Exhibit R-2, RDT&E Budget Item Justification: PB 2020 Army

R-1 Program Element (Number/Name)

Date: March 2019

2040: Research, Development, Test & Evaluation, Army I BA 5: System

PE 0604854A I Artillery Systems - EMD

Development & Demonstration (SDD)

Appropriation/Budget Activity

COST (\$ in Millions)	Prior Years	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024	Cost To Complete	Total Cost
Total Program Element	-	3.892	1.779	15.832	-	15.832	7.626	7.977	2.766	4.875	Continuing	Continuing
509: LIGHTWEIGHT 155M HOWITZER	-	3.892	1.779	7.632	-	7.632	7.626	7.977	2.766	4.875	0.000	36.547
HB6: Mobile Howitzer	-	0.000	0.000	8.200	-	8.200	0.000	0.000	0.000	0.000	Continuing	Continuing

Note

HB6 is a new start for FY2020.

A. Mission Description and Budget Item Justification

This program element encompasses engineering and manufacturing development for artillery weapons systems.

Project 509 supports the Lightweight 155mm Howitzer (LW155), also known as the M777A2, which is a Joint Service program between the US Marine Corps (USMC) and US Army which provides direct, reinforcing, general support fires to maneuver forces and direct support artillery. The LW155 was first introduced into the USMC in April 2005 and the Marines have fielded the howitzer to all active units. The Army fielded the howitzer to its Stryker Brigade Combat teams (SBCT), Fires Brigades and National Guard. Fielding of the Infantry Brigade Combat Teams (IBCT) commenced in FY2014 and will continue through FY2018. The LW155 fires unassisted projectiles to a range of 30 kilometers (km) and assisted projectiles to 40km. It is a successful joint service program between the USMC and US Army working together to develop, produce, field, and sustain the howitzer. The howitzer will be going through obsolescent replacement of electronic components in its digital fire control system, since it has been in the field for more than ten years.

Current development efforts are focused on extending the range of the LW155 to reduce the threat of being out ranged by potential adversaries and meeting the range key performance parameter objective distance (greater than 40km) as stated in the Joint US Army, USMC Operational Requirements Document (JORD) for Advanced Towed Cannon System, but deferred during Engineering Manufacturing and Development due to technology maturity, cost and schedule. The USMC and US Army are leveraging technology being developed as part of the Extended Range Cannon Artillery (ERCA) program by the US Army. The ERCA program is a suite of technologies, cannon, ammunition and fire control, to increase the range of cannon artillery to exceed peer competitors range (greater than 70km). An operational assessment of the M777 Extended Range (M777ER) howitzer will be conducted at the end of FY2020 to assess the performance of best available projectiles and objective hardware of M777ER howitzer.

Project HB6 is a new start effort for FY2020 which supports the mobile howitzer program. The Mobile 155mm Howitzer is a Self-Propelled, 155mm Wheeled Howitzer that provides lethal, proactive counter-fire essential for the survivability of the maneuver formations and other close support fires as required. The Mobile Howitzer improves the Field Artillery Battalion's ability to maintain pace with its supporting maneuver formations and survive against responsive, counter-fire from near-peer threats with rapid displacement and emplacement times. The mobile howitzer will improve tactical mobility and system survivability compared to existing towed howitzer systems. Development efforts, prototyping and evaluations will focus on attributes such as improved emplacement and displacement times, driving speed, and crew protection capabilities, all without sacrificing lethality versus existing towed howitzer systems. Program activities in FY2020 will be focused on assessing current

PE 0604854A: Artillery Systems - EMD

Page 1 of 14 R-1 Line #141

Exhibit R-2, RDT&E Budget Item Justification: PB 2020 Army Date: March 2019

Appropriation/Budget Activity

R-1 Program Element (Number/Name)

2040: Research, Development, Test & Evaluation, Army I BA 5: System Development & Demonstration (SDD)

PE 0604854A I Artillery Systems - EMD

prototype mobile howitzers to increase maneuverability when engaging targets during emergency fire missions and increase Soldier survivability during counter-fire movements. Systems will be assessed in an operational environment.

