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Department of Defense
OFFICE OF PREPUBLICATION AND SECURITY REVIEW

Selected Acquisition Report (SAR)



FFG(62) Guided Missile Frigate (FFG(62))

FY 2024 President's Budget

**Defense Acquisition Visibility Environment
(DAVE)**

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Common Acronyms and Abbreviations

\$B - Billions of Dollars
\$K - Thousands of Dollars
\$M - Millions of Dollars
ACAT - Acquisition Category
Acq O&M - Acquisition-Related Operations and Maintenance
ADM - Acquisition Decision Memorandum
APB - Acquisition Program Baseline
APPN - Appropriation
APUC - Average Procurement Unit Cost
BA - Budget Authority/Budget Activity
Blk - Block
BY - Base Year
CAPE - Cost Assessment and Program Evaluation
CARD - Cost Analysis Requirements Description
CDD - Capability Development Document
CLIN - Contract Line Item Number
CPD - Capability Production Document
CY - Calendar Year
DAB - Defense Acquisition Board
DAE - Defense Acquisition Executive
DAMIR - Defense Acquisition Management Information Retrieval
DoD - Department of Defense
DSN - Defense Switched Network
EMD - Engineering and Manufacturing Development
EVM - Earned Value Management
FMS - Foreign Military Sales
FOC - Full Operational Capability
FRP - Full Rate Production
FY - Fiscal Year
FYDP - Future Years Defense Program
ICE - Independent Cost Estimate
Inc - Increment
IOC - Initial Operational Capability
JROC - Joint Requirements Oversight Council
KPP - Key Performance Parameter
LRIP - Low Rate Initial Production
MDA - Milestone Decision Authority
MDAP - Major Defense Acquisition Program
MILCON - Military Construction
N/A - Not Applicable
O&M - Operations and Maintenance
O&S - Operating and Support
ORD - Operational Requirements Document
OSD - Office of the Secretary of Defense
PAUC - Program Acquisition Unit Cost
PB - President's Budget

PE - Program Element
PEO - Program Executive Officer
PM - Program Manager
POE - Program Office Estimate
RDT&E - Research, Development, Test, and Evaluation
SAR - Selected Acquisition Report
SCP - Service Cost Position
TBD - To Be Determined
TY - Then Year
U.S. - United States
UCR - Unit Cost Reporting
USD(A&S) - Under Secretary of Defense (Acquisition and Sustainment)
USD(AT&L) - Under Secretary of Defense (Acquisition, Technology and Logistics)

Program Information

Program Name

FFG(62) Guided Missile Frigate

DoD Component

Navy

Responsible Office

Program Manager

Name: CAPT Kevin Smith

Phone: (202) 781-2345

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Mission and Description

The FFG(X) will be a highly capable and survivable multi-mission platform designed for operations in blue water and the littoral environments. The platform will be able to conduct independent operations or as part of a Carrier/Expeditionary Strike Groups or a Surface Action Groups manned and equipped for Navy Composite Warfare and Joint Maritime Operations. The FFG(X) will conduct offensive and defensive Anti-Submarine Warfare, Surface Warfare, Electromagnetic Maneuver Warfare, and Air Warfare operations.

Executive Summary

FFG(62)

