



## THE UNDER SECRETARY OF DEFENSE

3010 DEFENSE PENTAGON  
WASHINGTON, DC 20301-3010

ACQUISITION,  
TECHNOLOGY,  
AND LOGISTICS

DEC 19 2016

The Honorable John McCain  
Chairman  
Committee on Armed Services  
United States Senate  
Washington, DC 20510

Dear Mr. Chairman:

Thank you for your November 3, 2016, letter to the Secretary of Defense concerning completion of the F-35 System Development and Demonstration (SDD) phase. I am responding on the Secretary's behalf. I can assure you the Department is committed to completing the baseline development of the F-35 in a timely and cost-effective manner.

The Department's ordered priorities with regard to the F-35 Program are: (1) complete SDD, (2) conduct Follow-on Modernization (FoM), and (3) achieve economic and stable production rates. I reviewed the F-35 program in detail over the last eight weeks, during the annual Defense Acquisition Board (DAB) review process, with these priorities and schedule risk in mind. I took into consideration the recommendations made by the Joint Program Office (JPO), several different Office of the Secretary of Defense (OSD) staff organizations (including Cost Assessment and Program Evaluation (CAPE), Director, Operational Test & Evaluation (DOT&E), Systems Engineering (SE), and Developmental Testing (DT)) and my own assessment of the progress currently being made in testing and software defect correction.

As a result of the review, I have concluded that we should plan for a seven (7) month extension from the previous SDD baseline estimate for the delivery of Block 3F capability with a completion goal of May 2018, and provide set-aside funds to account for increased SDD cost. The F-35 SDD program cost and schedule were re-baselined in 2011 following a thorough technical baseline review of the remaining work to complete the development effort. Since that time, the program has executed close to that baseline cost and schedule estimate, but schedule risk is inherent in a complex development program like the F-35. The testimony the F-35 Program Executive Officer (PEO) and I provided to your Committee in April 2016 was based on the program information available at the time of the testimony.

I did not accept the most pessimistic recommendations from OSD staff organizations, as in my judgement the revised schedule is executable. The program will be executed on an "event based" approach and will make every attempt to complete SDD as soon as possible. Any additional schedule slip granted now would become a self-fulfilling prophecy, and I want to keep pressure on the F-35 JPO and the prime contractor to make progress as quickly as possible. Any need for future SDD schedule adjustments (in either direction) as we learn more over the next few months of software testing, including the correction of deficiencies, and the final most

stressing parts of flight envelope testing, can be accommodated in the final Fiscal Year (FY) 2018 budget or subsequently.

Although this delay will increase the cost of SDD, all of this cost can be covered from funds within the program. These funds would be derived primarily from situations in the program where, through effective negotiation, we obtained more favorable pricing to the Government than originally estimated. We are working to control and minimize the SDD budget increase and at this time hope to hold it to approximately \$500 million. We are also planning for event-based contingencies that may require additional funds. As the new administration finalizes the FY 2018 budget over the next few months, there will be an opportunity to assess progress and make any needed adjustments.

Answers to your specific questions are provided below:

*When will the Department complete the SDD phase of the F-35?*

The majority of the SDD effort will complete following the correction of significant Block 3F software deficiencies and the successful completion of the flight test program. My direction as a result of the DAB review is to plan for a May 2018 completion of developmental testing, however there is still some risk associated with this date because of discoveries that may occur in testing. Completion of Developmental Test will be followed by a period of engineering analysis required to validate and verify specification compliance.

*How many additional funds, in each upcoming fiscal year budget, will be required to complete F-35 SDD?*

Completing SDD will require at least \$500 million more than previously budgeted. These funds will be required beginning in FY 2018. A more accurate projection will become available over the next few months as additional testing occurs. There are program funds available to cover over 80 percent of the shortfall we currently anticipate and the balance can be made up by diverting a fraction of the planned FoM funding to completing SDD. The final FY 2018 budget request will identify any changes to the funding required to complete SDD.

*What other service priorities will not receive funding in fiscal year 2018 due to the SDD delay and cost overrun?*

Since most the SDD cost increase can be funded with other F-35 program funds, we do not anticipate significant adjustments to other Service priorities in the FY 2018 budget request.

*Is Secretary James' Block 3F full combat capability certification, as required by the Fiscal year 2016 NDAA, still valid?*

The Secretary of the Air Force certification that was provided to Congress in September 2016 was based on a rigorous review of program information available at the time of certification. Since her certification, schedule pressures referenced earlier in this letter have increased the risk that LRIP Lot 10 aircraft delivered in FY 2018 will not be verified to have full Block 3F software, hardware, and weapons capability at the time of delivery. When LRIP Lot 10 jets are delivered, they will have Block 3F hardware and software installed on them; however, there may be flight envelope limitations until flight testing of the aircraft is completed. Flight test completion and full weapons and envelope clearance are expected later in FY 2018.

*How will this delay and cost overrun affect the current overall schedule for when Joint Strike Fighter deliveries to the Services?*

The current SDD schedule will not change the overall F-35 production deliveries to the Services.

*When will you complete the operational test and evaluation phase?*

Initial Operational Test & Evaluation (IOT&E) will take approximately one year after the formal start of testing. IOT&E is a condition-based event with well-defined criteria, and IOT&E will commence when the established criteria have been met to the satisfaction of the DOT&E. Using those criteria, and assuming DT completes in May 2018, would mean an IOT&E start in late 2018 or early 2019 with completion about one year later.

Other IOT&E start criteria include completion of the modification program for all of the 23 early LRIP aircraft planned for use and successful completion of the six month spin up phase. We are still evaluating alternatives that could relieve some of these schedule pressures and risks associated with the start of IOT&E, but we have not made a final decision on those actions.

*When will you make the Milestone C/Full Rate Production decision?*

The Full Rate Production decision will be made after the completion of IOT&E. This milestone is currently scheduled for 2019 but would slip if IOT&E is delayed further.

*Will you defer any planned F-35 capabilities from SDD into the F-35 Follow-on Modernization program?*

The only capability that has been deferred from SDD into the FoM program is the Prognostic and Health Management (PHM) downlink capability. The decision to defer the PHM downlink capability was made due to security considerations and was approved by the F-35 Configuration Steering Board in March 2015. No other deferrals are anticipated.

*How will the SDD delay affect the Follow-on Modernization program?*


Delays to the completion of SDD may impact the FoM program schedule. FoM work has begun and will continue to overlap the wind down of SDD, as the activities required to complete the developmental test effort are different than the engineering activities required at the beginning of the modernization effort. We will continue to assess that impact as we progress toward completion of SDD and may have to make some adjustments to the FoM schedule. FoM is a high priority, but completing SDD is more important to the Department.

*When will you provide your final response either to validate the current requirement for the F-35 Joint Strike Fighter total program of record quantity or identify a new requirement for the total number of F-35 aircraft that the Department would ultimately procure?*

We expect the new administration will assess the F-35 program, including quantity, prior to submitting an FY 2018 budget. In the near term, F-35 force structure requirements have not changed.

The Department looks forward to continuing our productive working relationship with you and your committee on this vitally important program for our Nation's security.

Sincerely,

A handwritten signature in black ink, appearing to read 'Frank Kendall', with a stylized flourish at the end.

Frank Kendall

cc:  
The Honorable Jack Reed  
Ranking Member