	-	-																										
C. Equipment Installation Cost	-	-	1.200	-	1.200																										
D. Contractor Support Cost	-	-	0.150	-	0.150																										
E. Corps of Engineers Support Cost	-	-	0.050	-	0.050																										
F. Other In-House Support Cost	-	-	-	-	-																										
G. Total Facility Project Cost	-	-	-	-	-																										
H. Other Costs	-	-	-	-	-																										
Total Project Cost	-	-	1.400	-	1.400																										

Narrative Explanation:
 FY 2024 Base procurement dollars in the amount of \$1.400 million supports the procurement and installation of a Wire Electric Discharge Machine (EDM) that is a required process to support minor component manufacturing of the M256 Block Crank and the M256 operating crank located at Watervliet Arsenal (WVA), New York. This automated system will be used to make precise and complex geometry cutting of metal sheets, plates, and blocks to support production of cannon systems. The EDM can replace very costly and time-consuming broaching operations and will support processing modernization as well as reducing operating costs and Takt times. Takt time is a calculation of the available production time divided by customer demand.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: PB 2024 Army **Date:** March 2023

Appropriation / Budget Activity / Budget Sub Activity: 2033A / 02 / 30 **P-1 Line Item Number / Title:** 3270GC0050 / Production Base Support (WOCV-WTCV)

Project Title: Quality Control Inspection Equipment **Project Number:** WVA0054 **Project Category:**

End Item Supported Model: Abrams **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	Facility Name: Watervliet Arsenal (WVA) Facility Location: Watervliet, NY Facility Type (GOGO, GOCO, COCO): GOGO						
A. Construction Cost	-	-	-	-	-	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Initial/Final Project Award: Construction Complete: Equipment Installation Complete: Prove Out Begins: Prove Out Complete:						
B. Equipment Cost	-	-	-	-	-							
C. Equipment Installation Cost	-	-	5.100	-	5.100							
D. Contractor Support Cost	-	-	0.200	-	0.200							
E. Corps of Engineers Support Cost	-	-	0.100	-	0.100							
F. Other In-House Support Cost	-	-	-	-	-							
G. Total Facility Project Cost	-	-	-	-	-							
H. Other Costs	-	-	-	-	-							
Total Project Cost	-	-	5.400	-	5.400	Related Projects						
						Project Number	Title	FY & Appn	Value (\$ M)	Facing	Start Date	Compl Date

Narrative Explanation:

FY 2024 Base procurement dollars in the amount of \$5.400 million supports equipment that will be used to support modernization of quality control functions by implementing the digitalization of data gathering to implement Statistical Process Control (SPC) located at Watervliet Arsenal (WVA), New York. Equipment will also be used to mitigate single points of failures as well as support increased workload.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: PB 2024 Army **Date:** March 2023

Appropriation / Budget Activity / Budget Sub Activity: 2033A / 02 / 30 **P-1 Line Item Number / Title:** 3270GC0050 / Production Base Support (WOCV-WTCV)

Project Title: Tri-Chrome Conversion **Project Number:** WVA0055 **Project Category:**

End Item Supported Model: Abrams **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	Facility Name: Watervliet Arsenal (WVA) Facility Location: Watervliet, NY Facility Type (GOGO, GOCO, COCO): GOGO						
A. Construction Cost	-	-	-	-	-	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Initial/Final Project Award: Construction Complete: Equipment Installation Complete: Prove Out Begins: Prove Out Complete:						
B. Equipment Cost	-	-	-	-	-							
C. Equipment Installation Cost	-	-	-	-	-							
D. Contractor Support Cost	-	-	-	-	-							
E. Corps of Engineers Support Cost	-	-	-	-	-							
F. Other In-House Support Cost	-	-	-	-	-							
G. Total Facility Project Cost	-	-	-	-	-							
H. Other Costs	-	-	9.400	-	9.400							
Total Project Cost	-	-	9.400	-	9.400	Related Projects						
						Project Number	Title	FY & Appn	Value (\$ M)	Facing	Start Date	Compl Date

Narrative Explanation:
 FY 2024 Base procurement dollars in the amount of \$9.400 million supports the procurement and installation of the conversion from hexavalent chromium plating to trivalent chromium plating located at Watervliet Arsenal (WVA), New York. This project is primarily focused on inner diameter bore coatings for large caliber weapons systems, which provide wear and erosion protection from the thermal, chemical, and mechanical impacts of a projectile. Tri Chrome attributes: Removes the dependence on hexavalent chromium for bore coatings. Newly renovated chrome plating facility will readily accept this new process. Process efficiencies have high potential to increase production capacity. This process introduces a new capability and expands current manufacturing options at WVA.

This is a new start project in FY 2024.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: PB 2024 Army **Date:** March 2023

Appropriation / Budget Activity / Budget Sub Activity: 2033A / 02 / 30 **P-1 Line Item Number / Title:** 3270GC0050 / Production Base Support (WOCV-WTCV)

Project Title: Cannon Preform Advanced Material Purchase **Project Number:** WVA0056 **Project Category:**

End Item Supported Model: **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	Facility Name: Watervliet Arsenal (WVA) Facility Location: Watervliet, NY Facility Type (GOGO, GOCO, COCO): GOGO						
A. Construction Cost	-	-	-	-	-	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Initial/Final Project Award: Construction Complete: Equipment Installation Complete: Prove Out Begins: Prove Out Complete:						
B. Equipment Cost	-	-	-	-	-							
C. Equipment Installation Cost	-	-	-	-	-							
D. Contractor Support Cost	-	-	-	-	-							
E. Corps of Engineers Support Cost	-	-	-	-	-							
F. Other In-House Support Cost	-	-	-	-	-							
G. Total Facility Project Cost	-	-	-	-	-							
H. Other Costs	-	-	1.200	-	1.200							
Total Project Cost	-	-	1.200	-	1.200	Related Projects						
						Project Number	Title	FY & Appn	Value (\$ M)	Facing	Start Date	Compl Date

Narrative Explanation:
 FY 2024 Base procurement dollars in the amount of \$1.200 million supports the Preform Advanced Material Purchase plating located at Watervliet Arsenal (WVA), New York. This pre-positions critical long lead castings and forgings to increase flexibility in US requirements and supply chain disruptions. Purchase of Howitzer cannon sub-components to prove out new manufacturing capability investments at Watervliet arsenal from other (multiple) Production Base Support (PBS) investments.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: PB 2024 Army **Date:** March 2023

Appropriation / Budget Activity / Budget Sub Activity: 2033A / 02 / 30 **P-1 Line Item Number / Title:** 3270GC0050 / Production Base Support (WOCV-WTCV)

Project Title: Minor Plating Reconstitution **Project Number:** WVA0057 **Project Category:**

End Item Supported Model: **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	Facility Name: Watervliet Arsenal (WVA) Facility Location: Watervliet, NY Facility Type (GOGO, GOCO, COCO): GOGO														
A. Construction Cost	-	-	-	-	-	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Initial/Final Project Award: Construction Complete: Equipment Installation Complete: Prove Out Begins: Prove Out Complete: <div align="center">Related Projects</div> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 10%;">Project Number</th> <th style="width: 30%;">Title</th> <th style="width: 10%;">FY & Appn</th> <th style="width: 10%;">Value (\$ M)</th> <th style="width: 10%;">Facing</th> <th style="width: 10%;">Start Date</th> <th style="width: 10%;">Compl Date</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>	Project Number	Title	FY & Appn	Value (\$ M)	Facing	Start Date	Compl Date							
Project Number	Title	FY & Appn	Value (\$ M)	Facing	Start Date		Compl Date													
B. Equipment Cost	-	-	2.000	-	2.000															
C. Equipment Installation Cost	-	-	2.000	-	2.000															
D. Contractor Support Cost	-	-	-	-	-															
E. Corps of Engineers Support Cost	-	-	-	-	-															
F. Other In-House Support Cost	-	-	-	-	-															
G. Total Facility Project Cost	-	-	-	-	-															
H. Other Costs	-	-	-	-	-															
Total Project Cost	-	-	4.000	-	4.000															

Narrative Explanation:
 FY 2024 Base procurement dollars in the amount of \$4.000 million conduct a study for renovating the minor plating line (aka anodization which is the process used for chrome plating). Minors refers to smaller parts as opposed to the cannon tube plating line). This includes new anodization equipment as well as upgrades to infrastructure like the subterranean piping for flow of chemicals involved in the process. This system will allow the Arsenal to anodize metal parts to provide corrosion and wear resistance. Bringing this capability into WVA will increase cannon production rates by eliminating the delays caused by long lead times at outside vendors.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: PB 2024 Army **Date:** March 2023

Appropriation / Budget Activity / Budget Sub Activity: 2033A / 02 / 30 **P-1 Line Item Number / Title:** 3270GC0050 / Production Base Support (WOCV-WTCV)

Project Title: JSMC Miscellaneous Small Projects **Project Number:** JSMC001 **Project Category:**

End Item Supported Model: Abrams **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	Facility Name: Joint Systems Manufacturing Center (JSMC) - Lima Facility Location: Lima, OH Facility Type (GOGO, GOCO, COCO): GOCO						
						Principal Milestones						Month & Year
A. Construction Cost	-	-	-	-	-	Concept Design Complete:						
B. Equipment Cost	7.485	-	4.517	-	4.517	Final Design Complete:						
C. Equipment Installation Cost	-	-	4.618	-	4.618	Initial/Final Project Award:						
D. Contractor Support Cost	-	-	-	-	-	Construction Complete:						
E. Corps of Engineers Support Cost	-	-	-	-	-	Equipment Installation Complete:						
F. Other In-House Support Cost	-	-	-	-	-	Prove Out Begins:						
G. Total Facility Project Cost	-	-	-	-	-	Prove Out Complete:						
H. Other Costs	-	-	7.128	-	7.128	Related Projects						
Total Project Cost	7.485	-	16.263	-	16.263	Project Number	Title	FY & Appn	Value (\$ M)	Facing	Start Date	Compl Date

Narrative Explanation:

FY 2024 Base procurement dollars estimated in the amount of \$16.263 million support the Abrams Tank Production Process and Abrams Industrial Base by focusing on maintaining improving, optimizing, and modernizing the manufacturing facilities located at the Joint Systems Manufacturing Center (JSMC) - Lima, OH. These small projects include, but are not limited to: rehabilitation and modernization of office spaces in various buildings on the property; perimeter fence clearing, zone spraying, and dead tree cutting; refurbishing and modernizing bridge ports and the manufacturing center; replacing, modernizing, and updating equipment (i.e., bump course controls, air conditioners, heat recovery units, steam & condensate lines, forklifts, concrete, cranes, etc.) that are past their useful life and/or have been in service for over 20 years.