B. Program Change Summary (\$ in Millions)	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total
Previous President's Budget	1.972	1.781	5.985	-	5.985
Current President's Budget	3.892	1.779	15.832	-	15.832
Total Adjustments	1.920	-0.002	9.847	-	9.847
 Congressional General Reductions 	-0.002	-0.002			
 Congressional Directed Reductions 	-	-			
 Congressional Rescissions 	-	-			
 Congressional Adds 	2.000	-			
 Congressional Directed Transfers 	-	-			
 Reprogrammings 	-	-			
SBIR/STTR Transfer	-0.078	-			
 Adjustments to Budget Years 	-	-	9.847	-	9.847

Change Summary Explanation

FY 2020 increase funds the operational assessment of the M777 Extended Range (M777ER) howitzer for the Army's modernization Long Range Precision Fires priority in support of the National Defense Strategy. Project HB6 is a new start in FY 2020 that focuses on evaluating mobile howitzers.

PE 0604854A: Artillery Systems - EMD

Army

UNCLASSIFIED
Page 2 of 14

Exhibit R-2A, RDT&E Project Ju		Date: March 2019											
Appropriation/Budget Activity 2040 / 5					_	am Elemen 54A <i>I Artiller</i>	•	,		Number/Name) HTWEIGHT 155M HOWITZER			
COST (\$ in Millions) Prior Years FY 2018 FY 2020 Base						FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024	Cost To Complete	Total Cost	
509: LIGHTWEIGHT 155M HOWITZER	-	3.892	1.779	7.632	-	7.632	7.626	7.977	2.766	4.875	0.000	36.547	
Quantity of RDT&E Articles	-	-	-	-	-	-							

Note

Army

The Lightweight 155mm (LW155) Towed Howitzer is a jointly managed program with the Marine Corps.

A. Mission Description and Budget Item Justification

The Lightweight 155mm Howitzer (LW155), also known as the M777A2, is a Joint Service program between the US Marine Corps (USMC) and US Army which provides direct, reinforcing, general support fires to maneuver forces and direct support artillery. The LW155 was first introduced into the USMC in April 2005 and the Marines have fielded the howitzer to all active units. The Army fielded the howitzer to its Stryker Brigade Combat teams (SBCT), Fires Brigades and National Guard. Fielding of the Infantry Brigade Combat Teams (IBCT) commenced in FY2014 and will continue through FY2018. The LW155 saw extensive action in Afghanistan, receiving high marks for its performance. It replaces all howitzers in all USMC missions and replaces the M198 howitzer as the general support artillery for light forces in the Army. The LW155 fires unassisted projectiles to a range of 30 kilometers (km) and assisted projectiles to 40km. The addition of the digital fire control system enables the weapon to program and fire the improved Excalibur precision-guided munitions to ranges in excess of 40km with better than 10-meter Circular Error Probable (CEP) accuracy. The LW155 is the first ground combat system whose major structures are made of high strength titanium alloy and the system makes extensive use of hydraulics to operate the breech, load tray, recoil and wheel arms. It is a successful joint service program between the USMC and US Army working together to develop, produce, field, and sustain the howitzer. The howitzer will be going through obsolescent replacement of electronic components in its digital fire control system, since it has been in the field for more than ten years.

Production and fielding of the LW155 concluded and entered into the Sustainment Life Cycle Phase. Current development efforts are focused on extending the range of the LW155 to reduce the threat of being out ranged by potential adversaries and meeting the range key performance parameter objective distance (greater than 40km) as stated in the Joint US Army, USMC Operational Requirements Document (JORD) for Advanced Towed Cannon System, but deferred during Engineering Manufacturing and Development due to technology maturity, cost and schedule. The USMC and US Army are leveraging technology being developed as part of the Extended Range Cannon Artillery (ERCA) program by the US Army. The ERCA program is a suite of technologies, cannon, ammunition and fire control, to increase the range of cannon artillery to exceed peer competitors range (greater than 70km). An operational assessment of the M777 Extended Range (M777ER) howitzer will be conducted at the end of FY2020 to assess the performance of best available projectiles and objective hardware of M777ER howitzer.