Program Highlights Since Last Report

The CONSTELLATION Class Frigates are designed to be highly capable and survivable multi-mission platform designed for operations in blue water and the littoral environments. The platform will be able to conduct independent operations or operations as a part of Carrier/Expeditionary Strike Groups or Surface Action Groups manned and equipped for Navy Composite Warfare and Joint Maritime Operations. The CONSTELLATION Class Frigate will conduct offensive and defensive Anti-Submarine Warfare, Surface Warfare, Electromagnetic Warfare/Information Operations, and Air Warfare operations. The CONSTELLATION Class Frigate Program was established in a two phase acquisition approach. Phase I: FFG 62 Conceptual Design (CD) was intended to mature Industry parent designs toward meeting FFG 62 requirements. It was conducted as a Full and Open Competition with five CD contracts awarded on 16 February 2018. The duration of Phase I was from February 2018 – June 2019. After Phase I completed, the Program released the Request For Proposals (RFP) for Phase II: FFG 62 Detail Design and Construction (DD&C) which was also a Full and Open Competition (not limited to CD participants). The program completed the Milestone B statutory requirements, and the contract was awarded to FMM on 30 April 2020 for the design, construction, and delivery of the first 10 CONSTELLATION Class Frigates. The Program of Record for FFG 62 class is 20 ships. The option for the second ship of the CONSTELLATION class (FFG-63) was exercised on 20 May 2021, and the option for the third ship of the CONSTELLATION class (FFG-64) was exercised on 16 June 2022. Since program award, the CONSTELLATION Class Frigate program has matured the Functional Design, and has transitioned that design into 3D modeling products to support the development of production products. The program is also procuring the combat system and equipment to support the production schedule. Critical Design Review (CDR) was conducted 25 May 2022, Production Readiness Review (PRR) for the lead ship was conducted 20 July 2022, and the Software CDR will be completed 3QFY23. FFG 62 lead ship construction started on 31 August 2022 and is on target to be delivered in 2026.

History of Significant Developments Since Program Initiation

History of Significant Developments Since Program Initiation	
Date	Significant Development Description
Aug - 2022	Started Construction of the lead ship
Jul - 2022	Conducted Program Readiness Review (PRR) for the lead ship
Jun - 2022	Exercised the option for the third ship, FFG 64
May - 2022	Conducted Critical Design Review (CDR)
Sep - 2021	Executed FFG (62) Integrated Baseline Review (IBR)
Aug - 2021	Build Specification integrated into the contract via no cost contract modification
Jun - 2021	Build Specification Certified by NAVSEA 05
May - 2021	Exercised the option for the second ship, FFG 63
Oct - 2020	Executed FFG (62) Initial Baseline Review (IBR)
Apr - 2020	Guided Missile Frigate (FFG(X)) completed Milestone B with all statutory requirements and the approval to proceed into DD&C
Apr - 2020	The FFG(X) DD&C contract was awarded to Fincantieri Marinette Marine (FMM)

Schedule

FFG(62)

Events	Milestone Baseline Objective	Current Baseline Objective/Threshold		Current Estimate/Actual	Deviation
Milestone B	Apr 2020	Apr 2020	Apr 2020	Apr 2020	
Detail Design and Construction Contract Award	Jul 2020	Jul 2020	Jan 2021	Apr 2020	
Critical Design Review	Jun 2022	Jun 2022	Dec 2022	May 2022	
Critical Design Review (Start)				May 2022	
Lead Ship Delivery	Sep 2026	Sep 2026	Mar 2027	Dec 2026	
West Coast training and support facilities occupancy date	Sep 2028	Sep 2028	Mar 2029	Sep 2028	
IOT&E Complete	Sep 2029	Sep 2029	Sep 2030	Sep 2029	
Initial Operational Capability	Sep 2029	Sep 2029	Sep 2030	Sep 2029	
Full Operational Capability	Mar 2031	Mar 2031	Mar 2032	Mar 2031	

Notes

Deviation Explanation

Performance

FFG(62)

Performance Characteristics					
Milestone Baseline	Current Baseline Objective/Threshold		Demonstrated Performance	Current Estimate/Actual	Deviation
(KSA) - Average Follow Cost (average SCN end cost across a 20 ship program (ships 2-20))					
	\$832M (CY20\$)	\$987M (CY20\$)	\$987M (CY20\$)	\$812M (CY20\$)	
(KPP) - Cyber Survivability					
	(T=O) FFG(X) shall be designed in accordance with tailored Cyber Survivability Attributes for cyber resiliency by considering and implementing best practices for cyber defense in accordance with the Information Assurance Technical Authority Defense-in-Depth Functional Implementation Architecture Standard.	FFG(X) shall be designed in accordance with tailored Cyber Survivability Attributes for cyber resiliency by considering and implementing best practices for cyber defense in accordance with the Information Assurance Technical Authority Defense-in-Depth Functional Implementation Architecture Standard.	(T=O) FFG(X) shall be designed in accordance with tailored Cyber Survivability Attributes for cyber resiliency by considering and implementing best practices for cyber defense in accordance with the Information Assurance Technical Authority Defense-in-Depth Functional Implementation Architecture Standard.	(T=O) FFG(X) shall be designed in accordance with tailored Cyber Survivability Attributes for cyber resiliency by considering and implementing best practices for cyber defense in accordance with the Information Assurance Technical Authority Defense-in-Depth Functional Implementation Architecture Standard.	
(KPP) - Energy					
	6000nm at 16kts	4000nm at 16kts	4000nm at 16kts	6000nm at 16kts	
(KPP) - Materiel Availability					
	At least 0.56	At least 0.46	At least 0.46	At least 0.56	
(KPP) - Net Ready					