No JSMC Miscellaneous Small Project funding was requested in FY 2023. This was due to available funding levels within the Production Base Support line and FY 2023 priority requirements supporting the Extended Range Cannon Artillery production base at Watervliet Arsenal supporting and the Army's modernization priorities.

FY 2024 funding request supports JSMC projects that were deferred from FY 2023 to FY 2024 as well as projects originally planned for execution in FY 2024 (approximately \$7-8 million per year).

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: PB 2024 Army **Date:** March 2023

Appropriation / Budget Activity / Budget Sub Activity: 2033A / 02 / 30 **P-1 Line Item Number / Title:** 3270GC0050 / Production Base Support (WOCV-WTCV)

Project Title: Remove TM004 and Install New Machine at TM005 Location **Project Number:** JSMC008 **Project Category:**

End Item Supported Model: **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	Facility Name: Joint Systems Manufacturing Center (JSMC) - Lima Facility Location: Lima, OH Facility Type (GOGO, GOCO, COCO): GOCO						
A. Construction Cost	-	-	-	-	-	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Initial/Final Project Award: Construction Complete: Equipment Installation Complete: Prove Out Begins: Prove Out Complete:						
B. Equipment Cost	-	-	-	-	-							
C. Equipment Installation Cost	-	-	-	-	-							
D. Contractor Support Cost	-	-	-	-	-							
E. Corps of Engineers Support Cost	-	-	-	-	-							
F. Other In-House Support Cost	-	-	-	-	-							
G. Total Facility Project Cost	-	-	-	-	-							
H. Other Costs	6.500	-	-	-	-							
Total Project Cost	6.500	-	-	-	-	Related Projects						
						Project Number	Title	FY & Appn	Value (\$ M)	Facing	Start Date	Compl Date

Narrative Explanation:
 There is no FY 2024 budget request for this project.

FY 2022 Base procurement dollars in the amount of \$6.500 million support the purchase of a modernized medium sized Horizontal Boring Mill (HBM) with rotary table at the Joint Systems Manufacturing Center (JSMC) - Lima, OH. The TM004, which was installed in 1982, is currently at the end of its useful life and parts/components are becoming obsolete. This modernized equipment will replace the existing system and provide increased capability and automation.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: PB 2024 Army **Date:** March 2023

Appropriation / Budget Activity / Budget Sub Activity: 2033A / 02 / 30 **P-1 Line Item Number / Title:** 3270GC0050 / Production Base Support (WOCV-WTCV)

Project Title: Replace CE92 & CE96 Vertical Machining Centers (VMCs) **Project Number:** JSMC009 **Project Category:**

End Item Supported Model: **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	Facility Name: Joint Systems Manufacturing Center (JSMC) - Lima Facility Location: Lima, OH Facility Type (GOGO, GOCO, COCO): GOCO						
A. Construction Cost	-	-	-	-	-	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Initial/Final Project Award: Construction Complete: Equipment Installation Complete: Prove Out Begins: Prove Out Complete:						
B. Equipment Cost	-	-	-	-	-							
C. Equipment Installation Cost	-	-	-	-	-							
D. Contractor Support Cost	-	-	-	-	-							
E. Corps of Engineers Support Cost	-	-	-	-	-							
F. Other In-House Support Cost	-	-	-	-	-							
G. Total Facility Project Cost	-	-	-	-	-							
H. Other Costs	2.500	-	-	-	-	Related Projects						
Total Project Cost	2.500	-	-	-	-							
						Project Number	Title	FY & Appn	Value (\$ M)	Facing	Start Date	Compl Date

Narrative Explanation:
 There is no FY 2024 budget request for this project.

FY 2022 Base procurement funds in the amount of \$2.500 million support the replacement of the existing Vertical Machining Centers (VMCs) with modernized systems which are more reliable, automated and have more capabilities at the Joint Systems Manufacturing Center (JSMC) - Lima, OH. The current VMCs are 15 - 20 years old and are experiencing high repair and maintenance costs.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: PB 2024 Army **Date:** March 2023

Appropriation / Budget Activity / Budget Sub Activity: 2033A / 02 / 30 **P-1 Line Item Number / Title:** 3270GC0050 / Production Base Support (WOCV-WTCV)

Project Title: Remove TR76 and TR77 and Replace with (1) Vertical Machining Center (VMC) **Project Number:** JSMC010 **Project Category:**

End Item Supported Model: Abrams **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	Facility Name: Joint Systems Manufacturing Center (JSMC) - Lima Facility Location: Lima, OH Facility Type (GOGO, GOCO, COCO): GOCO						
A. Construction Cost	-	-	-	-	-	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Initial/Final Project Award: Construction Complete: Equipment Installation Complete: Prove Out Begins: Prove Out Complete:						
B. Equipment Cost	-	-	-	-	-							
C. Equipment Installation Cost	-	-	-	-	-							
D. Contractor Support Cost	-	-	-	-	-							
E. Corps of Engineers Support Cost	-	-	-	-	-							
F. Other In-House Support Cost	-	-	-	-	-							
G. Total Facility Project Cost	-	-	-	-	-							
H. Other Costs	1.750	-	-	-	-							
Total Project Cost	1.750	-	-	-	-	Related Projects						
						Project Number	Title	FY & Appn	Value (\$ M)	Facing	Start Date	Compl Date

Narrative Explanation:
 There is no FY 2024 budget request for this project.

FY 2022 Base procurement dollars in the amount of \$1.750 million support the removal and replacement of two Virtual Machining Centers (VMC) that are 22 and 25 years old and at the end of their useful life. The old VMCs experience excessive downtime, require continual repair, and have incurred high maintenance costs. The new modernized Vertical Machining Center (VMC) will be more efficient and will provide improved capabilities.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: PB 2024 Army **Date:** March 2023

Appropriation / Budget Activity / Budget Sub Activity: 2033A / 02 / 30 **P-1 Line Item Number / Title:** 3270GC0050 / Production Base Support (WOCV-WTCV)

Project Title: Replace SB13 with Robotic Blast Booth **Project Number:** JSMC011 **Project Category:**

End Item Supported Model: Abrams **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	Facility Name: Joint Systems Manufacturing Center (JSMC) - Lima Facility Location: Lima, OH Facility Type (GOGO, GOCO, COCO): GOCO						
A. Construction Cost	-	-	-	-	-	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Initial/Final Project Award: Construction Complete: Equipment Installation Complete: Prove Out Begins: Prove Out Complete:						
B. Equipment Cost	-	-	-	-	-							
C. Equipment Installation Cost	-	-	-	-	-							
D. Contractor Support Cost	-	-	-	-	-							
E. Corps of Engineers Support Cost	-	-	-	-	-							
F. Other In-House Support Cost	-	-	-	-	-							
G. Total Facility Project Cost	-	-	-	-	-							
H. Other Costs	5.500	-	-	-	-							
Total Project Cost	5.500	-	-	-	-	Related Projects						
						Project Number	Title	FY & Appn	Value (\$ M)	Facing	Start Date	Compl Date

Narrative Explanation:
 There is no FY 2024 budget request for this project.

FY 2022 Base procurement dollars in the amount of \$5.500 million support the purchase and installation of an automated robotic blast system to replace the existing manual blast system. The current equipment, installed in 2007, is near the end of its useful life and has become severely worn due to the nature of the blasting environment.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: PB 2024 Army **Date:** March 2023

Appropriation / Budget Activity / Budget Sub Activity: 2033A / 02 / 30 **P-1 Line Item Number / Title:** 3270GC0050 / Production Base Support (WOCV-WTCV)

Project Title: RFID Asset Tracking **Project Number:** JSMC012 **Project Category:**

End Item Supported Model: Multiple Systems **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	Facility Name: Joint Systems Manufacturing Center (JSMC) - Lima Facility Location: Lima, OH Facility Type (GOGO, GOCO, COCO): GOCO						
A. Construction Cost	-	-	-	-	-	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Initial/Final Project Award: Construction Complete: Equipment Installation Complete: Prove Out Begins: Prove Out Complete:						
B. Equipment Cost	-	-	-	-	-							
C. Equipment Installation Cost	-	-	-	-	-							
D. Contractor Support Cost	-	-	-	-	-							
E. Corps of Engineers Support Cost	-	-	-	-	-							
F. Other In-House Support Cost	-	-	-	-	-							
G. Total Facility Project Cost	-	-	-	-	-							
H. Other Costs	1.653	-	-	-	-							
Total Project Cost	1.653	-	-	-	-	Related Projects						
						Project Number	Title	FY & Appn	Value (\$ M)	Facing	Start Date	Compl Date

Narrative Explanation:
 There is no FY 2024 budget request for this project.

FY 2022 Base procurement dollars in the amount of \$1.653 million supports the design and procurement of a Radio Frequency Identification (RFID) Asset Tracking system to needed to modernize the tool room infrastructure. This automated RFID tracking system is required to ensure accountability of United States Government (USG) assets throughout the Joint Systems Manufacturing Center (JSMC) - Lima, OH.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: PB 2024 Army **Date:** March 2023

Appropriation / Budget Activity / Budget Sub Activity: 2033A / 02 / 30 **P-1 Line Item Number / Title:** 3270GC0050 / Production Base Support (WOCV-WTCV)

Project Title: Robotic Machine Tending Systems **Project Number:** JSMC013 **Project Category:**

End Item Supported Model: **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	Facility Name: Joint Systems Manufacturing Center (JSMC) - Lima Facility Location: Lima, OH Facility Type (GOGO, GOCO, COCO): GOCO						
A. Construction Cost	-	-	-	-	-	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Initial/Final Project Award: Construction Complete: Equipment Installation Complete: Prove Out Begins: Prove Out Complete:						
B. Equipment Cost	-	-	-	-	-							
C. Equipment Installation Cost	-	-	-	-	-							
D. Contractor Support Cost	-	-	-	-	-							
E. Corps of Engineers Support Cost	-	-	-	-	-							
F. Other In-House Support Cost	-	-	-	-	-							
G. Total Facility Project Cost	-	-	-	-	-							
H. Other Costs	1.000	-	-	-	-							
Total Project Cost	1.000	-	-	-	-	Related Projects						
						Project Number	Title	FY & Appn	Value (\$ M)	Facing	Start Date	Compl Date

Narrative Explanation:
 There is no FY 2024 budget request for this project.