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2018	FY 2019	FY 2020
Title: Management Services	0.204	0.204	-
Description: Funding supports management services within the Program Management Office, Towed Artillery Systems			
FY 2019 Plans:			

PE 0604854A: Artillery Systems - EMD

Page 3 of 14

	UNCLASSIFIED			
Exhibit R-2A, RDT&E Project Justification: PB 2020 Army		Date:	March 2019	
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604854A / Artillery Systems - EMD	Project (Number 509 / LIGHTWEIC		WITZER
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2018	FY 2019	FY 2020
conduct modeling, simulation, analysis and trade studies to cl	latabase to support future technology demonstrations focused	on		
FY 2019 to FY 2020 Increase/Decrease Statement: Decrease of \$0.204M from FY19 to FY20 have been accounted.	ed for in the conversion of reimbursable to direct manpower.			
Title: Product Development		3.688	1.575	5.63
Description: Funds engineering support from the Armaments	Research Development and Engineering Center			
	lysis to characterize the objective M777A2 extended range des tive hardware fabrication of cannon integration components as witzer platform.			
	onents and recoil system components into the M777 Extended Inding will support Digital Fire Control System software update the nding NATO Ballistic Kernel integration.			
FY 2019 to FY 2020 Increase/Decrease Statement: Increase of \$4.055M from FY19 to FY20 accounts for the upd	ated prototype Digital Fire Control System software.			
Title: Opertional Assessment		-	-	2.00
Description: Funding will support operational assessment of	M777 Extended Range Howitzer in a controlled test environme	nt.		
• • • • • • • • • • • • • • • • • • • •	ER scheduled for 4th Quarter FY20. Operational Assessment entative M777ER hardware and measure range of best availab	le		
FY 2019 to FY 2020 Increase/Decrease Statement: Increase of \$2.000M from FY19 to FY20 accounts for the FY2	20 4th Quarter Operational Assessment of the M777ER howitze	r.		
	Accomplishments/Planned Programs Sub	totals 3.892	1.779	7.63

PE 0604854A: *Artillery Systems - EMD* Army

UNCLASSIFIED
Page 4 of 14

Exhibit R-2A, RDT&E Project Justification: PB 2020 Army		Date: March 2019
Appropriation/Budget Activity	R-1 Program Element (Number/Name)	Project (Number/Name)
2040 / 5	PE 0604854A I Artillery Systems - EMD	509 I LIGHTWEIGHT 155M HOWITZER
C. Other Program Funding Summary (\$ in Millions)		

			FY 2020	FY 2020	FY 2020					Cost To	
<u>Line Item</u>	FY 2018	FY 2019	Base	OCO	<u>Total</u>	FY 2021	FY 2022	FY 2023	FY 2024	Complete	Total Cost
 GZ1700: M777 Mods 	28.672	3.086	2.367	-	2.367	10.995	16.223	17.238	20.260	Continuing	Continuing

Remarks

Procurement funding supports active retrofits and hardware refresh for previously contracted Digital Fire Control System components, addressing obsolescence. FY2021-2024 funding procures chrome cannon tubes to address spiral wear and durability issues.

D. Acquisition Strategy

Production and fielding of the M777A2 has concluded and has now entered into the Sustainment Life Cycle Phase. Current RDTE efforts are focused on extending the range of the M777A2 to reduce the threat of being out ranged by potential adversaries and meeting the range key performance parameter objective distance (>40KM) as stated in the Joint US Army, USMC Operational Requirements Document (JORD) for Advanced Towed Cannon System, but deferred during Engineering Manufacturing and Development due to technology maturity, cost and schedule. The USMC and US Army are leveraging technology being developed as part of the Extended Range Cannon Artillery (ERCA) program by the US Army. The ERCA program is a suite of technologies, cannon, ammunition and fire control, to increase the range of cannon artillery to exceed peer competitors range (>70KM). An operational assessment of the M777 Extended Range howitzer will be conducted at the end of FY20 to support the decision point for procurement in support of an Urgent Materiel Release.

E. Performance Metrics

N/A

Army

PE 0604854A: Artillery Systems - EMD

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2020 Army

Date: March 2019

Appropriation/Budget Activity R-1 Program Element (Number/Name) Project (Number/Name)

2040 I 5 PE 0604854A I Artillery Systems - EMD 509 I LIGHTWEIGHT 155M HOWITZER

Management Servic	Management Services (\$ in Millions)			FY 2018		FY 2019		FY 2020 Base		FY 2020 OCO		FY 2020 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To	Total Cost	Target Value of Contract
Program Management	Sub Allot	Program Management Towed Artillery Systems : Picatinny Arsenal, NJ	0.590	0.204	Nov 2017	0.204	Nov 2018	-		-		-	Continuing	Continuing	Continuing
		Subtotal	0.590	0.204		0.204		-		-		-	Continuing	Continuing	N/A