	(T=O) FFG(X) shall support net centric military operations. FFG(X)'s systems shall be able to enter and be managed in the network, and exchange data in a secure manner to enhance mission effectiveness. These systems must continuously provide interoperable, secure, and operationally effective information exchanges to enable a net centric military capability.	FFG(X) shall support net centric military operations. FFG(X)'s systems shall be able to enter and be managed in the network, and exchange data in a secure manner to enhance mission effectiveness. These systems must continuously provide interoperable, secure, and operationally effective information exchanges to enable a net centric military capability.	(T=O) FFG(X) shall support net centric military operations. FFG(X)'s systems shall be able to enter and be managed in the network, and exchange data in a secure manner to enhance mission effectiveness. These systems must continuously provide interoperable, secure, and operationally effective information exchanges to enable a net centric military capability.	(T=O) FFG(X) shall support net centric military operations. FFG(X)'s systems shall be able to enter and be managed in the network, and exchange data in a secure manner to enhance mission effectiveness. These systems must continuously provide interoperable, secure, and operationally effective information exchanges to enable a net centric military capability.	
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(KPP) - Operational Availability

	At least 0.87	At least 0.72	At least 0.72	At least 0.87	
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(KPP) - Sustainment

	(T=O) FFG(X)s shall maintain their Material Availability, Operational Availability, and Reliability Threshold values in order to support the Blue/Gold crewing and deployment model delivering at least a 0.5 presence forward.	FFG(X)s shall maintain their Material Availability, Operational Availability, and Reliability Threshold values in order to support the Blue/Gold crewing and deployment model delivering at least a 0.5 presence forward.	(T=O) FFG(X)s shall maintain their Material Availability, Operational Availability, and Reliability Threshold values in order to support the Blue/Gold crewing and deployment model delivering at least a 0.5 presence forward.	(T=O) FFG(X)s shall maintain their Material Availability, Operational Availability, and Reliability Threshold values in order to support the Blue/Gold crewing and deployment model delivering at least a 0.5 presence forward.	
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(KPP) - Training

	<p>(T=O) FFG(X) crew shall be able to achieve Qualification and Certification in an off-ship training environment shall be used to the fullest extent in accordance with current SFTRM and TYCOM training guidance for Basic, Advanced, and Integrated Phase Training certification to support Blue and Gold rotational crewing.</p>	<p>FFG(X) crew shall be able to achieve Qualification and Certification in an off-ship training environment shall be used to the fullest extent in accordance with current SFTRM and TYCOM training guidance for Basic, Advanced, and Integrated Phase Training certification to support Blue and Gold rotational crewing.</p>	<p>(T=O) FFG(X) crew shall be able to achieve Qualification and Certification in an off-ship training environment shall be used to the fullest extent in accordance with current SFTRM and TYCOM training guidance for Basic, Advanced, and Integrated Phase Training certification to support Blue and Gold rotational crewing.</p>	<p>(T=O) FFG(X) crew shall be able to achieve Qualification and Certification in an off-ship training environment shall be used to the fullest extent in accordance with current SFTRM and TYCOM training guidance for Basic, Advanced, and Integrated Phase Training certification to support Blue and Gold rotational crewing.</p>
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Requirement Reference

Validated:
 Guided Missile Frigate (FFG(X)) CDD dated February 11, 2019

Deviation Explanation

No deviations for this program/subprogram

Notes

None

Acquisition Budget Estimate

FFG(62)