FY 2022 Base procurement dollars in the amount \$1.000 million support the purchase of an automated Robotic Machine Tending System for load/unload of component machining centers. The use of Collaborative Robots (Cobots) increase safety and reduce injury; increase output and accuracy; and are able to operate in harsh environments.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: PB 2024 Army **Date:** March 2023

Appropriation / Budget Activity / Budget Sub Activity: 2033A / 02 / 30 **P-1 Line Item Number / Title:** 3270GC0050 / Production Base Support (WOCV-WTCV)

Project Title: Repair/Refurbish/Replace Locomotive(s) **Project Number:** JSMC014 **Project Category:**

End Item Supported Model: Abrams **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	Facility Name: Joint Systems Manufacturing Center (JSMC) - Lima Facility Location: Lima, OH Facility Type (GOGO, GOCO, COCO): GOCO						
A. Construction Cost	-	-	-	-	-	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Initial/Final Project Award: Construction Complete: Equipment Installation Complete: Prove Out Begins: Prove Out Complete:						
B. Equipment Cost	-	-	-	-	-							
C. Equipment Installation Cost	-	-	-	-	-							
D. Contractor Support Cost	-	-	-	-	-							
E. Corps of Engineers Support Cost	-	-	-	-	-							
F. Other In-House Support Cost	-	-	-	-	-							
G. Total Facility Project Cost	-	-	-	-	-							
H. Other Costs	2.381	-	-	-	-							
Total Project Cost	2.381	-	-	-	-							
							Related Projects					
						Project Number	Title	FY & Appn	Value <i>(\$ M)</i>	Facing	Start Date	Compl Date

Narrative Explanation:
 There is no FY 2024 budget request for this project.

FY 2022 Base procurement dollars in the amount of \$2.381 million support the repair, refurbishment or replacement of aging locomotives at Joint Systems Manufacturing Center (JSMC) - Lima, OH. Locomotives are used extensively to push and rearrange transport cars within the JSMC rail yard to facilitate the unloading/loading of tanks. The typical lifespan of a locomotive is 25 to 30 years and the average age of locomotives in service at JSMC is 32 years.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: PB 2024 Army **Date:** March 2023

Appropriation / Budget Activity / Budget Sub Activity: 2033A / 02 / 30 **P-1 Line Item Number / Title:** 3270GC0050 / Production Base Support (WOCV-WTCV)

Project Title: Autonomous Material Handling **Project Number:** JSMC015 **Project Category:**

End Item Supported Model: **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	Facility Name: Joint Systems Manufacturing Center (JSMC) - Lima Facility Location: Lima, OH Facility Type (GOGO, GOCO, COCO): GOCO						
A. Construction Cost	-	-	-	-	-	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Initial/Final Project Award: Construction Complete: Equipment Installation Complete: Prove Out Begins: Prove Out Complete:						
B. Equipment Cost	-	-	-	-	-							
C. Equipment Installation Cost	-	-	-	-	-							
D. Contractor Support Cost	-	-	-	-	-							
E. Corps of Engineers Support Cost	-	-	-	-	-							
F. Other In-House Support Cost	-	-	-	-	-							
G. Total Facility Project Cost	-	-	-	-	-							
H. Other Costs	2.000	-	-	-	-							
Total Project Cost	2.000	-	-	-	-	Related Projects						
						Project Number	Title	FY & Appn	Value (\$ M)	Facing	Start Date	Compl Date

Narrative Explanation:
 There is no FY 2024 budget request for this project.

FY 2022 Base procurement dollars in the amount of \$2.000 million support the design of space, facilities and installation of required infrastructure to support autonomous material handling and remote monitoring of automated equipment at the Joint Systems Manufacturing Center (JSMC) - Lima, OH. Autonomous material handling systems are not only more efficient, they provide increased safety, as well as, assist in providing for a cleaner environment by reducing the amount of fossil fuels used for repetitive material moves throughout the facility.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: PB 2024 Army **Date:** March 2023

Appropriation / Budget Activity / Budget Sub Activity: 2033A / 02 / 30 **P-1 Line Item Number / Title:** 3270GC0050 / Production Base Support (WOCV-WTCV)

Project Title: Build 351 - Rehab South End Office Complex **Project Number:** JSMC016 **Project Category:**

End Item Supported Model: **Annual Capacity Before / After (1-8-5): /**

Cost Elements <i>(\$ in Millions)</i>	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	Facility Name: Joint Systems Manufacturing Center (JSMC) - Lima Facility Location: Lima, OH Facility Type (GOGO, GOCO, COCO): GOCO						
A. Construction Cost	-	-	-	-	-	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Initial/Final Project Award: Construction Complete: Equipment Installation Complete: Prove Out Begins: Prove Out Complete:						
B. Equipment Cost	-	-	-	-	-							
C. Equipment Installation Cost	-	-	-	-	-							
D. Contractor Support Cost	-	-	-	-	-							
E. Corps of Engineers Support Cost	-	-	-	-	-							
F. Other In-House Support Cost	-	-	-	-	-							
G. Total Facility Project Cost	-	-	-	-	-							
H. Other Costs	2.000	-	-	-	-							
Total Project Cost	2.000	-	-	-	-	Related Projects						
						Project Number	Title	FY & Appn	Value (\$ M)	Facing	Start Date	Compl Date

Narrative Explanation:
 There is no FY 2024 budget request for this project.

FY 2022 Base procurement dollars in the amount of \$2.000 million support modernization of the breakroom and the upstairs locker room area at the Joint Systems Manufacturing Center (JSMC) - Lima, OH and will provide design space and facilities for remote monitoring of automated equipment.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: PB 2024 Army **Date:** March 2023

Appropriation / Budget Activity / Budget Sub Activity: 2033A / 02 / 30 **P-1 Line Item Number / Title:** 3270GC0050 / Production Base Support (WOCV-WTCV)

Project Title: Water Tower Piping Renovation **Project Number:** JSMC017 **Project Category:**

End Item Supported Model: JSMC Installation **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	Facility Name: Joint Systems Manufacturing Center (JSMC) - Lima Facility Location: Lima, OH Facility Type (GOGO, GOCO, COCO): GOCO						
A. Construction Cost	-	-	-	-	-	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Initial/Final Project Award: Construction Complete: Equipment Installation Complete: Prove Out Begins: Prove Out Complete:						
B. Equipment Cost	-	-	-	-	-							
C. Equipment Installation Cost	-	-	-	-	-							
D. Contractor Support Cost	-	-	-	-	-							
E. Corps of Engineers Support Cost	-	-	-	-	-							
F. Other In-House Support Cost	-	-	-	-	-							
G. Total Facility Project Cost	-	-	-	-	-							
H. Other Costs	7.540	-	-	-	-							
Total Project Cost	7.540	-	-	-	-	Related Projects						
						Project Number	Title	FY & Appn	Value (\$ M)	Facing	Start Date	Compl Date

Narrative Explanation:
 There is no FY 2024 budget request for this project.

FY 2022 Base procurement dollars in the amount of \$7.540 million support the required renovation and upgrade of the Water Tower Piping at the Joint Systems Manufacturing Center (JSMC) - Lima, OH. The piping around the water tower is part of the underground utilities infrastructure designed and installed decades ago. Failure repairs have increased over the past several years and the piping has reached its expected service life.

Following an inspection completed at the end of 2020, multiple items were identified to be in need of repair or replacement. This project includes but is not limited to the underground piping around the water tower plant and northeast side of Building 147; the renovation of the water piping from the water tower to the new fire pumps and fire protection system in Building 66; new fire protection piping to Building 73 (Administration/Government Offices) and approximately 30% of Building 147 (Main Production) to include areas on the west side on Building 147 where sanitary sewer and storm drains connected, which is an Environmental Protection Agency (EPA) violation.

UNCLASSIFIED

Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: PB 2024 Army **Date:** March 2023

Appropriation / Budget Activity / Budget Sub Activity: 2033A / 02 / 30 **P-1 Line Item Number / Title:** 3270GC0050 / Production Base Support (WOCV-WTCV)

Project Title: Replace Arch Beam Cranes - Safety Recall **Project Number:** JSMC018 **Project Category:**

End Item Supported Model: **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	Facility Name: Joint Systems Manufacturing Center (JSMC) - Lima Facility Location: Lima, OH Facility Type (GOGO, GOCO, COCO): GOCO						
A. Construction Cost	-	-	-	-	-	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Initial/Final Project Award: Construction Complete: Equipment Installation Complete: Prove Out Begins: Prove Out Complete:						
B. Equipment Cost	-	-	-	-	-							
C. Equipment Installation Cost	-	-	-	-	-							
D. Contractor Support Cost	-	-	-	-	-							
E. Corps of Engineers Support Cost	-	-	-	-	-							
F. Other In-House Support Cost	-	-	-	-	-							
G. Total Facility Project Cost	-	-	-	-	-							
H. Other Costs	4.121	-	-	-	-							
Total Project Cost	4.121	-	-	-	-	Related Projects						
						Project Number	Title	FY & Appn	Value (\$ M)	Facing	Start Date	Compl Date

Narrative Explanation:
 There is no FY 2024 budget request for this project.

FY 2022 Base procurement dollars in the amount of \$4.121 million supports replacement of arch beam cranes at Joint Systems Manufacturing Center (JSMC) - Lima, OH. This type of crane has not been manufactured since 1962. A safety recall has been issued for these cranes, replacement parts are no longer available and the design is no longer recommended for use in "any type" of application. The welds weaken with time and could result in Martensitic Failure resulting in the bottom rail peeling away from the web plate and the potential for catastrophic load drop failure and the potential for fatal consequences.

UNCLASSIFIED

Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: PB 2024 Army **Date:** March 2023

Appropriation / Budget Activity / Budget Sub Activity: 2033A / 02 / 30 **P-1 Line Item Number / Title:** 3270GC0050 / Production Base Support (WOCV-WTCV)

Project Title: Building 281 Replace Drag Line **Project Number:** JSMC020 **Project Category:**

End Item Supported Model: **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	Facility Name: Joint Systems Manufacturing Center (JSMC) - Lima Facility Location: Lima, OH Facility Type (GOGO, GOCO, COCO): GOCO																										
						Principal Milestones						Month & Year																				
A. Construction Cost	-	-	-	-	-	Concept Design Complete:																										
B. Equipment Cost	-	-	-	-	-	Final Design Complete:																										
C. Equipment Installation Cost	-	-	-	-	-	Initial/Final Project Award:																										
D. Contractor Support Cost	-	-	-	-	-	Construction Complete:																										
E. Corps of Engineers Support Cost	-	-	-	-	-	Equipment Installation Complete:																										
F. Other In-House Support Cost	-	-	-	-	-	Prove Out Begins:																										
G. Total Facility Project Cost	-	-	-	-	-	Prove Out Complete:																										
H. Other Costs	1.102	-	-	-	-	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th align="center" colspan="7">Related Projects</th> </tr> <tr> <th align="center">Project Number</th> <th align="center">Title</th> <th align="center">FY & Appn</th> <th align="center">Value (\$ M)</th> <th align="center">Facing</th> <th align="center">Start Date</th> <th align="center">Compl Date</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>						Related Projects							Project Number	Title	FY & Appn	Value (\$ M)	Facing	Start Date	Compl Date							
Related Projects																																
Project Number	Title	FY & Appn	Value (\$ M)	Facing	Start Date	Compl Date																										
Total Project Cost	1.102	-	-	-	-																											

Narrative Explanation:
 There is no FY 2024 budget request for this project.