Product Development (\$ in Millions)		FY 2018		FY 2019		FY 2020 Base		FY 2020 OCO		FY 2020 Total					
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To	Total Cost	Target Value of Contract
Engineering	MIPR	Armaments Research & Developmet Center : Picatinny Arsenal, NJ	5.188	1.768	Nov 2017	1.575	Nov 2018	5.632	Nov 2019	-		5.632	Continuing	Continuing	Continuing
Long Lead Prototypes	MIPR	Watervliet Arsenal : Watervliet, NY	-	1.920	Jun 2018	-		-		-		-	Continuing	Continuing	Continuing
		Subtotal	5.188	3.688		1.575		5.632		-		5.632	Continuing	Continuing	N/A

Remarks

FY 2020 increase funds the operational assessment of the M777 Extended Range (M777ER) howitzer for the Army's modernization Long Range Precision Fires.

Test and Evaluation (\$ in Millions)				FY 2018		FY 2019		FY 2020 Base		FY 2020 OCO		FY 2020 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To	Total Cost	Target Value of Contract
Operational Assessment	MIPR	Army Test & Evaluation Command : Yuma, AZ	-	-		-		2.000	Jul 2020	-		2.000	Continuing	Continuing	Continuing
	Subtotal -		-		-		2.000		-		2.000	Continuing	Continuing	N/A	

Remarks

Army

FY2020 increase funds test center costs in support of the Operational Assessment at Yuma Test Center.

PE 0604854A: Artillery Systems - EMD

UNCLASSIFIED
Page 6 of 14

Exhibit R-3, RDT&E Project Cost Analysis: PB 2020 Army										Date:	Date: March 2019			
Appropriation/Budget Activity 2040 / 5		, , ,						Number/Name) HTWEIGHT 155M HOWITZER						
	Prior Years	FY 2	018	FY 2	2019		2020 ase	1	2020 CO	FY 2020 Total	Cost To Complete	Total Cost	Target Value of Contract	
Project Cost Totals		1.779		7.632		-		7.632	Continuing	Continuing	N/A			

Remarks

PE 0604854A: *Artillery Systems - EMD* Army

Page 7 of 14

Exhibit R-4, RDT&E Schedule Profile: PB 2020 Army Date: March 2019

Appropriation/Budget Activity R-1 Program Element (Number/Name) Project (Number/Name)

PE 0604854A I Artillery Systems - EMD 509 I LIGHTWEIGHT 155M HOWITZER 2040 / 5

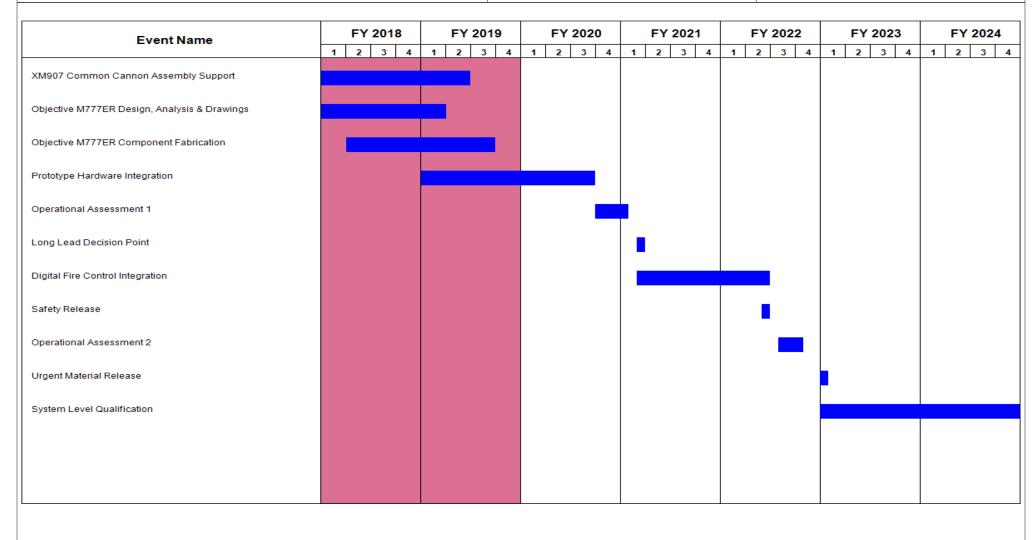


Exhibit R-4A, RDT&E Schedule Details: PB 2020 Army			Date: March 2019
Appropriation/Budget Activity	R-1 Program Element (Number/Name)	Project (N	umber/Name)
2040 / 5	PE 0604854A I Artillery Systems - EMD	509 <i>I LIGH</i>	TWEIGHT 155M HOWITZER