Total Acquisition Cost

		Milestone APB	Current Baseline		Budget Estimate PB 2024		
Category	Base Year	Objective (BY\$M)	Objective (BY\$M)	Threshold (BY\$M)	BY\$M	TY\$M	Deviation
RDT&E	2020	1,151.2	1,151.2	1,266.3	1,104.5	1,278.8	
Procurement	2020	19,003	19,003	20,903.3	18,502.5	21,421.7	
MILCON	2020	685.4	685.4	753.9	735.5	851.5	
Acq. O&M	2020	0	0	0	0	0	
Total		20,839.6	20,839.6		20,342.5	23,552.0	
PAUC	2020	1,041.980	1,041.980	1,146.178	1,017.125	1,177.600	
APUC	2020	950.150	950.150	1045.165	925.125	1,071.085	

Appropriation Category Deviation Explanations

PAUC Deviation Explanation

APUC Deviation Explanation

Budget Notes

The December 2022 SAR is aligned with the PB 2024 budget submission.

Values in the APB are based on the Guided Missile Frigate, FFG (62) Component Independent Cost Estimate (C-ICE) of April 15, 2020.

Procurement values include End Cost for procurement of 20 ships, and Outfitting & Post Delivery MILCON includes funding for the facilitization to support FFG (62) training requirements.

O&S Cost includes unit level manpower, unit operations, maintenance, sustaining support, indirect support costs, and disposal costs.

Total End Item Quantity

Quantity Category	Current APB Quantity	Current Estimate Quantity
Development	0	
Procurement	20	20
O&M-Acquired		

Quantity Notes

Unit Cost
FFG(62)

Current UCR Baseline and Current Estimate (Base-Year Dollars)			
Category (\$M) Base Year:2020	Current UCR Baseline	Current Estimate	% Change

Program Acquisition Unit Cost			
Cost	20,839.6	20,342.5	
Quantity	20	20	
Unit Cost	1041.980	1017.125	-2.39%
Average Procurement Unit Cost			

Cost	19,003.0	18,502.5	
Quantity	20	20	
Unit Cost	950.150	925.125	-2.63%

Original UCR Baseline and Current Estimate (Base-Year Dollars)			
Category (\$M) Base Year:2020	Original UCR Baseline	Current Estimate	% Change

Program Acquisition Unit Cost			
Cost	20,839.6	20,342.5	
Quantity	20	20	
Unit Cost	1041.980	1017.125	-2.39%
Average Procurement Unit Cost			

Cost	19,003.0	18,502.5	
Quantity	20	20	
Unit Cost	950.150	925.125	-2.63%

Cost Growth Details

Current Baseline PAUC Breach Explanation

Current Baseline APUC Breach Explanation

Original Baseline PAUC Breach Explanation

Original Baseline APUC Breach Explanation

Impacts of Schedule Changes on Unit Cost

Impacts of Performance Changes on Unit Cost

Actions Taken or Proposed to Control Future Cost Growth

Risk and Sensitivity Analysis**FFG(62)****Risk and Sensitivity Analysis****Current Procurement Cost(December - 2022)**

1. Current Baseline Estimate is the same as the Original Baseline Estimate.
2. The December 2022 SAR is aligned with the PB 2024 budget submission.

Original Baseline Estimate (April - 2020)

The Component Independent Cost Estimate (C-ICE), dated April 15, 2020, reflects risk-adjusted estimates for End Cost and point estimates for all other cost areas. The risk and sensitivity analysis is detailed in the C-ICE.

Current Baseline Estimate (April - 2020)

The Component Independent Cost Estimate (C-ICE), dated April 15, 2020, reflects risk-adjusted estimates for End Cost and point estimates for all other cost areas. The risk and sensitivity analysis is detailed in the C-ICE.