FY 2022 Base procurement dollars in the amount of \$1.102 million support the replacement of the Drag Line in Building 281 at Joint Systems Manufacturing Center (JSMC) - Lima, OH. The Drag Line in Building 281 has had numerous repairs through the years. The inner-workings (chains, gears, etc.) are worn out, at the end of life, and need to be replaced.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: PB 2024 Army **Date:** March 2023

Appropriation / Budget Activity / Budget Sub Activity: 2033A / 02 / 30 **P-1 Line Item Number / Title:** 3270GC0050 / Production Base Support (WOCV-WTCV)

Project Title: Replace Cooling Tower in Power House **Project Number:** JSMC021 **Project Category:**

End Item Supported Model: Abrams **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	Facility Name: Joint Systems Manufacturing Center (JSMC) - Lima Facility Location: Lima, OH Facility Type (GOGO, GOCO, COCO): GOCO						
A. Construction Cost	-	-	-	-	-	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Initial/Final Project Award: Construction Complete: Equipment Installation Complete: Prove Out Begins: Prove Out Complete:						
B. Equipment Cost	-	-	-	-	-							
C. Equipment Installation Cost	-	-	-	-	-							
D. Contractor Support Cost	-	-	-	-	-							
E. Corps of Engineers Support Cost	-	-	-	-	-							
F. Other In-House Support Cost	-	-	-	-	-							
G. Total Facility Project Cost	-	-	-	-	-							
H. Other Costs	1.160	-	-	-	-							
Total Project Cost	1.160	-	-	-	-	Related Projects						
						Project Number	Title	FY & Appn	Value (\$ M)	Facing	Start Date	Compl Date

Narrative Explanation:
 There is no FY 2024 budget request for this project.

FY 2022 Base funding in the amount of \$1.160 million supports the replacement of the cooling tower in the power house located at Joint Systems Manufacturing Center (JSMC) - Lima, OH. The galvanized steel in the cooling tower is deteriorating beyond repair and the parts required to keep the equipment sustainable are obsolete and difficult to procure.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: PB 2024 Army **Date:** March 2023

Appropriation / Budget Activity / Budget Sub Activity: 2033A / 02 / 30 **P-1 Line Item Number / Title:** 3270GC0050 / Production Base Support (WOCV-WTCV)

Project Title: Rehabilitate Hardstand Pavement **Project Number:** JSMC022 **Project Category:**

End Item Supported Model: Abrams **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	Facility Name: Joint Systems Manufacturing Center (JSMC) - Lima Facility Location: Lima, OH Facility Type (GOGO, GOCO, COCO): GOCO						
A. Construction Cost	-	-	-	-	-	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Initial/Final Project Award: Construction Complete: Equipment Installation Complete: Prove Out Begins: Prove Out Complete:						
B. Equipment Cost	-	-	-	-	-							
C. Equipment Installation Cost	-	-	-	-	-							
D. Contractor Support Cost	-	-	-	-	-							
E. Corps of Engineers Support Cost	-	-	-	-	-							
F. Other In-House Support Cost	-	-	-	-	-							
G. Total Facility Project Cost	-	-	1.061	-	1.061							
H. Other Costs	-	-	-	-	-							
Total Project Cost	-	-	1.061	-	1.061	Related Projects						
						Project Number	Title	FY & Appn	Value (\$ M)	Facing	Start Date	Compl Date

Narrative Explanation:

FY 2024 Base procurement dollars estimated in the amount of \$1.061 million support the replacement of large portions of the hardstand located at the Joint Systems Manufacturing Center (JSMC) - Lima, OH. This is used for the delivery and shipment of material throughout the facility at JSMC. The pavement is past its useful life and has increasing repair costs. This project will allow new pavement which will be designed to handle the new weight of the vehicles being operated.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: PB 2024 Army **Date:** March 2023

Appropriation / Budget Activity / Budget Sub Activity: 2033A / 02 / 30 **P-1 Line Item Number / Title:** 3270GC0050 / Production Base Support (WOCV-WTCV)

Project Title: B147 Replace Drag Line **Project Number:** JSMC023 **Project Category:**

End Item Supported Model: Abrams **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	Facility Name: Joint Systems Manufacturing Center (JSMC) - Lima Facility Location: Lima, OH Facility Type (GOGO, GOCO, COCO): GOCO																									
A. Construction Cost	-	-	-	-	-	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Initial/Final Project Award: Construction Complete: Equipment Installation Complete: Prove Out Begins: Prove Out Complete:	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th align="center" colspan="6">Related Projects</th> </tr> <tr> <th align="center">Project Number</th> <th align="center">Title</th> <th align="center">FY & Appn</th> <th align="center">Value <i>(\$ M)</i></th> <th align="center">Facing</th> <th align="center">Start Date</th> <th align="center">Compl Date</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>					Related Projects						Project Number	Title	FY & Appn	Value <i>(\$ M)</i>	Facing	Start Date	Compl Date							
Related Projects																															
Project Number	Title	FY & Appn	Value <i>(\$ M)</i>	Facing	Start Date							Compl Date																			
B. Equipment Cost	-	-	1.000	-	1.000																										
C. Equipment Installation Cost	-	-	0.180	-	0.180																										
D. Contractor Support Cost	-	-	-	-	-																										
E. Corps of Engineers Support Cost	-	-	-	-	-																										
F. Other In-House Support Cost	-	-	-	-	-																										
G. Total Facility Project Cost	-	-	-	-	-																										
H. Other Costs	-	-	-	-	-																										
Total Project Cost	-	-	1.180	-	1.180																										

Narrative Explanation:
 FY 2024 Base procurement dollars in the amount of \$1.180 million supports the replacement of the drag line in building 147 (B147) which is responsible for moving the assembly line during production located at the Joint Systems Manufacturing Center (JSMC) - Lima, OH. It is at the end of its useful life and is showing signs of failure. The drag line uses two large and equally long chains that drag a bar that pulls the tanks, hulls, turrets, etc. through multiple stations on the assembly line during the production process. The chains throughout this process have come out of alignment and have become increasingly difficult to move forward during production. This replacement will allow for reduced downtime and updated capacity to effectively move structures down the assembly line efficiently at JSMC.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: PB 2024 Army **Date:** March 2023

Appropriation / Budget Activity / Budget Sub Activity: 2033A / 02 / 30 **P-1 Line Item Number / Title:** 3270GC0050 / Production Base Support (WOCV-WTCV)

Project Title: Replace Fire Sprinkler System Components **Project Number:** JSMC024 **Project Category:**

End Item Supported Model: Abrams **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	Facility Name: Joint Systems Manufacturing Center (JSMC) - Lima Facility Location: Lima, OH Facility Type (GOGO, GOCO, COCO): GOCO						
A. Construction Cost	-	-	-	-	-	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Initial/Final Project Award: Construction Complete: Equipment Installation Complete: Prove Out Begins: Prove Out Complete:						
B. Equipment Cost	-	-	-	-	-							
C. Equipment Installation Cost	-	-	3.609	-	3.609							
D. Contractor Support Cost	-	-	-	-	-							
E. Corps of Engineers Support Cost	-	-	-	-	-							
F. Other In-House Support Cost	-	-	-	-	-							
G. Total Facility Project Cost	-	-	-	-	-							
H. Other Costs	-	-	-	-	-							
Total Project Cost	-	-	3.609	-	3.609	Related Projects						
						Project Number	Title	FY & Appn	Value (\$ M)	Facing	Start Date	Compl Date

Narrative Explanation:
 FY 2024 Base procurement dollars estimated in the amount of \$3.609 million supports the procurement and installation of 50-year-old fire sprinkler components located at the Joint Systems Manufacturing Center (JSMC) - Lima, OH. Majority of the fire sprinkler systems on site are over 50 years in age which is causing increasing failures throughout the facility. This project will decrease leaks, potential failure, and allow for minimal production impacts. This replacement will allow for systems to be updated when the replacement is completed.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: PB 2024 Army **Date:** March 2023

Appropriation / Budget Activity / Budget Sub Activity: 2033A / 02 / 30 **P-1 Line Item Number / Title:** 3270GC0050 / Production Base Support (WOCV-WTCV)

Project Title: Structural Repair of B142 **Project Number:** JSMC025 **Project Category:**

End Item Supported Model: Abrams **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	Facility Name: Joint Systems Manufacturing Center (JSMC) - Lima Facility Location: Lima, OH Facility Type (GOGO, GOCO, COCO): GOCO						
A. Construction Cost	-	-	1.300	-	1.300	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Initial/Final Project Award: Construction Complete: Equipment Installation Complete: Prove Out Begins: Prove Out Complete:						
B. Equipment Cost	-	-	-	-	-							
C. Equipment Installation Cost	-	-	-	-	-							
D. Contractor Support Cost	-	-	0.485	-	0.485							
E. Corps of Engineers Support Cost	-	-	-	-	-							
F. Other In-House Support Cost	-	-	-	-	-							
G. Total Facility Project Cost	-	-	-	-	-							
H. Other Costs	-	-	-	-	-							
Total Project Cost	-	-	1.785	-	1.785							
						Related Projects						
						Project Number	Title	FY & Appn	Value <i>(\$ M)</i>	Facing	Start Date	Compl Date

Narrative Explanation:
 FY 2024 Base procurement dollars estimated in the amount of \$1.785 million supports the design and construction of many structural and masonry issues with building 142 (B142) located at the Joint Systems Manufacturing Center (JSMC) - Lima, OH. Some issues are not structural in nature, but they allow the outside elements into the building. An outside engineering firm was brought on site to review the conditions of B142. This building needs to have some structural repairs done. These include the six (6) main areas which will bring the existing building up to be structurally safe and allow for continual operation. This building provides all compressed air and steam for the plant which directly supports main production buildings at JSMC.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: PB 2024 Army **Date:** March 2023

Appropriation / Budget Activity / Budget Sub Activity: 2033A / 02 / 30 **P-1 Line Item Number / Title:** 3270GC0050 / Production Base Support (WOCV-WTCV)

Project Title: 480V Substation Work **Project Number:** JSMC026 **Project Category:**