Schedule Details

	S	tart	E	nd
Events	Quarter	Year	Quarter	Year
XM907 Common Cannon Assembly Support	1	2015	2	2019
Objective M777ER Design, Analysis & Drawings	1	2015	1	2019
Objective M777ER Component Fabrication	2	2018	3	2019
Prototype Hardware Integration	1	2019	3	2020
Operational Assessment 1	4	2020	1	2021
Long Lead Decision Point	1	2021	1	2021
Digital Fire Control Integration	1	2021	2	2022
Safety Release	2	2022	2	2022
Operational Assessment 2	3	2022	4	2022
Urgent Material Release	1	2023	1	2023
System Level Qualification	1	2023	4	2024

Exhibit R-2A, RDT&E Project Ju	stification	PB 2020 A	rmy							Date: Marc	ch 2019		
Appropriation/Budget Activity 2040 / 5					_		t (Number/ y Systems		Number/Name) bile Howitzer				
COST (\$ in Millions)	Prior Years	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024	Cost To Complete	Total Cost	
HB6: Mobile Howitzer	-	0.000	0.000	8.200	-	8.200	0.000	0.000	0.000	0.000	Continuing	Continuing	
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-			

Note

Project is a New Start for FY 2020.

A. Mission Description and Budget Item Justification

Project HB6 is a new start effort for FY2020 which supports the mobile howitzer program. The Mobile 155mm Howitzer is a Self-Propelled, 155mm Wheeled Howitzer that provides lethal, proactive counter-fire essential for the survivability of the maneuver formations and other close support fires as required. The Mobile Howitzer improves the Field Artillery Battalion's ability to maintain pace with its supporting maneuver formations and survive against responsive, counter-fire from near-peer threats with rapid displacement and emplacement times. The mobile howitzer will improve tactical mobility and system survivability compared to existing towed howitzer systems. Development efforts, prototyping and evaluations will focus on attributes such as improved emplacement and displacement times, driving speed, and crew protection capabilities, all without sacrificing lethality versus existing towed howitzer systems. Program activities in FY2020 will be focused on assessing current prototype mobile howitzers to increase maneuverability when engaging targets during emergency fire missions and increase Soldier survivability during counter-fire movements. Systems will be assessed in an operational environment.

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2018	FY 2019	FY 2020
Title: Mobile Howitzer Analysis	-	-	3.100
Description: Conducts analysis of prototype and existing mobile howitzers.			
FY 2020 Plans: Funding will conduct analysis of prototype and existing mobile howitzers and evaluate systems based on mobility and survivability attributes. Suitable systems will be further assessed in an operational environment.			
FY 2019 to FY 2020 Increase/Decrease Statement: Project is a new start for FY 2020.			
Title: Safety Testing	-	-	4.100
FY 2020 Plans: Funding will support safety testing of mobile howitzer systems and prototypes to ensure they will be viable for assessment in an operational environment.			
FY 2019 to FY 2020 Increase/Decrease Statement: Project is a new start for FY 2020.			
Title: Operational Assessment	-	-	1.000

PE 0604854A: Artillery Systems - EMD

Exhibit R-2A, RDT&E Project Justification: PB 2020 Army			Date: March 2019
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604854A I Artillery Systems - EMD	Project (Nu HB6 / Mobi	umber/Name) ile Howitzer

Description: Funding will support the Operational Assessment of the prototype mobile howitzers. FY 2020 Plans: Funding will support the Operational Assessment of the prototype mobile howitzers scheduled for 4th Quarter FY20. Operational Assessment will evaluate survivability, mobility, and lethality of prototype mobile howitzers. FY 2019 to FY 2020 Increase/Decrease Statement: Project is a new start for FY 2020.	204073	1 L 0004034A1 Artillery Systems - LIVID	TIDOT IVIC	ODITE I TOWIL	201	
FY 2020 Plans: Funding will support the Operational Assessment of the prototype mobile howitzers scheduled for 4th Quarter FY20. Operational Assessment will evaluate survivability, mobility, and lethality of prototype mobile howitzers. FY 2019 to FY 2020 Increase/Decrease Statement: Project is a new start for FY 2020.	B. Accomplishments/Planned Programs (\$ in Millions)		F	FY 2018	FY 2019	FY 2020
Funding will support the Operational Assessment of the prototype mobile howitzers scheduled for 4th Quarter FY20. Operational Assessment will evaluate survivability, mobility, and lethality of prototype mobile howitzers. FY 2019 to FY 2020 Increase/Decrease Statement: Project is a new start for FY 2020.	Description: Funding will support the Operational Assessment of the prototype	e mobile howitzers.				
Project is a new start for FY 2020.	Funding will support the Operational Assessment of the prototype mobile howit		onal			
Accomplishments/Planned Programs Subtotals						
Accomplishments/Flaimed Frograms Subtotals		Accomplishments/Planned Programs Subt	otals	-	-	8.200

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

N/A

Remarks

D. Acquisition Strategy

The acquisition strategy for the Mobile Howitzer Program is to evaluate existing industry prototypes and fielded systems and assess capability of mobility and survivability attributes. Evaluation will be conducted by US Army engineers and the Army Test and Evaluation Command.

E. Performance Metrics

N/A

PE 0604854A: Artillery Systems - EMD Army

UNCLASSIFIED
Page 11 of 14

Exhibit R-3, RDT&E Project Cost Analysis: PB 2020 Army

Appropriation/Budget Activity
2040 / 5

R-1 Program Element (Number/Name)
PE 0604854A / Artillery Systems - EMD

PE 0604854A / Artillery Systems - EMD

Product Developmer	nt (\$ in Mi	illions)		FY 2	2018	FY	2019	FY 2 Ba		FY 2	2020 CO	FY 2020 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To	Total Cost	Target Value of Contract
Mobile Howitzer Analysis	MIPR	Armament Research, Development & Enigneering Center : Picatinny Arsenal, NJ	-	-		-		3.100	Oct 2019	-		3.100	Continuing	Continuing	-
		Subtotal	-	-		-		3.100		-		3.100	Continuing	Continuing	N/A

Test and Evaluation	(\$ in Milli	ons)		FY 2	2018	FY 2	2019		2020 ase	FY 2	2020 CO	FY 2020 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To	Total Cost	Target Value of Contract
Safety Test	MIPR	Yuma Test Center : Yuma, AZ	-	-		-		4.100	Jun 2020	-		4.100	Continuing	Continuing	-
Opertaional Assessment	MIPR	Yuma Test Center : Yuma, AZ	-	-		-		1.000	Aug 2020	-		1.000	Continuing	Continuing	-
		Subtotal	-	-		-		5.100		-		5.100	Continuing	Continuing	N/A

													Target
	Prior					FY 20	020	FY 2	2020	FY 2020	Cost To	Total	Value of
	Years	FY 2	2018	FY 2019	9	Bas	e	00	0	Total	Complete	Cost	Contract
Project Cost Totals	-	-		0.000		8.200		-		8.200	Continuing	Continuing	N/A

Remarks

Project is a New Start for FY2020.

PE 0604854A: Artillery Systems - EMD Army

UNCLASSIFIED
Page 12 of 14

Exhibit R-4, RDT&E Schedule Profile: PB 2020 Army

Appropriation/Budget Activity

2040 / 5

R-1 Program Element (Number/Name)
PE 0604854A / Artillery Systems - EMD

PE 0604854A / Artillery Systems - EMD

Date: March 2019

Project (Number/Name)
HB6 / Mobile Howitzer

Event Name		FY 2	2018	:		FY	201	19		FY	20	20		F'	Y 20	021			FY	20	22		FY:	202	3		F١	20	024
Evolitianio	1	2	3	4	1	2	3	4	1	2	3	4	1	2	;	3	4	1	2	3	4	1	2	3	4	1	2	:	3
obile Howitzer Analysis																													
ifety Test																													
erational Assessment																													

Exhibit R-4A, RDT&E Schedule Details: PB 2020 Army			Date: March 2019
Appropriation/Budget Activity	,	, ,	umber/Name)
2040 / 5	PE 0604854A I Artillery Systems - EMD	HB6 / Mob	ile Howitzer

Schedule Details

	St	art	E	nd
Events	Quarter	Year	Quarter	Year
Mobile Howitzer Analysis	1	2020	3	2020
Safety Test	3	2020	4	2020
Operational Assessment	4	2020	4	2020