Schedule Risk		
Technical Risks		
Current	December 21, 2022	Air Warfare (AW) Test Dependency - If CRUDES AEGIS CP22-1, CP23-1(TBR) and DDG FLT III/BL 10.0 AWDT/OT events are not executed as projected per the FFG-62 TEMP leveraged plan, then additional FFG-62AW DT/OT testing will be required to satisfy data needs to VV&A the Combat System Test Bed (CSTB) model needed for IOT&E /COTF Runs for Record (RfR).
Current	December 21, 2022	Mooring and Channel Depth Clearance - If current depth of Menominee River navigable channel will not support FFG transit, then there will be challenges for mooring, sea trial evolutions, or launch. Revised calculations based on ship's displacement and trim are required for establishing expected drafts at launch, BT, AT and sail-away.
Current	December 21, 2022	Performance Measurement Baseline (PMB) - If Performance Measurement Baseline (PMB) is not established and maintained, then Government is unable to validate adequate rigor has been applied to facilitate mutual understanding of cost and schedule risk, and underlying management processes used for planning and controlling Program. This item presents major schedule risk.
Current	December 21, 2022	Surface Combatant Industrial Base (SCIB) - If Northeast Wisconsin area has a challenged industrial base to support the Navy's current force structure and shipbuilding plans, then Frigate Program will have a reduced capacity to timely-deliver warships.

Low Rate Initial Production

FFG(62)

Item	Initial LRIP Decision	Current Total LRIP
Approval Date	11/08/2018	
Approved Quantity	20	
Reference	FFG(X) Acquisition Strategy	

Start Year 2020

End Year

Rationale if quantity exceeds 10% of the total number of articles to be procured:

FFG 62 Low Rate Initial Production (LRIP) Quantity is 20 ships comprising of the total quantity planned. The LRIP quantity exceeds the 10% of total planned production quantity because the 20 ships in the FFG 62 procurement profile represent the minimum quantity and rate that will preserve the industrial base for FFG 62 and is feasible.

Notes

Contracts & Efforts

Contract Data	
Contract Number	N0002420C2300
Effort Number	FFG 64 (Hull 3)
Modification Number	P00016
Award Date	06/16/2022
Definitization Date	06/16/2022
Order Number	
CAGE Code/CAGE Legal Name	/Marinette Marine Corp
Contract Title	Guided Missile Frigate Detail Design and Construction (DD&C)
Contract Address	Marinette, WI
Contracting Office	
Supported Phase	Development
Contract Strategy	
Contract Type	Fixed-Price Incentive (Firm Target)
Modification Date	
Work Start Date	
Technical Data Rights	
Work Completed	

Contracts/Effort Price, Quantity, and Performance (TY\$M)

Initial Target Price	Current Target Price	
Initial Ceiling Price	Current Ceiling Price	
Contractor EAC	PM EAC	
Initial Quantity	Current Quantity	Delivered Quantity
BAC	BCWP	ACWP
BCWS	Cost Variance	Schedule Variance

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Contract Notes:

Factors Contributing to Cost Variance and Projected Effects on Program Costs

Factors Contributing to Schedule Variance and Projected Effects on Program Schedule

Contract Data	
Contract Number	N0002420C2300
Effort Number	FFG-62 (Hull 1)
Modification Number	
Award Date	04/30/2020
Definitization Date	04/30/2020
Order Number	
CAGE Code/CAGE Legal Name	/Marinette Marine Corp
Contract Title	Guided Missile Frigate Detail Design and Construction (DD&C)
Contract Address	Marinette, WI
Contracting Office	
Supported Phase	Development
Contract Strategy	
Contract Type	Fixed-Price Incentive (Firm Target)
Modification Date	
Work Start Date	
Technical Data Rights	
Work Completed	29.39%

Contracts/Effort Price, Quantity, and Performance (TY\$M)		
Initial Target Price	Current Target Price	
\$794.4	\$794.4	
Initial Ceiling Price	Current Ceiling Price	
\$836.5	\$836.8	
Contractor EAC	PM EAC	
\$845.8	\$836.8	
Initial Quantity	Current Quantity	Delivered Quantity
1	1	0
BAC	BCWP	ACWP
\$695.4	\$204.4	\$258.8
BCWS	Cost Variance	Schedule Variance

\$329.1	-\$54.4	-\$124.8
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Contract Notes:

Current cumulative SPI value is 0.62 in dollars. Current SPI is attributed to a few factors early in the contract. Some factors are: 1) Design changes to major CFE components (Main Reduction Gear, and Propulsion system) caused scope change in contracts with shipbuilder vendors. 2) Reshuffling of major Subcontractor work to align to milestone schedules and changes between subcontractors. 3) Delays in completing design - resulting in the inability to release work orders for production execution. Current cumulative CPI is 0.79 in dollars. Current CPI is attributed to a few factors: 1) FMM rate/usage variances. 2) Functional design cost

Factors Contributing to Cost Variance and Projected Effects on Program Costs

The 29.4% work completed reflects detail design work coming to completion, material purchase orders on contract and the start of fabrication, BCWP for this effort is \$204.38M and the BAC is \$695.42M. In terms of labor hours the contract is 7.4% complete, BCWP is 269,400 hours and BAC is 3.6M hours.

Factors Contributing to Schedule Variance and Projected Effects on Program Schedule

Majority of schedule variance is attributed to issues with FMM subcontractor management: 1) Inability to flow down proper requirements resulting in stop work orders and delays in progress. 2) Inability to provide complete Vendor Furnished Information (VFI) to subcontractors to allow them to complete their work. 3) Late task starts due to purchase order negotiations taking longer than planned.

Contract Data	
Contract Number	N0002420C2300
Effort Number	FFG-63 (Hull 2)
Modification Number	P0005
Award Date	05/20/2021
Definitization Date	05/20/2021
Order Number	
CAGE Code/CAGE Legal Name	/Marinette Marine Corp
Contract Title	Guided Missile Frigate Detail Design and Construction (DD&C)
Contract Address	Marinette, WI
Contracting Office	
Supported Phase	Development
Contract Strategy	
Contract Type	Fixed-Price Incentive (Firm Target)
Modification Date	
Work Start Date	
Technical Data Rights	
Work Completed	4.17%

Contracts/Effort Price, Quantity, and Performance (TY\$M)		
Initial Target Price	Current Target Price	
\$553.9	\$553.9	
Initial Ceiling Price	Current Ceiling Price	
\$582.6	\$582.6	
Contractor EAC	PM EAC	
\$548.6	\$582.6	
Initial Quantity	Current Quantity	Delivered Quantity
1	1	
BAC	BCWP	ACWP
\$474.3	\$19.8	\$23.4
BCWS	Cost Variance	Schedule Variance

\$29.1	-\$3.6	-\$9.3
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Contract Notes:

Factors Contributing to Cost Variance and Projected Effects on Program Costs

Factors Contributing to Schedule Variance and Projected Effects on Program Schedule

External Government Activities

Activity Title		Government Entity	Supported Phase
CAGE		Work Start Date	
City		State/Province:	
Notes			

Deliveries and Expenditures

FFG(62)

Deliveries				
Delivered to Date	Planned to Date	Actual to Date	Total Quantity	Percent Delivered
Development				
Production	3		20	0.00%
Total Program Quantity Delivered				
	3	0		

Expended and Appropriated (TY \$M)				
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Years Appropriated to date: 7

Total Years Appropriated Funding (Current Baseline): 22

Percent Years Appropriated: 31.82%

Then-Year Funding Appropriated as Percentage of Total Acquisition Estimate: 20.00%

Then-Year Funding Expended as Percentage of Total Acquisition Estimate: 6.1%

Total Acquisition Cost: 20,687

Deliveries & Expenditures Notes:

*Budget data pulled from PB24 Budget Submissions

*Inflation rate from JIC PB23 dtd 1Feb2022 provided in SAR for Procurement

*SCN Pulled from PB24 GWS Costs

*OPN not included as it is not included in APB number

*SCN POE estimate includes \$322.1M LBES cost estimate

Operating and Support Costs

FFG(62)

O&S Cost Breakdown:

Category (BY\$ Million)	FFG(62)
Unit-Level Manpower	16.6
Unit Operations	5.4
Maintenance	9.8
Sustaining Support	10.7
Continued System Improvements	6.5
Other	9.0
Total	57.9