End Item Supported Model: Abrams **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	Facility Name: Joint Systems Manufacturing Center (JSMC) - Lima Facility Location: Lima, OH Facility Type (GOGO, GOCO, COCO): GOCO																									
A. Construction Cost	-	-	-	-	-	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Initial/Final Project Award: Construction Complete: Equipment Installation Complete: Prove Out Begins: Prove Out Complete:	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th align="center" colspan="6">Related Projects</th> </tr> <tr> <th style="width: 10%;">Project Number</th> <th style="width: 30%;">Title</th> <th style="width: 10%;">FY & Appn</th> <th style="width: 10%;">Value <i>(\$ M)</i></th> <th style="width: 10%;">Facing</th> <th style="width: 10%;">Start Date</th> <th style="width: 10%;">Compl Date</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>					Related Projects						Project Number	Title	FY & Appn	Value <i>(\$ M)</i>	Facing	Start Date	Compl Date							
Related Projects																															
Project Number	Title	FY & Appn	Value <i>(\$ M)</i>	Facing	Start Date							Compl Date																			
B. Equipment Cost	-	-	1.600	-	1.600																										
C. Equipment Installation Cost	-	-	0.217	-	0.217																										
D. Contractor Support Cost	-	-	-	-	-																										
E. Corps of Engineers Support Cost	-	-	-	-	-																										
F. Other In-House Support Cost	-	-	-	-	-																										
G. Total Facility Project Cost	-	-	-	-	-																										
H. Other Costs	-	-	-	-	-																										
Total Project Cost	-	-	1.817	-	1.817																										

Narrative Explanation:
 FY 2024 Base procurement dollars estimated in the amount of \$1.817 million support the replacement of 480-volt substation located at the Joint Systems Manufacturing Center (JSMC) - Lima, OH. This project will allow for clean uninterrupted power to the production process. While completing this replacement, it will reduce safety hazards by reducing the plant arc flash rating on the affected power distribution equipment.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: PB 2024 Army **Date:** March 2023

Appropriation / Budget Activity / Budget Sub Activity: 2033A / 02 / 30 **P-1 Line Item Number / Title:**
3270GC0050 / Production Base Support (WOCV-WTCV)

Project Title: Upgrade Cranes CO0112 and CO0431 Turret Line Station 0 **Project Number:** JSMC027 **Project Category:**

End Item Supported Model: Abrams **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	Facility Name: Joint Systems Manufacturing Center (JSMC) - Lima Facility Location: Lima, OH Facility Type (GOGO, GOCO, COCO): GOCO						
A. Construction Cost	-	-	-	-	-	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Initial/Final Project Award: Construction Complete: Equipment Installation Complete: Prove Out Begins: Prove Out Complete:	Related Projects					
B. Equipment Cost	-	-	1.090	-	1.090							
C. Equipment Installation Cost	-	-	0.760	-	0.760							
D. Contractor Support Cost	-	-	-	-	-							
E. Corps of Engineers Support Cost	-	-	-	-	-							
F. Other In-House Support Cost	-	-	-	-	-							
G. Total Facility Project Cost	-	-	-	-	-							
H. Other Costs	-	-	-	-	-							
Total Project Cost	-	-	1.850	-	1.850							
						Project Number	Title	FY & Appn	Value (\$ M)	Facing	Start Date	Compl Date

Narrative Explanation:
 FY 2024 Base procurement dollars estimated in the amount of \$1.850 million supports the removal of obsolete equipment and the installation of new cranes CO0112 and CO0431, used at Turret Line Station 0 located at the Joint Systems Manufacturing Center (JSMC) - Lima, OH. This will reduce the amount of downtime to assembly tasks at this station because of the age of existing equipment.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: PB 2024 Army **Date:** March 2023

Appropriation / Budget Activity / Budget Sub Activity: 2033A / 02 / 30 **P-1 Line Item Number / Title:** 3270GC0050 / Production Base Support (WOCV-WTCV)

Project Title: Replacement of Government Owned Mobile Equipment (Forklifts, Walk behind, Pallet Jack) **Project Number:** JSMC028 **Project Category:**

End Item Supported Model: Abrams **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	Facility Name: Joint Systems Manufacturing Center (JSMC) - Lima Facility Location: Lima, OH Facility Type (GOGO, GOCO, COCO): GOCO																									
A. Construction Cost	-	-	-	-	-	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Initial/Final Project Award: Construction Complete: Equipment Installation Complete: Prove Out Begins: Prove Out Complete:	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th align="center" colspan="6">Related Projects</th> </tr> <tr> <th align="center">Project Number</th> <th align="center">Title</th> <th align="center">FY & Appn</th> <th align="center">Value <i>(\$ M)</i></th> <th align="center">Facing</th> <th align="center">Start Date</th> <th align="center">Compl Date</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>					Related Projects						Project Number	Title	FY & Appn	Value <i>(\$ M)</i>	Facing	Start Date	Compl Date							
Related Projects																															
Project Number	Title	FY & Appn	Value <i>(\$ M)</i>	Facing	Start Date							Compl Date																			
B. Equipment Cost	-	-	-	-	-																										
C. Equipment Installation Cost	-	-	1.500	-	1.500																										
D. Contractor Support Cost	-	-	-	-	-																										
E. Corps of Engineers Support Cost	-	-	-	-	-																										
F. Other In-House Support Cost	-	-	-	-	-																										
G. Total Facility Project Cost	-	-	-	-	-																										
H. Other Costs	-	-	-	-	-																										
Total Project Cost	-	-	1.500	-	1.500																										

Narrative Explanation:
 FY 2024 Base procurement dollars estimated in the amount of \$1.500 million support the replacement of government owned mobile equipment on site that directly supports production located at the Joint Systems Manufacturing Center (JSMC) - Lima, OH. The equipment is the primary way that all material is delivered to the line during production activities. The equipment is at the end of its useful life and is requiring increased maintenance costs and obsolescence.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: PB 2024 Army **Date:** March 2023

Appropriation / Budget Activity / Budget Sub Activity: 2033A / 02 / 30 **P-1 Line Item Number / Title:** 3270GC0050 / Production Base Support (WOCV-WTCV)

Project Title: B147 Shaw Box Overhead Cranes **Project Number:** JSMC030 **Project Category:**

End Item Supported Model: Abrams **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	Facility Name: Joint Systems Manufacturing Center (JSMC) - Lima Facility Location: Lima, OH Facility Type (GOGO, GOCO, COCO): GOCO						
A. Construction Cost	-	-	-	-	-	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Initial/Final Project Award: Construction Complete: Equipment Installation Complete: Prove Out Begins: Prove Out Complete:	Related Projects					
B. Equipment Cost	-	-	3.200	-	3.200							
C. Equipment Installation Cost	-	-	1.800	-	1.800							
D. Contractor Support Cost	-	-	-	-	-							
E. Corps of Engineers Support Cost	-	-	-	-	-							
F. Other In-House Support Cost	-	-	-	-	-							
G. Total Facility Project Cost	-	-	-	-	-							
H. Other Costs	-	-	-	-	-							
Total Project Cost	-	-	5.000	-	5.000							
						Project Number	Title	FY & Appn	Value (\$ M)	Facing	Start Date	Compl Date

Narrative Explanation:
 FY 2024 Base procurement dollars estimated in the amount of \$5.000 million supports the required replacement of large shaw box cranes located at the Joint Systems Manufacturing Center (JSMC) - Lima, OH. The cranes serve as the primary way of moving material during the production process throughout the facility. The replacement and modernization of these cranes allow us to avoid increasing maintenance cost along with allowing for us to correct safety concerns with the cranes during inspections.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: PB 2024 Army **Date:** March 2023

Appropriation / Budget Activity / Budget Sub Activity: 2033A / 02 / 30 **P-1 Line Item Number / Title:** 3270GC0050 / Production Base Support (WOCV-WTCV)

Project Title: Building 351 Outside Utilities Replacement **Project Number:** JSMC031 **Project Category:**

End Item Supported Model: Abrams **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	Facility Name: Joint Systems Manufacturing Center (JSMC) - Lima Facility Location: Lima, OH Facility Type (GOGO, GOCO, COCO): GOCO						
A. Construction Cost	-	-	-	-	-	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Initial/Final Project Award: Construction Complete: Equipment Installation Complete: Prove Out Begins: Prove Out Complete:						
B. Equipment Cost	-	-	-	-	-							
C. Equipment Installation Cost	-	-	-	-	-							
D. Contractor Support Cost	-	-	-	-	-							
E. Corps of Engineers Support Cost	-	-	-	-	-							
F. Other In-House Support Cost	-	-	-	-	-							
G. Total Facility Project Cost	-	-	-	-	-							
H. Other Costs	-	-	6.857	-	6.857							
Total Project Cost	-	-	6.857	-	6.857							
											Related Projects	
						Project Number	Title	FY & Appn	Value <i>(\$ M)</i>	Facing	Start Date	Compl Date

Narrative Explanation:
 FY 2024 Base procurement dollars estimated in the amount of \$6.857 million support the required renovation and upgrade of Building 351 outside utilities replacement at the Joint Systems Manufacturing Center (JSMC) - Lima, OH. The piping around the production building is part of the underground utility infrastructure designed and installed decades ago. Which includes several various utilities used for production and site operations. Failure repairs have increased over the past several years and the piping has reached its expected service life. The increase in failures has caused production impacts and decreased production efficiency.

This project is a new start in FY 2024.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: PB 2024 Army **Date:** March 2023

Appropriation / Budget Activity / Budget Sub Activity: 2033A / 02 / 30 **P-1 Line Item Number / Title:** 3270GC0050 / Production Base Support (WOCV-WTCV)

Project Title: Replace (2) Turret Machines (TM) TM006/TM007 **Project Number:** JSMC032 **Project Category:**

End Item Supported Model: Abrams **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	Facility Name: Joint Systems Manufacturing Center (JSMC) - Lima Facility Location: Lima, OH Facility Type (GOGO, GOCO, COCO): GOCO						
A. Construction Cost	-	-	-	-	-	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Initial/Final Project Award: Construction Complete: Equipment Installation Complete: Prove Out Begins: Prove Out Complete:						
B. Equipment Cost	-	-	-	-	-							
C. Equipment Installation Cost	-	-	5.200	-	5.200							
D. Contractor Support Cost	-	-	2.709	-	2.709							
E. Corps of Engineers Support Cost	-	-	-	-	-							
F. Other In-House Support Cost	-	-	-	-	-							
G. Total Facility Project Cost	-	-	-	-	-							
H. Other Costs	-	-	-	-	-							
Total Project Cost	-	-	7.909	-	7.909							
						Related Projects						
						Project Number	Title	FY & Appn	Value <i>(\$ M)</i>	Facing	Start Date	Compl Date

Narrative Explanation:
 FY 2024 Base procurement dollars estimated in the amount of \$7.909 million supports the removal of obsolete equipment and the procurement and installation of turret machining equipment on the production line located at the Joint Systems Manufacturing Center (JSMC) - Lima, OH. This project will also make improvements to the workspace required to install the new equipment. This equipment provides large machining capability which will be instrumental in modernizing the machining capability while reducing downtime during current production.

This project is a new start in FY 2024.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: PB 2024 Army **Date:** March 2023

Appropriation / Budget Activity / Budget Sub Activity: 2033A / 02 / 30 **P-1 Line Item Number / Title:** 3270GC0050 / Production Base Support (WOCV-WTCV)

Project Title: Building 147 South Side Underground Infrastructure Improvement **Project Number:** JSMC033 **Project Category:**

End Item Supported Model: Abrams **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	Facility Name: Joint Systems Manufacturing Center (JSMC) - Lima Facility Location: Lima, OH Facility Type (GOGO, GOCO, COCO): GOCO						
A. Construction Cost	-	-	-	-	-	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Initial/Final Project Award: Construction Complete: Equipment Installation Complete: Prove Out Begins: Prove Out Complete:						
B. Equipment Cost	-	-	-	-	-							
C. Equipment Installation Cost	-	-	-	-	-							
D. Contractor Support Cost	-	-	-	-	-							
E. Corps of Engineers Support Cost	-	-	-	-	-							
F. Other In-House Support Cost	-	-	-	-	-							
G. Total Facility Project Cost	-	-	-	-	-							
H. Other Costs	-	-	8.570	-	8.570							
Total Project Cost	-	-	8.570	-	8.570	Related Projects						
						Project Number	Title	FY & Appn	Value (\$ M)	Facing	Start Date	Compl Date

Narrative Explanation:
 FY 2024 Base procurement dollars estimated in the amount of \$8.570 million support the required renovation and upgrade of Building 147 (B147) south side underground infrastructure improvements at the Joint Systems Manufacturing Center (JSMC) - Lima, OH. The piping around the south side of B147 is part of the underground utilities infrastructure designed and installed decades ago. Which includes several various utilities used for production and site operations. Failure repairs have increased over the past several years and the piping has reached its expected service life. The increase in failures has caused production impacts and decreased production efficiency.

This project is a new start in FY 2024.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: PB 2024 Army **Date:** March 2023

Appropriation / Budget Activity / Budget Sub Activity: 2033A / 02 / 30 **P-1 Line Item Number / Title:** 3270GC0050 / Production Base Support (WOCV-WTCV)

Project Title: Electronic Fabrication & Assembly Inspection **Project Number:** JSMC035 **Project Category:**

End Item Supported Model: Abrams **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	Facility Name: Joint Systems Manufacturing Center (JSMC) - Lima Facility Location: Lima, OH Facility Type (GOGO, GOCO, COCO): GOCO						
A. Construction Cost	-	-	-	-	-	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Initial/Final Project Award: Construction Complete: Equipment Installation Complete: Prove Out Begins: Prove Out Complete:						
B. Equipment Cost	-	-	-	-	-							
C. Equipment Installation Cost	-	-	-	-	-							
D. Contractor Support Cost	-	-	0.952	-	0.952							
E. Corps of Engineers Support Cost	-	-	-	-	-							
F. Other In-House Support Cost	-	-	-	-	-							
G. Total Facility Project Cost	-	-	-	-	-							
H. Other Costs	-	-	-	-	-							
Total Project Cost	-	-	0.952	-	0.952	Related Projects						
						Project Number	Title	FY & Appn	Value (\$ M)	Facing	Start Date	Compl Date

Narrative Explanation:
 FY 2024 Base procurement dollars estimated in the amount of \$0.952 million support the project to take existing manual fabrication and assembly inspections paper processes throughout the Joint Systems Manufacturing Center (JSMC) and transform electronically recorded information into one (1) central software. This migration from manual process to electronically recorded process with a final inspection is a planned reduction of 3-4% of standard operating efficiency. The project will allow for in-process asset tracking to improve quality and accountability which will modernize the facilities flexibility and capability for future army plans.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: PB 2024 Army **Date:** March 2023

Appropriation / Budget Activity / Budget Sub Activity: 2033A / 02 / 30 **P-1 Line Item Number / Title:** 3270GC0050 / Production Base Support (WOCV-WTCV)

Project Title: Electronic Final Inspection Records **Project Number:** JSMC036 **Project Category:**

End Item Supported Model: Abrams **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	Facility Name: Joint Systems Manufacturing Center (JSMC) - Lima Facility Location: Lima, OH Facility Type (GOGO, GOCO, COCO): GOCO						
A. Construction Cost	-	-	-	-	-	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Initial/Final Project Award: Construction Complete: Equipment Installation Complete: Prove Out Begins: Prove Out Complete:						
B. Equipment Cost	-	-	-	-	-							
C. Equipment Installation Cost	-	-	-	-	-							
D. Contractor Support Cost	-	-	0.976	-	0.976							
E. Corps of Engineers Support Cost	-	-	-	-	-							
F. Other In-House Support Cost	-	-	-	-	-							
G. Total Facility Project Cost	-	-	-	-	-							
H. Other Costs	-	-	-	-	-							
Total Project Cost	-	-	0.976	-	0.976	Related Projects						
						Project Number	Title	FY & Appn	Value (\$ M)	Facing	Start Date	Compl Date

Narrative Explanation:
 FY 2024 Base procurement dollars estimated in the amount of \$0.976 million support the project of taking the existing manual paper final inspection processes throughout the Joint Systems Manufacturing Center (JSMC) and transform electronically recorded information into one (1) central software. This migration from manual processes to electronically recorded processes with a final inspection is a planned reduction of 3-4% of standard operating efficiency. The project will allow for in-process asset tracking to improve quality and accountability which will modernize the facilities flexibility and capability for future Army plans.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: PB 2024 Army **Date:** March 2023

Appropriation / Budget Activity / Budget Sub Activity: 2033A / 02 / 30 **P-1 Line Item Number / Title:** 3270GC0050 / Production Base Support (WOCV-WTCV)

Project Title: Level/Alignment of Hull Machines (HM) HM0035 & HM0036 **Project Number:** JSMC037 **Project Category:**

End Item Supported Model: Abrams **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	Facility Name: Joint Systems Manufacturing Center (JSMC) - Lima Facility Location: Lima, OH Facility Type (GOGO, GOCO, COCO): GOCO						
A. Construction Cost	-	-	-	-	-	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Initial/Final Project Award: Construction Complete: Equipment Installation Complete: Prove Out Begins: Prove Out Complete:						
B. Equipment Cost	-	-	0.700	-	0.700							
C. Equipment Installation Cost	-	-	0.277	-	0.277							
D. Contractor Support Cost	-	-	-	-	-							
E. Corps of Engineers Support Cost	-	-	-	-	-							
F. Other In-House Support Cost	-	-	-	-	-							
G. Total Facility Project Cost	-	-	-	-	-							
H. Other Costs	-	-	-	-	-							
Total Project Cost	-	-	0.977	-	0.977							
											Related Projects	
						Project Number	Title	FY & Appn	Value <i>(\$ M)</i>	Facing	Start Date	Compl Date

Narrative Explanation:
 FY 2024 Base procurement dollars estimated in the amount of \$0.997 million support the level and alignment of hull machines (HM) #0035 and #0036 that are a part of the heavy machining line (HML) and their transport system located at the Joint Systems Manufacturing Center (JSMC) - Lima, OH. This is repeated every two years to maintain the accuracy of the machine outputs. The equipment wear will start to build compounding errors in the bearing races and machined surfaces and those errors will be reflected in the quality of the machining work that the equipment can complete. This work will keep the machined surfaces square and true which allows for production quality and reduced potential downtime.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: PB 2024 Army **Date:** March 2023

Appropriation / Budget Activity / Budget Sub Activity: 2033A / 02 / 30 **P-1 Line Item Number / Title:** 3270GC0050 / Production Base Support (WOCV-WTCV)

Project Title: Thick Plate Machining Line Equipment **Project Number:** JMTC002 **Project Category:**

End Item Supported Model: AMPV, SPHS, MPF, Abrams **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	Facility Name: Rock Island Arsenal - Joint Manufacturing and Technology Center (RIA-JTMC) Facility Location: Rock Island, IL Facility Type (GOGO, GOCO, COCO): GOGO						
A. Construction Cost	-	-	-	-	-	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Initial/Final Project Award: Construction Complete: Equipment Installation Complete: Prove Out Begins: Prove Out Complete:						
B. Equipment Cost	8.215	-	-	-	-							
C. Equipment Installation Cost	0.295	-	-	-	-							
D. Contractor Support Cost	-	-	-	-	-							
E. Corps of Engineers Support Cost	-	-	-	-	-							
F. Other In-House Support Cost	-	-	-	-	-							
G. Total Facility Project Cost	-	-	-	-	-							
H. Other Costs	1.659	-	-	-	-							
Total Project Cost	10.169	-	-	-	-	Related Projects						
						Project Number	Title	FY & Appn	Value (\$ M)	Facing	Start Date	Compl Date

Narrative Explanation:
There is no FY 2024 budget request for this project.

FY 2022 Base procurement dollars in the amount of \$10.169 million support the procurement of equipment required for increasing the capacity and capability of the thick aluminum armor plate machining line at Rock Island Arsenal Joint Manufacturing and Technology Center, as well as, conduct Industrial Base studies on Organic and Commercial support to the Defense Industrial base. Machined thick plate aluminum vehicle components minimizes the dependence on welding and forgings, improving quality and decreasing lead times. This processing technology will reduce the number of welds to minimize issues associated with weld quality and reduce the propensity for shock induced weld rupture, which addresses the Armored Multi-Purpose Vehicle (AMPV) Capability Development Document (CDD) requirements for System Survivability and Force Protection. In addition, unitized structure will address "idler cracking" observed during AMPV mobility testing. Decreases in weld defects and distortions in hull structure will minimize rework and production delays. 14 AMPV components have been prototyped and are ready to be manufactured using this new production capability. Equipment includes, but is not limited to, a second roughing station, a second shuttle carriage and finishing station, and will support the automated fabrication of large machined components for the production of Army vehicles.

- Equipment cost details:
- 1) Second Roughing Station: This would increase the capacity of the line and remove a single point issue with the robotic machining.
 - 2) Second Shuttle Carriage with additional wait stations: This would allow more flexibility in the movement of parts on the line as well as allow longer periods of un-manned operation by allowing more stations to be prepared ahead.
 - 3) Second Finishing Station: This would increase the throughput of the line and further extend unmanned operation time.
 - 4) Thick Plate Machining Ancillary Equipment: Fixture manufacturing capability and refined fixtures to support the milling operations.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: PB 2024 Army **Date:** March 2023

Appropriation / Budget Activity / Budget Sub Activity: 2033A / 02 / 30 **P-1 Line Item Number / Title:** 3270GC0050 / Production Base Support (WOCV-WTCV)

Project Title: Tool Room Modernization **Project Number:** JMTC003 **Project Category:**

End Item Supported Model: AMPV, SPHS, MPF, Abrams **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	Facility Name: Rock Island Arsenal - Joint Manufacturing and Technology Center (RIA-JTMC) Facility Location: Rock Island, IL Facility Type (GOGO, GOCO, COCO): GOGO						
A. Construction Cost	-	-	-	-	-	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Initial/Final Project Award: Construction Complete: Equipment Installation Complete: Prove Out Begins: Prove Out Complete:						
B. Equipment Cost	0.838	-	-	-	-							
C. Equipment Installation Cost	0.040	-	-	-	-							
D. Contractor Support Cost	-	-	-	-	-							
E. Corps of Engineers Support Cost	-	-	-	-	-							
F. Other In-House Support Cost	0.060	-	-	-	-							
G. Total Facility Project Cost	-	-	-	-	-							
H. Other Costs	-	-	-	-	-							
Total Project Cost	0.938	-	-	-	-	Related Projects						
						Project Number	Title	FY & Appn	Value (\$ M)	Facing	Start Date	Compl Date

Narrative Explanation:
 There is no FY 2024 budget request for this project.

FY 2022 Base procurement dollars in the amount of \$.938 million support the procurement of equipment required for increasing the capacity and precision of the tool room at Rock Island Arsenal Joint Manufacturing and Technology Center (JMTC). Equipment includes, but is not limited to, several new small machines (grinders, measuring equipment, lathes, mills) to enable fabrication of tools and fixtures for use on all JMTC programs to include the thick plate milling line. Project enables fabrication of tools and fixtures more quickly and with higher precision.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: PB 2024 Army **Date:** March 2023

Appropriation / Budget Activity / Budget Sub Activity: 2033A / 02 / 30 **P-1 Line Item Number / Title:** 3270GC0050 / Production Base Support (WOCV-WTCV)

Project Title: CNC Cutting Table and Spreader **Project Number:** JMTC004 **Project Category:**

End Item Supported Model: AMPV, SPHS, MPF, Abrams **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	Facility Name: Rock Island Arsenal - Joint Manufacturing and Technology Center (RIA-JTMC) Facility Location: Rock Island, IL Facility Type (GOGO, GOCO, COCO): GOGO						
A. Construction Cost	-	-	-	-	-	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Initial/Final Project Award: Construction Complete: Equipment Installation Complete: Prove Out Begins: Prove Out Complete:						
B. Equipment Cost	0.375	-	-	-	-							
C. Equipment Installation Cost	-	-	-	-	-							
D. Contractor Support Cost	-	-	-	-	-							
E. Corps of Engineers Support Cost	-	-	-	-	-							
F. Other In-House Support Cost	-	-	-	-	-							
G. Total Facility Project Cost	-	-	-	-	-							
H. Other Costs	-	-	-	-	-							
Total Project Cost	0.375	-	-	-	-	Related Projects						
						Project Number	Title	FY & Appn	Value (\$ M)	Facing	Start Date	Compl Date

Narrative Explanation:
 There is no FY 2024 budget request for this project.

FY 2022 Base procurement dollars in the the amount of \$0.375 million support the procurement of equipment required for increasing the capacity and precision of pliable material and composite cutting at Rock Island Arsenal Joint Manufacturing and Technology Center. Equipment is includes Computer Numerical Control (CNC) cutting table (also known as a burner table) and spreader. Pliable material and composites are cut manually and are labor intensive with low precision. This investment provides automated cutting with speed, precision, and increased capacity.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: PB 2024 Army **Date:** March 2023

Appropriation / Budget Activity / Budget Sub Activity: 2033A / 02 / 30 **P-1 Line Item Number / Title:** 3270GC0050 / Production Base Support (WOCV-WTCV)

Project Title: Bridge Mill (Thick plate machining line) **Project Number:** JMTC005 **Project Category:**

End Item Supported Model: AMPV, SPHS, MPF, Abrams **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	Facility Name: Rock Island Arsenal - Joint Manufacturing and Technology Center (RIA-JTMC) Facility Location: Rock Island, IL Facility Type (GOGO, GOCO, COCO): GOGO																		
A. Construction Cost	-	-	-	-	-	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Initial/Final Project Award: Construction Complete: Equipment Installation Complete: Prove Out Begins: Prove Out Complete:																		
B. Equipment Cost	3.300	-	-	-	-																			
C. Equipment Installation Cost	0.200	-	-	-	-																			
D. Contractor Support Cost	-	-	-	-	-																			
E. Corps of Engineers Support Cost	-	-	-	-	-																			
F. Other In-House Support Cost	-	-	-	-	-																			
G. Total Facility Project Cost	-	-	-	-	-																			
H. Other Costs	-	-	-	-	-																			
Total Project Cost	3.500	-	-	-	-	Related Projects																		
						<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 10%;">Project Number</th> <th style="width: 30%;">Title</th> <th style="width: 10%;">FY & Appn</th> <th style="width: 10%;">Value (\$ M)</th> <th style="width: 10%;">Facing</th> <th style="width: 10%;">Start Date</th> <th style="width: 10%;">Compl Date</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>					Project Number	Title	FY & Appn	Value (\$ M)	Facing	Start Date	Compl Date							
Project Number	Title	FY & Appn	Value (\$ M)	Facing	Start Date	Compl Date																		

Narrative Explanation:
 There is no FY 2024 budget request for this project.

FY 2022 Base procurement dollars in the amount of \$3.500 million support the procurement of equipment required for increasing the capacity and capability of the thick aluminum armor plate machining line at Rock Island Arsenal Joint Manufacturing and Technology Center. Equipment includes, but is not limited to, a bridge mill to allow machining of larger parts and steel components to support the automated fabrication of large machined components for the production of Army vehicles. This investment will increase the capability by allowing machining of larger parts and allow machining of steel components and the fixtures from the line would increase capacity since it would be able to be used as a second finishing station if workload required.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: PB 2024 Army **Date:** March 2023

Appropriation / Budget Activity / Budget Sub Activity: 2033A / 02 / 30 **P-1 Line Item Number / Title:**
3270GC0050 / Production Base Support (WOCV-WTCV)

Project Title: JMTC Miscellaneous Small Projects **Project Number:** JMTC006 **Project Category:**

End Item Supported Model: Abrams **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	Facility Name: Rock Island Arsenal - Joint Manufacturing and Technology Center (RIA-JTMC) Facility Location: Rock Island, IL Facility Type (GOGO, GOCO, COCO): GOGO						
A. Construction Cost	-	-	-	-	-	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Initial/Final Project Award: Construction Complete: Equipment Installation Complete: Prove Out Begins: Prove Out Complete:						
B. Equipment Cost	-	-	-	-	-							
C. Equipment Installation Cost	-	-	-	-	-							
D. Contractor Support Cost	-	-	-	-	-							
E. Corps of Engineers Support Cost	-	-	-	-	-							
F. Other In-House Support Cost	-	-	-	-	-							
G. Total Facility Project Cost	-	-	-	-	-							
H. Other Costs	-	-	1.750	-	1.750							
Total Project Cost	-	-	1.750	-	1.750	Related Projects						
						Project Number	Title	FY & Appn	Value (\$ M)	Facing	Start Date	Compl Date

Narrative Explanation:
 FY 2024 Base procurement dollars in the amount of \$1.750 million support the Abrams Tank Production Process and Abrams Industrial Base by focusing on maintaining, improving, optimizing, and modernizing the manufacturing facilities located at Rock Island Arsenal Joint Manufacturing and Technology Center (RIA-JMTC) - Rock Island, IL.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: PB 2024 Army **Date:** March 2023

Appropriation / Budget Activity / Budget Sub Activity: 2033A / 02 / 30 **P-1 Line Item Number / Title:** 3270GC0050 / Production Base Support (WOCV-WTCV)

Project Title: Flexible Plating Line **Project Number:** JMTC007 **Project Category:**

End Item Supported Model: Abrams **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	Facility Name: Rock Island Arsenal - Joint Manufacturing and Technology Center (RIA-JTMC) Facility Location: Rock Island, IL Facility Type (GOGO, GOCO, COCO): GOGO						
A. Construction Cost	-	-	-	-	-	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Initial/Final Project Award: Construction Complete: Equipment Installation Complete: Prove Out Begins: Prove Out Complete:	Related Projects					
B. Equipment Cost	-	-	1.236	-	1.236							
C. Equipment Installation Cost	-	-	-	-	-							
D. Contractor Support Cost	-	-	-	-	-							
E. Corps of Engineers Support Cost	-	-	-	-	-							
F. Other In-House Support Cost	-	-	-	-	-							
G. Total Facility Project Cost	-	-	-	-	-							
H. Other Costs	-	-	-	-	-							
Total Project Cost	-	-	1.236	-	1.236							
						Project Number	Title	FY & Appn	Value (\$ M)	Facing	Start Date	Compl Date

Narrative Explanation:
 FY 2024 Base procurement dollars in the amount of \$1.236 million to procure and install a flexible electroless nickel plating line to support production located at Rock Island Arsenal Joint Manufacturing and Technology Center (RIA-JMTC) - Rock Island, IL. This project re-introduces Nickel Plating capability to JMTC. Nickel plating is used to provide corrosion and wear surface protection for several weapons system components produced by JMTC. This project will replace existing, non-industry standard sand handling system with separate systems for differing sand and product types. This will enable best possible quality for both steel and aluminum cast weapon system parts. Mold shake-out will be enhanced through the replacement of an obsolete mold handling excavator ensuring a safe excavation process. The overall impact is an increase in cast part quality, reduction in environmental and personal safety impacts, developing and installing a new flexible plating line capable of electroless nickel coating and rapid switch to other new coatings. This will reduce lead time and supply chain risk on gun system parts by creating a new organic capability for current and future coatings and supports new and obsolescent weapon system production.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: PB 2024 Army **Date:** March 2023

Appropriation / Budget Activity / Budget Sub Activity: 2033A / 02 / 30 **P-1 Line Item Number / Title:** 3270GC0050 / Production Base Support (WOCV-WTCV)

Project Title: Sand Handling System **Project Number:** JMTC008 **Project Category:**

End Item Supported Model: Abrams **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	Facility Name: Rock Island Arsenal - Joint Manufacturing and Technology Center (RIA-JTMC) Facility Location: Rock Island, IL Facility Type (GOGO, GOCO, COCO): GOGO						
A. Construction Cost	-	-	-	-	-	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Initial/Final Project Award: Construction Complete: Equipment Installation Complete: Prove Out Begins: Prove Out Complete:	Related Projects					
B. Equipment Cost	-	-	1.236	-	1.236							
C. Equipment Installation Cost	-	-	-	-	-							
D. Contractor Support Cost	-	-	-	-	-							
E. Corps of Engineers Support Cost	-	-	-	-	-							
F. Other In-House Support Cost	-	-	-	-	-							
G. Total Facility Project Cost	-	-	-	-	-							
H. Other Costs	-	-	-	-	-							
Total Project Cost	-	-	1.236	-	1.236							
						Project Number	Title	FY & Appn	Value (\$ M)	Facing	Start Date	Compl Date

Narrative Explanation:
 FY 2024 Base procurement dollars in the amount of \$1.236 million to procure and install a sand handling system to support production located at Rock Island Arsenal Joint Manufacturing and Technology Center (RIA-JMTC) - Rock Island, IL. This project will replace existing, non-industry standard sand handling systems with separate systems for differing sand and product types. This will enable the best possible quality for both steel and aluminum cast weapon system parts. Mold shake-out will be enhanced through the replacement of an obsolete mold handling excavator ensuring a safe excavation process. The overall impact is an increase in cast part quality and reduction in environmental and personal safety impacts.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: PB 2024 Army **Date:** March 2023

Appropriation / Budget Activity / Budget Sub Activity: 2033A / 02 / 30 **P-1 Line Item Number / Title:** 3270GC0050 / Production Base Support (WOCV-WTCV)

Project Title: Upgrade Existing Paint Booths **Project Number:** JMTC009 **Project Category:**

End Item Supported Model: Abrams **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	Facility Name: Rock Island Arsenal - Joint Manufacturing and Technology Center (RIA-JTMC) Facility Location: Rock Island, IL Facility Type (GOGO, GOCO, COCO): GOGO						
A. Construction Cost	-	-	-	-	-	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Initial/Final Project Award: Construction Complete: Equipment Installation Complete: Prove Out Begins: Prove Out Complete:	Related Projects					
B. Equipment Cost	-	-	2.700	-	2.700							
C. Equipment Installation Cost	-	-	1.800	-	1.800							
D. Contractor Support Cost	-	-	-	-	-							
E. Corps of Engineers Support Cost	-	-	-	-	-							
F. Other In-House Support Cost	-	-	-	-	-							
G. Total Facility Project Cost	-	-	-	-	-							
H. Other Costs	-	-	-	-	-							
Total Project Cost	-	-	4.500	-	4.500							
						Project Number	Title	FY & Appn	Value (\$ M)	Facing	Start Date	Compl Date

Narrative Explanation:
 FY 2024 Base procurement dollars in the amount of \$4.500 million is to convert two (2) existing manual paint lines and two (2) drive-in booths through the integration of a flexible robotic paint system located at Rock Island Arsenal Joint Manufacturing and Technology Center (RIA-JMTC) - Rock Island, IL. This will automate a manufacturing process that nearly 90% of all arsenals manufacturing components utilize. Applying modern robotics and imaging systems to existing painting and post processing infrastructure will reduce labor costs, increase safety of workers, and improve quality through consistency. Robotic paint automation can reduce raw material consumption by up to 30% due to improved paint application accuracy and limiting waste through unnecessary overspray. Operationalizing robotic painting removes the hazards of volatile organic compound exposure for employees that are currently mitigated through cumbersome and bulky personal protective equipment. Organically manufactured components will gain schedule reliability from an automated painting process achieved through an increased throughput production capacity. Flexibility to efficiently execute to a variable quantity volume, with a high mix of complexity, will enable the painting of large weapon systems as well as mid to small size subcomponents of systems.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: PB 2024 Army **Date:** March 2023

Appropriation / Budget Activity / Budget Sub Activity: 2033A / 02 / 30 **P-1 Line Item Number / Title:** 3270GC0050 / Production Base Support (WOCV-WTCV)

Project Title: Sand Printing Package **Project Number:** JMTC010 **Project Category:**

End Item Supported Model: Abrams **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	Facility Name: Rock Island Arsenal - Joint Manufacturing and Technology Center (RIA-JTMC) Facility Location: Rock Island, IL Facility Type (GOGO, GOCO, COCO): GOGO						
A. Construction Cost	-	-	-	-	-	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Initial/Final Project Award: Construction Complete: Equipment Installation Complete: Prove Out Begins: Prove Out Complete:						
B. Equipment Cost	-	-	1.500	-	1.500							
C. Equipment Installation Cost	-	-	0.500	-	0.500							
D. Contractor Support Cost	-	-	-	-	-							
E. Corps of Engineers Support Cost	-	-	-	-	-							
F. Other In-House Support Cost	-	-	-	-	-							
G. Total Facility Project Cost	-	-	-	-	-							
H. Other Costs	-	-	-	-	-							
Total Project Cost	-	-	2.000	-	2.000	Related Projects						
						Project Number	Title	FY & Appn	Value (\$ M)	Facing	Start Date	Compl Date

Narrative Explanation:
 FY 2024 Base procurement dollars in the amount of \$2.000 million support the procurement and installation of a sand printing package located at Rock Island Arsenal Joint Manufacturing and Technology Center (RIA-JMTC) - Rock Island, IL. This continues the sand-casting process transformation from legacy molding techniques to a high-speed prototype and production methodology of printed sand cores and molds. This migration from manually producing wood patterns and core boxes to model based tooling development will significantly lessen the time for producing production castings and is immediately applicable to current Main Battle Tank System (MBTS) cast parts. The project incorporates robotic sand milling to produce mold cavities in an effective and efficient manner. Hard tooling will no longer be a prerequisite for creating low to medium volumes of mold cavities, reducing lead times and startup costs while improving product quality through rapid, iterative mold design.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: PB 2024 Army **Date:** March 2023

Appropriation / Budget Activity / Budget Sub Activity: 2033A / 02 / 30 **P-1 Line Item Number / Title:** 3270GC0050 / Production Base Support (WOCV-WTCV)

Project Title: Large, Multi-Axis Machining **Project Number:** JMTC011 **Project Category:**

End Item Supported Model: Abrams **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	Facility Name: Rock Island Arsenal - Joint Manufacturing and Technology Center (RIA-JTMC) Facility Location: Rock Island, IL Facility Type (GOGO, GOCO, COCO): GOGO																									
A. Construction Cost	-	-	-	-	-	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Initial/Final Project Award: Construction Complete: Equipment Installation Complete: Prove Out Begins: Prove Out Complete:	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th align="center" colspan="6">Related Projects</th> </tr> <tr> <th align="center">Project Number</th> <th align="center">Title</th> <th align="center">FY & Appn</th> <th align="center">Value <i>(\$ M)</i></th> <th align="center">Facing</th> <th align="center">Start Date</th> <th align="center">Compl Date</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>					Related Projects						Project Number	Title	FY & Appn	Value <i>(\$ M)</i>	Facing	Start Date	Compl Date							
Related Projects																															
Project Number	Title	FY & Appn	Value <i>(\$ M)</i>	Facing	Start Date							Compl Date																			
B. Equipment Cost	-	-	7.500	-	7.500																										
C. Equipment Installation Cost	-	-	-	-	-																										
D. Contractor Support Cost	-	-	-	-	-																										
E. Corps of Engineers Support Cost	-	-	-	-	-																										
F. Other In-House Support Cost	-	-	-	-	-																										
G. Total Facility Project Cost	-	-	-	-	-																										
H. Other Costs	-	-	-	-	-																										
Total Project Cost	-	-	7.500	-	7.500																										

Narrative Explanation:
 FY 2024 Base procurement dollars in the amount of \$7.500 million to support the procurement and installation of two (2) different large multi-axis machining systems and supporting equipment located at Rock Island Arsenal Joint Manufacturing and Technology Center (RIA-JMTC) - Rock Island, IL. These automated machining systems will be used to make precise and complex geometry cutting of metal sheets, plates, and blocks to support production of Cannon systems. Production quality and delivery will be modernized through improved repeatability, automation, more efficient cutting, and greater machine uptime. This project replaces outdated and unreliable existing machines with modern machines capable of producing large, machined armor components; reducing setup and run times, and enabling complex machining on next generation weapon systems.

This project is a new start in FY 2024.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: PB 2024 Army **Date:** March 2023

Appropriation / Budget Activity / Budget Sub Activity: 2033A / 02 / 30 **P-1 Line Item Number / Title:** 3270GC0050 / Production Base Support (WOCV-WTCV)

Project Title: ATEC Facilities **Project Number:** ATEC **Project Category:**

End Item Supported Model: **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	Facility Name: Army Test and Evaluation Command (ATEC) Facilities Facility Location: Various Facility Type (GOGO, GOCO, COCO):						
A. Construction Cost	-	-	-	-	-	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Initial/Final Project Award: Construction Complete: Equipment Installation Complete: Prove Out Begins: Prove Out Complete:						
B. Equipment Cost	-	-	-	-	-							
C. Equipment Installation Cost	-	-	-	-	-							
D. Contractor Support Cost	-	-	-	-	-							
E. Corps of Engineers Support Cost	-	-	-	-	-							
F. Other In-House Support Cost	-	-	-	-	-							
G. Total Facility Project Cost	-	-	-	-	-							
H. Other Costs	3.668	3.681	3.816	-	3.816							
Total Project Cost	3.668	3.681	3.816	-	3.816							
						Related Projects						
						Project Number	Title	FY & Appn	Value <i>(\$ M)</i>	Facing	Start Date	Compl Date

Narrative Explanation:
 FY 2024 Base procurement dollars in the amount of \$3.816 million support the Army Test and Evaluation Command priorities at the following locations:

- Aberdeen Test Center (ATC) will continue to modernize fire control instrumentation required to assess weapon system fire control performance on a wide range of test items. Aberdeen Test Center will continue replacing and upgrading weapon, sight, and target scoring high-definition video cameras, recorders, digital video processing systems, fiber optic converters, and telemetry systems. Replacement equipment is scheduled to address obsolescence issues, software compatibility gaps, and deterioration of existing hardware while ensuring test equipment maintains pace with technological advances of test items to preclude lack of test support. Aberdeen Test Center will also procure new instrumentation that will allow Electromagnetic Interference (EMI) testing of current and future military platforms, including autonomous vehicles.
- White Sands Test Center (WSTC) will continue to maintain and upgrade existing equipment and instrumentation for the developing and evolving White Sands Missile Range (WSMR) directed energy - High-Power Microwave (HPM), Electromagnetic Pulse (EMP) and lightning effects test simulators. These items include sensors, oscilloscopes, fiber optic links, vacuum systems, cryogenic superconducting magnets, waveguides, antennas, cathodes, insulators, and various cabling and subassemblies. These efforts will help White Sands Test Center meet regulatory, customer, and/or evolving mission requirements.
- Yuma Test Center (YTC) will acquire upgraded sensors, sensor positioning equipment, control hardware, signal conditioners, and other data acquisition equipment and software to modernize and improve accuracy and efficiency of ballistics data acquisition.