Cost Estimate Source: ICE dated April 15, 2020

O&S Cost Notes:

Total Program O&S Cost Compared with Baseline					
	Current Baseline				
	Objective (BY\$M)	Threshold (BY\$M)	Current Estimate (BY\$M)	Current Estimate (TY\$M)	Deviation
Total O&S	57,928.1	63,720.9	57.9	96,521.0	

Note:

O&S Cost includes unit level manpower, unit operations, maintenance, sustaining support, indirect support costs, and disposal costs. The estimates are based on Guided Missile Frigate, (FFG (62)) Component Independent Cost Estimate (C-ICE) of April 15, 2020 supporting the FFG-62 Milestone B Review and APB. They are based on 20 ships in the class with an average service life of 25 years. Disposal/Demilitarization Cost Estimate and Source of Estimate: \$179.6M Disposal cost support the total program quantity of 20 ships. This estimate is from the O&S Life Cycle Cost Baseline date supporting the Program Milestone B certification. Disposal Cost is included in the O&S Cost of the current APB objective and threshold for this program \$385.8 M (TY) \$179.6M (CY 2020).

Sustainment Strategy: The program strategy to characterize and define measurable performance based targets within cost constraint(s) based on unique system and support functions necessary to meet the program sustainment KPP (engineering support, software support, training, maintenance and supply support). FFG (62) will leverage current fleet depot maintenance policies and procedures and existing depot repair infrastructure, including organic, defense industry (Naval Shipyards) and commercial capabilities to the maximum extent practicable.

For Each Acquired System or System Variant:

- i. Quantity to Sustain: 20
- ii. First Operational Fiscal Year: 2026
- iii. Final Operational Fiscal Year: 2065
- iv. Unit Expected Service Life: 25 years

Antecedent System(s) O&S Costs: N/A

O&S Cost Deviation Explanation

Operating and Support Costs - Disposal and Unitized Costs**FFG(62)****Annual Unitized O&S Cost Definition and Calculation Relative to Total O&S Cost:**

Sustainment Factors	System Name: FFG 62	Antecedent System Name:
Quantity to Sustain	20	
Unit of Measure	Ship	
Unit Expected Service Life	25	

Base Year:

Annual Unitized O&S Cost by Category Base Year \$ Unit:(\$K)	System Name: FFG 62	Antecedent System Name:
Unit-Level Manpower	16.6	
Unit Operations	5.4	
Maintenance	9.8	
Sustaining Support	10.7	
Continued System Improvements	6.5	
Other	9.0	
Total O&S	58.0	0.0

Disposal/Demilitarization Cost Estimate

(Base Year \$Millions)	System Name: FFG 62	Antecedent System Name:
Total Disposal	179.6	

Cost Estimate Source - Disposal

Type:	Independent Cost Estimate
Approval Authority and Date:	Component 04/15/2020
Note:	
O&S Cost includes unit level manpower, unit operations, maintenance, sustaining support, indirect support costs, and disposal costs. The estimates are based on Guided Missile Frigate, (FFG (62)) Component Independent Cost Estimate (C-ICE) of April 15, 2020 supporting the FFG-62 Milestone B Review and APB. They are based on 20 ships in the class with an average service life of 25 years.	
Disposal Cost Notes:	

Disposal/Demilitarization Cost Estimate and Source of Estimate: \$179.6M Disposal cost support the total program quantity of 20 ships. This estimate is from the O&S Life Cycle Cost Baseline date supporting the Program Milestone B certification. Disposal Cost is included in the O&S Cost of the current APB objective and threshold for this program \$385.8 M (TY) \$179.6M (CY 2020).

Additional O&S Estimate Assumptions:

Sustainment Strategy:

The program strategy to characterize and define measurable performance based targets within cost constraint(s) based on unique system and support functions necessary to meet the program sustainment KPP (engineering support, software support, training, maintenance and supply support). FFG (62) will leverage current fleet depot maintenance policies and procedures and existing depot repair infrastructure, including organic, defense industry (Naval Shipyards) and commercial capabilities to the maximum extent practicable.

Antecedent Estimate Assumptions: