HEARING TO RECEIVE TESTIMONY ON

AIR FORCE MODERNIZATION

Wednesday, March 29, 2017

U.S. Senate
Subcommittee on Airland
Committee on Armed Services
Washington, D.C.

The subcommittee met, pursuant to notice, at 3:30 p.m. in Room SR-222, Russell Senate Office Building, Hon. Tom Cotton, chairman of the subcommittee, presiding.

Committee Members Present: Senators Cotton [presiding], Tillis, Sullivan, King, Blumenthal, Warren, and Peters.
OPENING STATEMENT OF HON. TOM COTTON, U.S. SENATOR FROM ARKANSAS

Senator Cotton: The hearing will come to order.

Today we’ll be discussing the future of our Air Force, what shortfalls we need to fix, what capabilities we need to develop. As we all know, Congress has a tendency to think in one-year increments, a handicap our rivals are only too happy to exploit.

So I consider this hearing our opportunity to take the long view. We’ll get an update on the problems we heard about last year, like the shortage in fighter pilots and in crew members for remotely piloted aircraft. We’ll also talk in more depth about how to keep our technological edge over the next 10 years.

The truth is, we’ve been losing ground for years. As Lieutenant General Stephen Hoog noted a little over two years ago, at the beginning of Desert Storm we had 134 combat squadrons. By 9/11, we were down to 88. Today, we’re at 55. In fact, he argued, if we were to conduct Operation Desert Storm today, we would have to “completely strip out Asia or strip out Europe, and we’d still be short of the combat power we had in Desert Storm.” And that was a relatively small conflict against one country in one region.

We all know how we got here. The last administration made severe cuts to the Defense budget, which Congress did
far too little to oppose, and since then the threats to our national security have multiplied, whether it’s the Islamic State, Russia, China, North Korea, or Iran.

At the very moment when the dangers to our country are increasing, the Air Force’s capacity, readiness, and capabilities are decreasing. But now we have a new administration that recognizes this dire situation. The President has promised to build a military that far outpaces our rivals. The question we want to discuss today is how do we do that?

I will be particularly interested to hear from our witnesses how the Air Force plans to modernize its forces as part of the larger effort to rebuild our military. A strong Air Force is key to our joint war fighting capability. We have to be able to deploy and support forces anywhere on the globe, and to do that we need a sufficient strategic and operational reserve, national mobilization capability, and robust defense industrial base.

What we do this year will determine how we fare over the next 10 years. The stakes are high, and I know all of us here take them very seriously.

I look forward to hearing our witnesses’ testimony. All three of them come from the Air Force’s headquarters at the Pentagon: Lieutenant General Mark Nowland, Deputy Chief of Staff for Operations; Lieutenant General Arnold Bunch,
Military Deputy, Office of the Assistant Secretary of Air Force for Acquisitions; and Lieutenant General Jerry Harris, Deputy Chief of Staff for Strategic Plans, Programs and Requirements.

Gentlemen, thank you all for appearing today. Thank you for your many decades of distinguished service to our country in uniform.

Senator King?
Senator King: Thank you, Mr. Chairman.

I want to extend a welcome and thank you to each of our witnesses for appearing before the subcommittee today. I look forward to hearing your testimony and discussing these important issues.

Last week the subcommittee heard from the Army witnesses about the challenges that the Army has in its modernization. Following our first hearing two weeks ago on all armed warfare in the 21st century, it’s clear that both our ground and air forces need to reestablish the capabilities required to dominate -- I emphasize dominate -- near-peer adversaries across the full spectrum of military operations.

Today I’m looking forward to hearing from our Air Force witnesses about the challenges and opportunities they face in modernizing the Air Force. I’m especially interested in hearing from the witnesses how the Air Force plans to manage its multiple modernization programs in ways that deliver the capabilities our war fighters need to defeat our most capable adversaries on a timely basis -- I want to emphasize on a timely basis -- while protecting our taxpayers’ dollars. Often, in acquisition matters, timeliness as well as dollars are important considerations.

Too many defensive acquisition programs over-promise
and under-deliver on cost and schedule, and we must do
better if we’re going to effectively modernize our fighter,
bomber, aerial refueling and other fleets to the levels
required to meet our future requirements.

Our witnesses this afternoon face huge challenges as
they strive to balance the need to support ongoing
operations and sustain readiness with the need to modernize
and keep the technological edge so critical to successful
military operations. Resources are never unlimited, and the
Air Force must make investments based on near-term risks as
well as future threats to procure new weapons, upgrade
existing platforms, and fund research and development
accounts.

Our Air Force will bear the brunt of dealing with the
anti-access, aerial denial threats that our Armed Forces may
and likely will face in the future. These challenges are
made particularly difficult by the spending caps imposed by
the Budget Control Act. These caps were relieved somewhat
for Fiscal Year 2016 and 2017 in the bipartisan Budget Act
of 2015, but the caps again take effect in 2018 and are not
automatically nullified by making cuts in non-defense
discretionary programs.

Every year we are challenged to make decisions
balancing a number of competing demands for resources,
including resources for current operation and investment in
future modernization. In the absence of specific budget proposals, however, we will be assessing overall plans and programs regarding current and future aviation programs. There are a number of other issues that we need to discuss, but in the interest of time I will stop here and wait for our discussion.

Again, I want to thank our witnesses; and thank you, Mr. Chairman, for calling this hearing.

Senator Cotton: General Nowland?

General Harris: Sir, may I start?

Senator Cotton: You may, General Harris.

General Harris: Yes.

Senator Cotton: Did you draw the short straw this morning?

General Harris: I did, sir.

Senator Cotton: Okay. Sorry to hear that.

General Harris: It’s because I’m younger. They’re more experienced.

Senator Cotton: You have the most hair.

[Laughter.] 

General Harris: I’m not sure.

[Laughter.]
STATEMENT OF LIEUTENANT GENERAL JERRY D. HARRIS, JR.,
USAF, DEPUTY CHIEF OF STAFF FOR STRATEGIC PLANS, PROGRAMS
AND REQUIREMENTS, HEADQUARTERS, UNITED STATES AIR FORCE;
ACCOMPANIED BY LIEUTENANT GENERAL ARNOLD W. BUNCH, JR.,
USAF, MILITARY DEPUTY, OFFICE OF THE ASSISTANT SECRETARY OF
THE AIR FORCE FOR ACQUISITION; AND LIEUTENANT GENERAL MARK
C. NOWLAND, USAF, DEPUTY CHIEF OF STAFF FOR OPERATIONS,
HEADQUARTERS, UNITED STATES AIR FORCE.

General Harris: Sir, thank you for having us here
today to continue our discussion on Air Force modernization.
To the several members of the committee who have served
in our Armed Forces before, a special thank you for
continuing to serve this great nation.
First, we would like to enter our written statement
into the record.

Senator Cotton: So entered.

General Harris: Your United States Air Force is always
there. We’re providing global vigilance, global reach, and
global power. The demand for our service has never been
higher, even though we are 38 percent smaller, already
noted, than we were in 1991.
We’ve been continuously deployed across the globe, and
our adversary has been watching and copying us, learning
from us every day, year in and year out. The world is
changing, and our adversaries are catching us faster than we
predicted. To ensure we keep the advantage across the entire spectrum of warfare, we must modernize our nuclear forces, our conventional forces, and the projection of those forces in air, space, and cyber domains.

We’re increasing our fighter and tanker procurement to modernize the force, and soon we’ll be producing the B-21 to modernize our long-range strike fleet.

We are also in the early stages of replacing a portion of our training aircraft, which will enable shorter training timelines and better-trained air crew.

We are also modernizing some of our older aircraft, extending their durability, and providing increased capability to kill and survive in combat.

We’re making progress with the space fence, protected SATCOM, and our Joint Space Operation Center.

Our number-one asset is our airmen, and we continue to grow them. Venues such as this give us the opportunity to highlight our efforts, and we appreciate the opportunity to partner with the subcommittee. Thank you.

[The prepared statement of General Harris follows:]
Senator Cotton: General Bunch?

General Bunch: Sir, for the three of us, that one statement. We look forward to answering your questions.

Thank you, Senator Cotton, Senator King, for the opportunity to be here today.

Senator Cotton: Thank you. I appreciate it.

So, as we know, the Department of Defense, like all departments, is operating under a continuing resolution until April 28th. The situation is far from ideal. There is a potential, though, for a full-year continuing resolution for all of Fiscal Year 2017. That would be far more damaging to our military services because of ongoing budget disagreements within the Congress.

Can I ask each of our witnesses to give examples from their respective areas of the damaging effects a full-year budget under a continuing resolution might have, General Nowland, from an operations and readiness perspective; General Bunch, for program acquisition; and General Harris, for long-term strategy effects?

General Nowland?

General Nowland: Mr. Chairman, thank you for the opportunity. A continuing resolution would devastate the readiness that we’re trying to regenerate. Basically, in air, space, and cyber, it would have operational effects as we are working to regain our readiness. We would prioritize
to make sure that we continue to do the deployed mission, but those other units who are not either deployed or preparing to deploy, they would suffer readiness realities because they would basically have to stop flying in the air domain. The other missions in space and cyber would continue, but training opportunities would be lost.

General Bunch: Mr. Chairman, in the acquisition community, a year-long continuing resolution would be devastating for the efforts that we’re trying to do to modernize our Air Force. In the critical area of nuclear programs, we would require as many as 17 anomalies if we could afford to do that within our existing programs to keep these critical upgrades to the B-2, the B-52, Minuteman, and our NC3 capabilities on track.

It would also impact 60 Air Force acquisition new starts that we had planned across the spectrum, and we would end up needing another anomaly to cover the B-21 program, which is off to a good start at this point.

It would impact us in missile and ammunition procurement. It would impact us in our modernizations to aircraft and our procurement to include Compass Call. It would impact us in missile procurement. It would impact us in space procurement with our beyond-line-of-sight terminals and our evolved expendable launch vehicle programs, intended to assure that we have mission assurance in space. And it
will result in a stop work issued against the GPS OCX program, just to name a few.

Senator Cotton: You mentioned the B-21. What about two other of your largest procurement programs, the F-35 and the KC-46A?

General Bunch: So the F-35 right now, I do not have an anomaly that we’re listing as one we would need at this stage, sir. On the KC-46, we provided an anomaly, and we were able to go award lot 3 already under the continuing resolution to keep the production program on track at the price bands that we had negotiated with Boeing when we awarded the contract.

Senator Cotton: You mentioned a lot of anomalies. How would you end up prioritizing and balancing those?

General Bunch: Sir, that’s why I said if we could afford to do that. What we would have to do is work with the remainder of the team and look at where those modernizations are for the longer-term plan that Joe Harris talks about and determine which areas we could take risks in or which areas we could not take risks in.

Senator Cotton: General Harris?

General Harris: Thank you, Chairman. That’s a great question. We appreciate the opportunity to address it. A continuing resolution, to be honest, would be something that our adversaries haven’t been able to do to
your Air Force, and that’s going to be ground us, which, as you said, we’re trying to avoid. With the current hole that we would be in, it’s about $600 million in our flying hour program alone. That’s 120,000 flight hours, and your Air Force goes through that in a month-and-a-half. So it would be the last month-and-a-half the entire Air Force would have to stop flying, but because we can’t do that, it would start affecting units almost immediately, forcing their grounding, and that turns around our readiness program.

The airmen that we talked about are the most important to us and our chief, number-one effort. We’d have to defer all those bonus payments that we were setting up to cover to retain them, which means we’re going to be training more and creating a bigger hole in our future programs.

Senator King: I want to push down a little bit on the effects of a continuing resolution. I agree with you that it’s no way to govern, and we shouldn’t be even thinking about a further continuing resolution for the rest of the year.

However, basically it means that you have the same amount of money that you had last year. Why is it that it creates such a problem? For example, General Harris, you just said you’d have to ground the squadrons for two months at the end of the year. You didn’t have to ground them last year. I’m unclear as to why it would have that effect.
General Harris: Sir, that’s a great question. We are actually flying more this year, trying to improve our readiness status. So we had been at that since 1 October based on the signals and messaging we’ve had from both Congress and OSD. So we’re flying at a rate greater than last year, trying to reverse our readiness trends and have more airmen prepared to fight the high-end conflict, not just today’s fight. So we’re ahead of last year’s curve significantly, trying to get these airmen up to speed.

Senator King: So basically what you’re saying is if you don’t have additional funding over and above what you had for last year, you’d run out of money and that’s why you’d have to ground those squadrons.

General Harris: That’s exactly right, sir.

Senator King: General Bunch, the same question. Why such a drastic effect if indeed you’re having the same amount? This is what my taxpayers in Maine would say: They’re getting the money that they got last year; why would there be such a drastic effect on various programs?

General Bunch: Yes, sir. So, some of these programs – for example, OCX -- if you recall, we had to plus up the budget to get the program back on track. That’s a program where we’re going to be spending more money this year than we were before, so that’s an example of that.

On our weapons procurement, one of the things that
we’ve seen is the desire and the continued utilization of precision weapons to minimize collateral damage and dependence on those, and that demand signal has gone up, and we have tried to respond to that by trying to increase the production of joint direct attack munitions, small diameter bomb, Hellfire, and advanced precision kill weapons system. All of those were on a ramp to plus back up so that we can rebuild our stockpiles and match what we’re utilizing in the fight today.

Senator King: Isn’t that what OCO was all about?

General Bunch: So the problem -- it is, sir. But the problem with OCO traditionally, last year you allowed us to take some OCO dollars and predict what our utilization would be so that we could procure weapons. That’s not traditionally how we’ve been able to do that. So that helped us. The problem with OCO is it’s years before I can get to the point that I fill back up those stockpiles.

What we’re trying to do is send a steady signal with stable funding and a demand signal to the industrial base so that they keep the production levels up at what we need, not only for us but also for our partners, and also for foreign military sales and for other activities as we fight around the world.

Senator King: So part of the problem with a continuing resolution is predictability and maintaining your
acquisitions and maintaining the industrial base.

General Bunch: Sir, the way that we describe, I describe, particularly in the weapons area, is for many years we’ve been full up on the throttle and full back on the throttle, and what we’ve got to do is set a stable throttle and continue to keep stable funding to send that signal to industry so that industry is willing to make the investments so that they can support what we need to procure.

Senator King: I hesitate to speculate how a jet airplane would fly if Congress was in the driver’s seat, the pilot’s seat.

In your prepared testimony, one of the most, I thought, troubling pieces -- and this is returning to the longer-term issue -- is manpower shortfalls, particularly pilots and maintainers. This appears to be a serious, ongoing problem, and particularly in the next few years I understand there are a great number of retirements in the commercial side, and you’re seeing a loss of people.

How do we cope with the shortfall in pilots, and also maintainers?

General Bunch: Senator King, that’s a fantastic question. Our Air Force and our chief has directed that we take this on head-on. The answer is we’re going to need a little bit of help from everybody, work with industry, work
with Congress, but what we can control we’re taking on right now. The first thing we need to do, sir, is we’re working on our requirements.

So we have a rated staff allocation plan, which is as you look at your United States Air Force, not every pilot is flying. Some pilots are doing staff duty, some pilots are doing training duties --

Senator King: Wouldn’t pilots rather be flying?

General Bunch: Yes, sir, they would, but not for their entire career because we need pilots in staff positions so that we can make good decisions about future acquisition, about future con ops, about command and control. So we have a myriad of duties.

Our young pilots, your first 11 years of your career essentially, sir, is built around building technical capability. So that’s really where the vast majority of our pilots, our young pilots, are. As you become older, we need less older pilots, but we need to use them to train our Air Force and to operate our Air Force. But we basically have cut our staff, so we’re looking at requirements.

The second thing we do is we’re increasing production. We are pushing up our production to the maximum capacity that we can, and in particular with fighter pilots we’re going to try to produce 335 total force fighter pilots per year, and we’re going to produce those continually for the
next five to seven years. We need to just produce those pilots to fill in gaps.

As we do that, we will also create mobility pilots, but we also have a responsibility to build coalition and international pilots. So we’re going to maximize our production while balancing our training requirements.

Senator King: My time has expired, but we’re going to get back to this. I want to follow up on how we’re going to do the retention. I think that’s very important. And also recruit and retain people who are maintaining, because you can have pilots, but if the planes aren’t ready, that’s a problem too.

Mr. Chairman, thank you.

Senator Cotton: Senator Tillis?

Senator Tillis: Thank you, Mr. Chair.

Gentlemen, thank you for being here and for your service.

The question I want to focus a little bit on, the continuing resolution and the effect that it may have. But before I do, I’ve got a couple of baseline questions.

How many squadrons do we currently have that are at their highest level of certification or readiness?

General Harris: Sir, it’s not many. It’s less than half that are in what we would call Level 1 or Level 2 readiness.
Senator Tillis: How many are at Level 1?

General Harris: Three, maybe four.

Senator Tillis: I think it’s four. And that’s a total of how many squadrons?

General Harris: Fifty-five.

Senator Tillis: And the number of pilots that you all would like to have versus how many you need, how far behind are we?

General Harris: Sir, we are probably 700 to 1,000 in the Air Force alone; and, as we’re talking about, we’re increasing our production now. The bonus increase that Congress has given us will help us retain more of those mid-level pilots, but we don’t think it’s enough. Although we’ll never keep up with airline salaries, currently between us and the Navy are producing about 2,200 pilots a year. This past year that we’re finishing now, airlines are hiring 4,000. We’re only producing 2,200.

General Nowland: Sir, we’re 1,555 total force pilots behind today.

Senator Tillis: Okay, it’s even worse than I thought.

Now, with that sort of as a baseline, I don’t think you all would put that as something you’re really happy with and that’s in the best interests of the national security, or really, for that matter, the morale of the Air Force. Let’s say that some people around here are going to declare
victory and high-five if we get a continuing resolution passed for 12 months that has, let’s say, even the numbers that we talked about here in terms of increased spending. How do those numbers change at all over the next 24 months? Do they get better, worse, or stay the same?

General Harris: Sir, they’ll get worse. First off, we won’t be able to close out ’17 at our end strength that we’re looking for of 321,000. We’ll fall short of that number, and that will just compound as we go forward. The chief and secretary are trying to grow the number of airmen we need -- maintainers, ops, flyers, those that are working across the spectrum. Right now, we just don’t have enough doing the mission.

Senator Tillis: If passing the CR was what many people think here would be a success, I don’t think anybody in uniform would think it was a success, particularly those who are worried about our readiness and our capability and our ability to project power.

Lieutenant Bunch? Or General Bunch. I’m sorry.

General Bunch: I was one once, sir. I was a lieutenant.

Senator Tillis: A little younger.

General Bunch: A day or two ago, sir, and still loving it. It would be devastating for us --

Senator Tillis: Devastating.
General Bunch: -- if we take a continuing resolution throughout the year. We’ll be at $2.8 billion short. We will have to find a way to fund within five months.

Senator Tillis: My next question relates to the sad reality that that may be the best that we can expect. I hope we can get more, but that may be the best we can expect.

What advice would you give to us in terms of other things we could do that could remove some of the hurdles or allow you to be more productive with the money that you have if we’re constrained by money? I don’t want to be. I think that we need to place a priority on the challenges that you have and all the other branches have. But what other things should we be looking at that you haven’t heard any movement on that could potentially increase your flexibility, reduce burdens, reduce inefficiencies to at least help bend the curve on what is otherwise just an undeniable downward trend?

General Harris: Senator, that’s not an easy task to come up with. We do have some new starts that we are trying to get through authorizing those with the money would help, allowing us to move money, if necessary, left and right to cover some of these shortfalls. I think we’re already doing that, and we have good support from Congress. But not having a stable budget from year to year really impacts my
ability to work on my 5-, 10-, and 20-year plans.

Senator Tillis: No doubt about it. I mean, we can sit here, and we beat you all until you bleed, we beat you for bleeding, for cost overruns on certain projects, but we create the structural inefficiencies that cause that to happen. You can’t make a long-term supply chain optimization outcome happen unless you have a long-term spending horizon to plan it on.

General Bunch, you were going to say something?

General Bunch: Yes. I would just say, sir, that Congress has been very helpful with us when we’ve come in on critical acquisition programs, to give us the anomalies, and we appreciate that support. But if we go for the year long, and I talked about the number of nuclear anomalies we would need and the number of new starts, all that is out of balance with what limited amount of money we’ve got, and we’ve got to make trades, and we have to work on all of these together, and that would be very challenging to do.

Senator Tillis: In my remaining time I don’t expect an answer, but we would like to hear back from you specific things so that we can ease the burden. If we’re going to get to a point to where the CR is all we can get, please give us feedback on things that we can go nail down that at least make you managing in this fiscally tight time more efficient. It shouldn’t be the solution, but at least it
provides some relief that we’re not really talking enough about now.

Thank you, Mr. Chair.

Senator Cotton: General Nowland, you said you have a shortfall of 1,555 total force pilots today?

General Nowland: Yes, Mr. Chairman.

Senator Cotton: What’s your shortfall of fighter pilots today?

General Nowland: Sir, today, as of today, we’re 950 fighter pilots short across the total force.

Senator Cotton: Thank you.

Senator Sullivan?

Senator Sullivan: Thank you, Mr. Chairman.

And gentlemen, thank you for testifying today and your service, appreciate it very much.

I wanted to talk about another shortfall that we were trying to get some more focus on. In NDAA last year, I sponsored a provision that asked for a report on the F-35 maintainer shortage, and I think that was due a couple of weeks ago. I know you’re busy, so maybe we can see that relatively soon, or maybe it’s already completed.

But the point of the amendment was actually to be helpful, to try to get your ideas on how we actually close that gap. My one question -- that language was based on the end strength of 321,000. I think General Goldfein talked
about end strength of 350,000. What does that do to the maintainer shortage, and will you be explaining that kind of increase on end strength and what we need to do to address the maintainer shortage in the report?

General Harris: Senator Sullivan, I’ll start with that. Thank you. Sorry if we’re late on the report. We’ll work on that.

Senator Sullivan: We know you’ve got a lot going on. And like I said, that was not a smack-you-down provision. That’s a provision trying to help.

General Harris: Understand.

Senator Sullivan: Because it’s an important issue.

General Harris: What we’re looking at doing, when the chief talks about closing out this year at 321,000, that includes growth in our maintainers. We are over-assessing from our current need of what we need of new recruits, because it takes us so long to train. We recognize that we’ve got to bring them in somewhere. So we’re bringing in more than 1,000 now than we had planned in the long-range plans and picking that up. So we will get healthy over time, but it will become an experience issue for a while. We won’t have too many 3 level, and 5 and 7 level.

As we grow to 350,000, that will help the chief right-size all of our squadrons. Right now, it’s about 80 percent manned across any squadron. We’re trying to work on the ops
and maintenance first to get at the combat capability, but we certainly need the support so that we have the quality of life that takes care of all the airmen that are flying to make sure we can retain them when they’re at mid-level career and they get those other choices that are out there.

Senator Sullivan: And more broadly speaking, how are we looking on the F-35 production, the cost, the deployment? Obviously, the President was talking about this for some time, and I think General Mattis or a senior Air Force official took that over. Are we seeing cost reductions and the deployment schedules on schedule right now?

General Bunch: Sir, let me start with that, and then I’ll let these two gentlemen jump in.

We are seeing General Bogdan driving cost savings into the program through his efforts with Lockheed Martin. We are seeing it come down, the price curve, the way that we want it to. It’s at or better than what General Bogdan had been trying to drive to, to show us what we were doing.

So one of the things we’re asking for is please keep driving that cost down and --

Senator Sullivan: And I think it’s helpful to have the President of the United States raising that and pushing on that, too.

General Bunch: Sir, we love anybody that’s putting pressure on us to try to save money. We’re all good with
Senator Sullivan: That’s your ultimate leverage.

General Bunch: Yes, sir. So we are seeing that. The message we have given out is we need to see those costs continue to come down. We want to see the sustainment costs continue to come down, and we want to continue to --

Senator Sullivan: Is that process impacting the schedule of deployments, or no? I mean, it’s a different place.

General Bunch: So right now we haven’t deployed. We have done Red Flag, and I’ll let these gentlemen talk to that. But right now we’re staying on track with the production the way we want it, the fielding the way we want it and intended, and the schedule is moving forward with the completion of the 3-F testing. So we’re moving in that direction, and I’ll pass it over to General Nowland and General Harris to address the Red Flag and how the jet is performing.

Senator Sullivan: So there’s no right movement? Aren’t the Marines getting a new IwoKuni and Bravos?

General Nowland: Senator Sullivan, the Marines have moved them to IwoKuni. Our first operational squadron initial operational capability is at Hill Air Force Base. They recently deployed the Red Flag and had a very successful Red Flag. We are next going to take them and
they’re going to go to Europe on a theater security package and work through initial operational capability, working towards full operational capability as we work to develop the capability of the system, the network, how do we bring it all together and how do we deploy with the two increased combat capability.

Senator Sullivan: Okay.

General Harris: And, sir, the pilots that are flying this airplane, the Red Flag, love it. They step down out of the cockpit and they tell stories of the kill ratios that are phenomenal. Those that have flown Red Flag in now fifth gen and fourth gen wonder why they ever did it in a fourth gen airplane.

General Bunch: Sir, what I’ve told people is we look at the F-35 program and we had some developmental things that we worked through, and we had challenges that General Bogdan and his team have worked through with Lockheed Martin and with everybody. Probably we have semi-annual meetings with all the international partners, and it was about three ago that the conversation wasn’t about the development; the conversation was predominantly focused on when we’re going to start deploying and how we’re going to support down range.

To me, that was a shift in the program that we are moving forward. The platform has crossed a hurdle and we’re
really getting to where we’re looking to employ the asset.

Senator Sullivan:  Good.

Mr. Chairman, I have a few more questions, but I’ll defer to whatever your role is here.

Senator Cotton:  You can ask one.

Senator Sullivan:  It will be a multi-part one question.

[Laughter.]

Senator Cotton:  Well played.

Senator Sullivan:  Let me ask you, you talk about the fifth gen and the Red Flag.  One of the things I like to do is take military members who aren’t in the Air Force, other senior leaders, and try to get some of my colleagues up to Eielson to see the Red Flag Alaska exercises and J-Park.  And every time I go there, which is frequently, the superlatives that are talked about with regard to the J-Park training -- which I think the airspace is about the size of Florida, so a little bit bigger than what we’ve got down in the lower 48, actually a lot bigger, and we’re expanding it right now, as you know -- is that one of the issues that keeps coming out is that you talked about readiness at the outset of your testimony and the importance of ranges.

My understanding is that when you’re talking about fifth gen air-to-air training, because the standoff ranges are increasingly much further with the fifth gen aircraft,
that the ranges need to be increasingly large, or the
airspace needs to be bigger. We have that at J-Park, which
I think I’d like your opinion on whether, as General Welch
said prior to his leaving, that that was the best range on
the Planet Earth.

But if you agree with that, what are the suggestions to
increase readiness? Although it is a remarkable place for
air-to-air combat, I’d ask the question that the last Red
Flag evolution they did they had close to 90 aircraft up
night fighting and getting refueled, and it was remarkable –
- not the notional aircraft, the real aircraft.

What are your suggestions that we need to do to improve
J-Park, and do you agree with oncoming fifth gen, that that
is not only the crown jewel of air-to-air training in the
U.S. military but it’s going to be increasingly important as
we move to F-35s and F-22s?

And what do we do about the aggressor squadron? We had
a great aggressor squadron in Alaska. The F-16s are very
good. But at the fifth gen level, are we going to need to
bring in F-22s to be aggressors at a certain point?

So that’s my multi-part question. And I’ll also ask
about where are we on KC-46 spacing. There was NDAA
language last year that laid out particular principles that
the Congress wanted you to look at, and I just would like an
update on that.
That’s one question, by the way.

[Laughter.]

General Nowland: Sir, I think you might get multiple answers.

Senator Sullivan: Well, if the Chairman would allow it, I think that would be great.

General Nowland: Senator Sullivan, as the director of operations, I can tell you J-Park is critical towards the future. Airspace and the range size that you talk about is absolutely -- you’re spot on, we need greater distances. But our chief has just directed a new initiative that’s called Operational Training Infrastructure. We used to talk about live, virtual, constructive, but what we have determined, it’s much bigger than just live, virtual, constructive. It’s the whole system that goes into it.

So part of the F-35 and F-22 fifth generation platforms are so smart that threat replication becomes very, very important, and you can’t do it necessarily. You have to have some very high-fidelity simulation. So in A-3, director of operations, we are standing up a new division with a general officer that will be looking at how --

Senator Sullivan: You put your pilots here and the trainers if they get a kill?

[Laughter.]

General Nowland: We’ll look at -- every day come to
work thinking about do we do training better and how do we maximize our investments in training to include our Nellis ranges, to include J-Park, our training infrastructure, how do we man our aggressor squadrons, how do we train in our aggressor squadrons, what is the future of our adversary air squadrons, how do we get adversary air while not reducing readiness of blue forces.

So your question is spot on. We are thinking every day about it because we know that fifth generation training is different than training of fourth generation.

Senator Sullivan: You can integrate the fifth gen physical air-to-air with some of the notional. Isn’t that correct?

General Harris: Sir, we’re working on that. That’s part of our upgrade that we’re looking for follow-on. Right now we’re concentrating on combat capability for the F-35, but we are working through several programs to bring that training in because, as you’re aware, the J-Park, I’ve been lost in it as a former Blue Fox pilot back in the ‘90s. It is a massive air space, yet these threats are partially reliant on threat density and being able to put multiple threats overlapping on top of each other. That’s what we meant to kick the door in with our fifth gen aircraft, and we continue to work on that.

That’s not easy to do. J-Park is a jewel. It’s not a
backyard range that we have, but where we base our F-35s
with two squadrons at Eielson, in addition to what we’ve got
at Elmendorf with the F-22s, we need to continue to work on
that, but we have to balance it. Are we buying more threats
to train against versus combat capability in the aircraft
that we’re trying to do? That’s always a balance that we
work through on a daily basis.

Senator Sullivan: Thank you.

General Bunch: I love what they said. We’re trying to
do this holistically to make sure we’re on the right path to
inquire what we need to be able to support the live,
virtual, constructive and what we’re trying to do for the
future. There’s not only a range aspect of this, but
there’s also a security aspect of this as to what you can do
virtually and what you can really do in the open air that we
have to balance as well, sir. And I, unfortunately, do not
have the KC-46 basing thing with me, so I’ll have to take
that one for the record, sir. But I’ll get you an answer
back.


Mr. Chairman, thank you.

Senator Cotton: Thank you.

General Nowland, I want to return to this question
about fighter pilot shortfalls. I’m not trying to sharp-
shoot the number. I’m just trying to get a handle on them.
Whatever they are, I think the upshot of those numbers is not good.

Last year your predecessor, General Raymond, testified the Air Force was short 511 fighter pilots. That was expected to grow to 834 by 2022, in part because of the higher than expected hiring by private airlines last year, though you finished 2016 short over 700 pilots. I understand that Congresswoman Wilson in her questions for the record submitted for tomorrow’s hearing has said they will be short 800 fighter pilots, but you say it’s 950 fighter pilots short today?

General Nowland: My numbers are total force. So it depends on how you look at the numbers, but we’ll make sure we square with --

Senator Cotton: And that’s total force fighter pilots.
General Harris: Nine-hundred-fifty total force fighter pilots.

General Nowland: Total force fighter pilots.
General Harris: Active, Guard, and Reserve.
Senator Cotton: So might the discrepancy be counting Guard and Reserve, along with active?

General Nowland: Quite possibly, sir, because our 55 fighter squadrons include our Guard and Reserve. They are not in addition to that. And as we look at our requirements, we stack nearly 50 squadrons on top of each
other to get through the defense planning guidance that we
have now for some of our larger conflicts, and that’s when
we need 55 healthy and ready squadrons, then look at growth
to make sure that we can meet our needs.

Senator Cotton: Whatever the number is, and I’m
pleased to get it to us broken down along those dimensions,
would you agree with my first statement that the upshot
number is not good for the health of the Air Force and for
the security of our nation?

General Nowland: Mr. Chairman, absolutely. We can
show you that the number has gotten worse over time and is
increasing. Now, we are very hopeful, under retention, our
third line, that the extra money that Congress allocated to
us and the plan that we’re coming back with, with a pilot
bonus, with a tiered system, a business model system that
allows us to give multiple options, will be part of the
solution. But it’s not money alone that’s going to keep
pilots in. It’s also partially got to do with culture of
the squadrons and getting pilots back to their primary duty.

One of the primary irritants for pilots is additional
duties, and our chief has taken actions to eliminate
additional duties. We put five additional personnel into 24
fighter squadrons to help with the additional duties as we
look at --

Senator Cotton: Could you give the committee some
examples of additional duties?

General Nowland: Yes, sir. For example, we put people in that will help them do the scheduling duty that requires you to do that every day; help with reporting, reporting functions, whether that be OPRs, ZPRs, administrative type of work that needs to be done in a squadron. The things that take a squadron, a fighter pilot away from flying, being an officer -- remember, we’re all officers first, so professional officership comes first. But then replacing those duties that detract him from not preparing for his next sortie. So we’re looking at areas such as that.

Senator Cotton: Okay. The committee last year increased the cap for bonuses from $25,000 to $35,000. Do you anticipate a request that you’ll be increasing the cap further?

General Harris: Sir, we would request that. We’re finding almost a one-to-one ratio. So with the $35,000 bonus, that is an increase, and that’s good. After two decades, we have not changed it, but we’re actually hoping for higher. At $50,000, we may get up to 50 percent retention. So we will tier that based on where we have our biggest needs, and right now that is in the fighter pilot community.

Senator Cotton: At what phase in one’s career would one receive that bonus?
General Harris: At the end of your pilot training commitment. So it is around that 11- to 12-year point, and then the option is for five years or to keep you out to 20 years. We have several options to get at different lifestyles to retain as many of the pilots as we can.

Senator Cotton: So perhaps a $50,000 bonus for a five-year commitment, or more?

General Nowland: Essentially, the RAND study said $48,000 a year. The problem is --

Senator Cotton: I’m sorry. Is it a year?

General Nowland: A RAND study said -- yes, sir -- a $48,000 bonus is what they were recommending, and that was based on a number of 3,500. The problem is the airlines are hiring more than that. In 2022, we have data that shows that 58 percent of American Airlines pilots are going to be eligible for retirement.

So as we look to the future, this problem is not going away. That’s why it’s production, retention, requirements, and then as we think about this as a national problem, if you think it cost us $11 million to create an F-22 pilot, and you lose him at the peak of his proficiency, it’s a loss to the nation of a big investment.

Senator Cotton: My time is up on this round. I will just say that our committee staff has traveled and conducted sensing sessions with some pilots in Europe and in the
Middle East, and I think there’s a strong non-monetary component to it as well. One of those components is the operational tempo. The Air Force has been heavily deployed in those theaters now for 27 years. Obviously, there’s a self-reinforcing aspect to it as well as the pilot shortage grows shorter and the up tempo becomes even greater. So I think that’s something that both the Air Force and this committee needs to consider as well, as important as those monetary bonuses are.

Senator Peters?

Senator Peters: Thank you, Mr. Chairman. And I thank all three of you for being here. I appreciate your testimony here today.

My question centers around the A-10 aircraft. In Michigan, our Air National Guard flies A-10s and has been doing that very successfully, but we are also now on the short list of five potential sites for deployment for the F-35, which we hope will have a successful outcome as that process moves forward.

But if you could talk a little bit about how you see this transition as we move away from A-10s, what will be some of the sequencing and timelines for that, as well as new F-35 squadrons coming in, perhaps taking some of these positions. How do you see that unfolding?

General Harris: Senator Peters, that’s a great
question. First off, what I’d like to say is we are living with the NDAA requirements right now on the A-10s, and we are waiting for the comparison testing to be complete before we make decisions on the final outcome. But at this time we are not asking for additional upgrades with the A-10. It is an awesome airplane, and I would venture to say it is the best CASS airplane that we have.

But where I think we have not done well in telling our story with the F-35 is that as it moves in, as we are holding at 55 squadrons, things have to fall off the bottom, and it’s going to be our older fighters that we have not upgraded. A-10s may be some of that, F-16s, F-15s. We’re buying roughly two squadrons a year. When we look at the 60 range that we’re aiming for, by the time we put some in training, some in test, and continue to grow the efforts that we need. So that’s the pace that we’re looking at, and we are working a few years ahead because of the MILCON required to support the F-35 and the capabilities that it brings to any fight. A lot of that involves the higher classification and the security requirements on ramps, those types of things that we have to upgrade.

Senator Peters: Right. Thank you.

Your testimony also mentions the space domain and that we need reliable access to space, including jam-resistant position navigation and timing. My understanding is that
our adversaries have been investing a great deal in their
space capability, something that we have to be concerned
about.

What do you believe are the most important investments
that we need to make now in space to support those vital
missions? What should we be doing here in Congress to help
you achieve that important mission?

General Bunch: Sir, I think we’ve outlined in our
budgets that we put in, we put those in the highest
priority. I believe we’re giving you what we believe we
need for the future. I will tell you right now, we’re very
focused on developing the new launch capability to get us
off the RD-180 and to move the pads so that we can have two
domestically produced, commercially viable providers of
launch services to meet all of our NSS requirements. So
those programs, we’ve been doing other transaction authority
investments with public-private partnerships with industry
for the last few years that we’re trying to expand out now
to go to launch service agreements.

Also, we need to keep -- and I’m pointing to myself --
the OCX program on track because we need that to have a
stronger encrypted M-code GPS signal for what we’re going to
do for those activities.

The last thing that our chief is very focused on, and
I’m not going into a whole lot more details about specific
programs, is we need to normalize how we’re doing our space business. We need to treat it like an operational domain. We need to treat it like the air domain. We need to set the requirements. We need to make sure we’ve got con ops for how we would operate and do things. We have to do all those things beforehand. We need to streamline the acquisition. That’s in my swim lane. We need to partner better with the NRO. We need to make sure we’re moving out and using the operationally responsive space authorities that we have. We need to look at doing RCO-like activities in the space domain, which is another area that we’re focused on right now.

So we have a big focus in the space area to be more responsive to what we’re trying to do because we know that’s a critical domain and a critical area that we do our business in.

Senator Peters: Thank you.

Senator Cotton: Senator Warren?

Senator Warren: Thank you, Mr. Chairman.

General Harris, last week the House Armed Services Committee held a hearing on Air Force readiness, and during that hearing your colleague, Major General West, seemed to indicate that the Air Force might be prepared to retire the F-15C and D in the next year or two. Is that right? Does the Air Force propose retiring the F-15? And how is the Air
Force going to replace that capability?

General Harris: Ma’am, thank you. It’s an opportunity for us to tell the story. That’s pre-decisional. We have not decided, and throughout we continue to deploy the F-15C/D fleet. It’s an air superiority fighter for us with somewhat limited capabilities from a fourth gen perspective compared to an F-22, but we are not replacing it at this time. It is something that we’re looking at as we continue to bring in more fifth gen capability, what assets do we push out at the bottom of that chain.

Senator Warren: All right. So let me ask you, then, if it’s pre-decisional, has the Air Force done the analysis to demonstrate that purchasing new F-16s instead of servicing the F-15s will provide the same level of capabilities and actually save the taxpayer money?

General Harris: We are doing that analysis. I don’t know how that is going to turn out from a cost perspective, but I think it’s going to be fairly balanced. So I look forward to providing that when we get that information completed.

Senator Warren: And I’ll take it you’ll get that resolved before you make any decisions?

General Harris: We will, and certainly that’s part of it, but we also have to look at the operational capabilities and what a fifth gen fighter, although it is a multi-role
fighter in the F-35, brings to this fight as a family of systems. It far out-classes anything in our fourth gen.

Senator Warren: I understand that, and actually I’ve got some questions about that. But what I really want to focus on is what we’re doing in the next year or two, at a time when we’re hearing about readiness difficulties with the Air Force.

I also want to ask, you know that more than 60 percent of our F-15s belong to the Air National Guard. So what I’d like to have here today is your commitment that the Air Force will consult with the Air Guard and specifically with the Adjutants General in states with the Air Guard F-15 wings before any decisions are made.

General Harris: Ma’am, they’re part of my team on the plan process. So they’re involved with us every day. At that testimony, seated next to General West was General Rice, the Air National Guard commander. So they’re involved with --

Senator Warren: I know General Rice well. Good.

General Harris: -- and we’ll continue to work with them.

Senator Warren: All right. I just want to make sure we’re going to do that.

Given its cost, I realize that we may not be able to procure the F-35 in the numbers the Air Force has planned
until 2045. So I’m also not convinced that the F-16 is fully capable of replacing the F-15 in meeting the air-to-air mission. So I just want to raise the point, because it seems to me that retiring hundreds of aircraft at a time when the Air Force is in need of additional capability may not make a lot of sense here, and I just want to make sure you’re looking very carefully at the proposal. I know we’ll have questions as this emerges.

General Harris: Yes, ma’am, we’re looking at that, and what our chief is trying to drive to is to maintain us at 55 fighter squadrons, including our Guard and Reserve in that number, and making them healthy with what we have.

Senator Warren: Okay. I also want to, if I can get it in quickly here, I want to ask you about the nuclear command and control network, the NC3 system that connects our President to our field forces in case of emergency. As you know, the system is absolutely essential to provide early warning, to communicate critical information in a nuclear crisis. If NC3 doesn’t work, the rest of our nuclear triad becomes essentially useless here.

The current NC3 system is old. General Hyten recently said that NC3 was his highest priority for nuclear recapitalization, and he said, and I’m going to quote him here, “Any delay, deferment, or cancellation of NC3 modernization will create a capability gap potentially
degrading the President’s ability to respond appropriately to a strategic threat.”

So I just want to ask, General Bunch, is NC3 the highest priority for the Air Force as well?

General Bunch: Ma’am, we have multiple priorities.

Senator Warren: I know.

General Bunch: NC3 is a priority that we have within the Air Force. We named Air Force Global Strike Command and General Rand as the lead for the NC3 effort. So we named a four-star and a MAGCOM as the lead. We aligned NC3 efforts under a program executive officer up at Hanscom right now, and we designated someone. We did not have that before. He’s designated to look over all those programs. We’ve aligned that into the nuclear weapons center, which we’ve stood up now and we’ve restructured so that it’s really only focused on the sustainment and the modernization of our nuclear inventory.

So we, the Air Force, have made a big commitment to prioritizing that. I will not tell you that we have it 100 percent straight today. I will tell you that there are a lot of small efforts that are in a lot of different POs that don’t have a whole lot of manpower. Our team met with the A-10 and pulled in all the program executive officers who have those assets, and pulled in the Global Strike Command and other expertise to get us on a path to make sure that we
are focused on that and delivering those capabilities which are so critical to our ability to keep the nuclear deterrent viable.

    Senator Warren: Good. I appreciate that.

    I have additional questions, but I’ll just ask them in a QFR. I just want to say I think this is an absolutely critical program, and it’s important for us to keep an eye on it. So, thank you, General.

    General Bunch: Yes, ma’am.

    Senator Warren: Thank you.

    Senator Cotton: Senator Blumenthal?

    Senator Blumenthal: Thanks. Thank you, Mr. Chairman.

    I have a couple of simple numbers questions which you may have answered; I apologize if you have, but I would like to hear the answers.

    What is the ideal procurement number for Fiscal Year 2018 on the F-35 for you? What do you want on the F-35 for Fiscal Year 2018?

    General Bunch: Sir, I’d like to get to 60 F-35A models for the U.S. Air Force.

    Senator Blumenthal: Okay. And I think there’s been some testimony about the number of -- and by the way, I’m not a business guy, and I’m not a military professional, but common sense tells me if you order enough of them, the price comes down with scale, and I’ve heard that from the company.
So if you confirm it, I’ll believe it’s true.

General Bunch: Sir, what we’ve asked and what I’ve given in our dialogues and the message I’ve carried from our chief is we want to go to 60. We need to see the price continue to come down on the curve so that we can continue to procure those, and we need the operations and sustainment effort that we need so that we can operate and maintain those the same way. So that is what General Bogdan -- I apologize, sir, for interrupting you. That is what General Bogdan’s team is working. They understand where we want to go, and I’m comfortable that as we’ve gone through the buys over the years we are moshing down the curve and we are coming down to a lower rate, and that’s where we want Lockheed Martin to stay.

Senator Blumenthal: And Lockheed Martin and Pratt and all the contractors involved have begun a war on costs. In fact, they began it some time ago, maybe years ago, and they have continued that war to drive down costs, but scale is very important to that effort.

General Bunch: It is, sir.

Senator Blumenthal: Thank you.

Could you tell me -- I know there’s been some talk about the number, the shortages of pilots -- how many are you down from the number that you need? I’ve heard different numbers -- 800, 900. Maybe it’s --
General Nowland: Senator Blumenthal, the number changes every day. But as of today, we are 1,555 total force pilots short of our requirements.

Senator Blumenthal: Fifteen hundred and fifty-five.

General Nowland: Yes, sir, 1,555.

Senator Blumenthal: And what is the number from which you are short?

General Nowland: Sir, our total number of pilots is approximately 20,300. That’s approximately what our total requirements are for pilots.

And I’m sorry, Chairman Cotton, I gave you 1,550 because I didn’t have my glasses on. I apologize.

Senator Blumenthal: And of those 1,555 -- again, I apologize, because my terminology probably won’t be as exact, as official as it should be. What number of those are fighter pilots?

General Nowland: Sir, we are 950 fighter pilots short today.

Senator Blumenthal: That would square with what I’ve heard. And out of what number is that?

General Nowland: Sir, I’ll get you the exact number. I don’t want to give you a wrong number. I’ve got it right down here, but I don’t have total number of fighter pilots broken out. I have it broken out by the services, so I can get it to you.
Senator Blumenthal: If you could, I would appreciate it.

General Nowland: Yes, sir.

Senator Blumenthal: And again, I don't mean to make too much of this numbers stuff, but one theory that has been advanced to me about how to keep and maybe even attract more skilled pilots is this idea of readiness, giving them time, basically time to train, because they need, so it's been described to me, time in the air to be proficient. And if they don't get that time, they feel they're not proficient, and it's a real deterrent to stay in the Air Force. So it makes the offers they may receive from the private world all the more attractive.

So readiness is a key to keeping and attracting skilled pilots. Is that over-simplistic, or is it relevant?

General Nowland: Senator Blumenthal, no, you are exactly right. It's a combination, a series of things. Chairman Cotton already mentioned it also, personnel tempo. Deploying down-range is one thing, but then when you come home, flying and then being home -- I have a story of an F-22 pilot, a major who was in Alaska, sir. He had been there for seven years. He went to weapons school. He was at the peak of his game. He came home one day and his wife put her hand on his shoulder and said, honey, I love you, but you've got to get out of the Air Force. And he said why? Because
in the last five years you’ve been home 10 months.

So that’s an extreme case. Now, the good news is he went to the Reserves and he’s still serving with the Air Force. But personnel tempo is part of it. When you’re a very small Air Force and you’re a very small F-22 fleet, you’re constantly in demand. So we’re looking at how we get personnel tempo under control.

There’s deployment to dwell, but there’s also personnel tempo. Building white space is super important.

General Harris: May I add to that also?

Senator Blumenthal: Yes, absolutely. Thank you. With the Chair’s permission.

General Harris: Sir, you’re exactly right. Quality of life is a part of this. The pilots came in, they intended to fly and they like to fly. So one of the chief’s number-one items is to fix our squadrons and right-sizing them. So we are putting administrative support back into the squadrons. Over the last two decades as we’ve been getting smaller, we’ve been cutting as much of the tail as we can, and we realize we did too much. The flying squadrons are so small, they had no support.

So after a full day of flying or an exercise that they were deployed to, they had to come home and do a significant amount of paperwork that could be done by many people, not just the flyers. So we’re looking at a lot of those tasks,
if you want to call them additional duties, whether it’s keeping the areas that we work in that are highly classified open and having somebody to do that, rather than requiring an aviator to do that, we’re getting at a lot of those tasks.

So the quality of life will continue to rise. So as we get them home, that 10-month/5-year vignette, that’s just not all combat operations. It’s a significant portion of that, but it’s all the other training they’re doing off-station that we’re trying to free up back at home.

Senator Blumenthal: And if I could ask just one more question, please? In terms of continuing proficiency, the administrative duties, personnel tempo, when someone comes home they want to stay proficient, ready, are they getting enough time actually in the air flying?

General Nowland: Sir, it varies by weapon system. But the answer is we are working to increase weapon system sustainment. This is where our maintainers come in. We have a minimum number of sorties per month that we need to fly pilots to consider them mission ready, and we are driving our maintenance to try to increase our utilization rate so we can fly pilots more, because that minimum number should be the floor, not the ceiling. We want to be above that number to increase our readiness, and we are driving towards a utilization rate, with additional maintainers and
more weapons systems sustainment funding, which we’ve done.
We’re moving in that direction. The trends are going in the right direction, but we’re not where we want to be right now.

Senator Blumenthal: Thank you. Thank you all very, very much for your service and for being so forthcoming today.

And thanks to the Chair.

Senator Cotton: Senator King?

Senator King: Thank you, Mr. Chairman.

We’ve talked a lot about retention. I’d just note, General, you made the point that whatever the bonus is, it’s a lot less than $11 million, which is the cheapest training, the training you don’t have to do because you’ve got somebody who is already trained. So I think that’s got to be part of our calculus as we talk about this.

Again, talking a bit about the shortage, I understand that there is an excess of pilots on the mobility side, and I was wondering if there was any effort or plans or thought being given to shifting pilots from mobility over to where you are facing the shortages.

General Nowland: Senator King, that’s a great question. The mobility excess pilots we have moved into our training architecture. So as we looked at our overall operational training infrastructure, it also deals with
manning our T-38s, T-6 squadrons, and UPT. And as we became shorter on fighter pilots, we took fighter pilots out of the training infrastructure and moved them into unique fighter pilot jobs. So mobility pilots have moved into that training function.

We have a very small number, but we have moved some mobility pilots who went through T-38s into a fighter cockpit. But that’s a very small number because a specialized UPT, the vast majority of our pilots who have gone through T-1 training go into the mobility world, and they’ve not formed T-38s.

Senator King: Are bonuses being paid to mobility pilots even though there’s an excess?

General Nowland: Well, there’s not really -- it depends on what you mean by excess. We’re still short of our overall pilot numbers, and we’re still taking risk in our training infrastructure, and the mobility pilots are also going to be short like fighter pilots here. Air Mobility Command tells us by 2020 we will start to lose them.

Our pilot retention, our pilot numbers are based upon a 65 percent take rate. Unfortunately, our mobility pilots are not at that rate. They’re below 65 percent. But we’ve been living off of over-producing mobility pilots in years 7, 8, 9, 10.
Senator King: You had an excess but the excess is being worked down, is what you’re saying.

General Nowland: We are using all of our pilots to the maximum extent capability. It’s just we filled our mobility pilots; they’re filling other functions. So I think we’re saying the same thing. Over time, our mobility excess that is allowing us to do our training function will degrade and will be gone, and then we’ll have to figure out how we’re going to fill our training cockpits.

Senator King: Let me talk about a related, not the same but a related issue, and that’s UAV pilots. My understanding is that we’re now in a world of using enlisted personnel as UAV pilots, at least with the Global Hawk. What about Predators and Reapers? How is that working? Have you found any diminution of quality using enlisted people in these slots? Because we were stressing out the regular pilots, as I understand it. Has that change been implemented, and to what extent has it been successful?

General Nowland: Senator King, this is a fabulous question. I love this question. Our RPA pilots, we are moving enlisted pilots into our RQ4 community, because what we found is that in our RQ4 community it’s very similar to what we did in space, the way we’re operating. They have not arrived there yet, sir. They’re going through the training pipeline right now. So our first batch is going
through the pipeline. We now have the next batch. We just
had our second batch of enlisted pilots who have been
selected and now are starting down the track to be enlisted
RPA pilots.

Our MQ1s and MQ9s -- our MQ1 fleet we’re going to
retire. Our MQ9 is going to be essentially our new
platform. We don’t have the enlisted aviators in MQ9s right
now, sir.

Senator King: What’s the MQ9?

General Nowland: The MQ9, it is the Reaper.

Senator King: That’s the Reaper, okay.

General Nowland: Yes, sir. We have the Predator,
which is the MQ1, which we are eliminating, and the MQ9, the
Reaper.

Senator King: So you have no enlisted people in the
Reaper program. Are you planning to move in that direction?

General Nowland: We have enlisted people in the Reaper
program, sir. They’re just not pilots. We have a pilot, we
have a sensor operator, and they are a team, and they work
side by side.

Senator King: Will you have enlisted pilots in the
Reaper program?

General Nowland: At this time, Senator, what we’re
doing is we are looking and evaluating. As we go down this
road, we’re going to evaluate all options in the future.
But the first thing is we need to get our enlisted aviators into the RQ4 and see how they go.

Right now, our training pipeline is pretty much set. This year we’re going to train over 300 RPA operators. Whether they’re an officer or enlisted, you still have to train 300 RPA pilots. So there really is no advantage one way or the other right now. We’ve got time to make this decision down the road, sir.

Senator King: I commend -- again, we’ve got to think very creatively about how we fill this shortfall, and if the enlisted people can do this job effectively, that’s another resource that at least being able to reallocate trained fighter pilots into fighters.

The B-21, are the requirements for the B-21 locked down, no more good ideas?

General Bunch: Yes, sir. We locked the requirements down before we went into -- General Welch did. Before General Welch, we continue to keep them under General Goldfein. General Goldfein has made it crystal clear to the two of us that he is the chief requirements officer for the Air Force, and if we want to change anything in those requirements, particularly in the KPP, key performance parameter, he needs to know about it and he needs to approve it.

Our intent all along has been to keep those locked down
so that we would not increase costs. We could control. One
of the things that I talk about, I believe one of the key
things we did on the program was we put cost as a key
performance parameter for what we wanted, and I viewed that
as serving as an appetite suppressant. It caused everyone
not to try to add additional things. It caused everybody to
use what we had, and we built it in a way that we can
increase its capability over time because of the open
modular system that we designed as the backbone for the
platform.

Senator King: And as you know, we have an interesting
contract, which I think is a creative solution to the risk
problem of 70 percent fixed, 30 percent cost plus. But that
30 percent could explode if we start redesigning the
platform in the middle of the construction process.

General Bunch: It’s been a key factor for us, sir, that we’re looking at. There are a couple of things we
didn’t want to get into the B-2. We rewrote the
requirements after we awarded the contract and we redesigned
the platform. We don’t want to go there. That’s why
holding the requirements so stable is so critical to us.

Senator King: I like hearing you say we don’t want to
go there. I’d rather have you say we will not go.

General Bunch: No. I apologize, sir. We’re not going
there.
Senator King: Thank you.

General Bunch: We’re not going there.

Senator King: Mr. Chairman, thank you.

Senator Cotton: I want to return to Senator King’s questions about RPAs, and I want to ascend above the enlisted question for a moment. We’ll return to that, though.

Last year, Secretary James recommended an RPA get well plan that included over 140 specific actions. General Nowland, how many of those actions have been completed, and when will they all be completed?

General Nowland: We call that the cultural process improvement program. The exact numbers, I’ll have to consult or get back to you; I don’t know. The most important part of it, though, was the deployment to dwell and the crew ratios, Mr. Chairman, and we’ve reached over a 10.1 crew ratio. We’ve had a series of initiatives.

In my previous job I was the 12th Air Force Commander, so I was intimately familiar with this. We’ve had a series of initiatives to try to normalize what we call life at Creech Air Force Base in Northwest Las Vegas, and those initiatives have gone through. The morale at Creech is good because we now have the crew ratios where we are driving to what we call a deploy to dwell, so that the pilots will actually have time to come out of combat sorties and go into
training sorties. This is so important for us, because we
are learning that our MQ9s are force multipliers.

One vignette. On the most sophisticated sortie we do
at the weapons school, which is weapon school integration,
they always have an exercise where they have personnel
recovery of a downed airman. The RPA, the MQ9 crew, when it
operates in that role, is a perfect, perfect example of how
you integrate all the information in and then get it to
Sandy-1, who is the A-10 that is doing the actual job of
rescuing the pilot, because they can have situational
awareness, coordinate all activities.

So we’re learning that there’s multiple functions for
these weapons systems as we move forward. The exact number,
sir, on CPIP, I will get back to you, but we are progressing
in a very good fashion.

Senator Cotton: General Harris, did you have an answer
to that question?

General Harris: Not to the number. We closed out on
the 140, but we are more than halfway through that program.
Last time I left the dance at Air Combat Command, we were
executing that, so we will get back to you on that.

Senator Cotton: That’s fine. Just please get it to us
for the record.

How are we doing on pilot production for the MQ1 and
MQ9 as a whole, putting aside the question of the division
of labor, or the potential division of labor between officer and enlisted?

General Nowland: Yes, sir. For Fiscal Year 2016, MQ1 and MQ9, we produced 252. We forecasted 271. So we were a little short of what we wanted to do. But we also did foreign military sales with 35, and we hit all 35 of those pilots as we moved forward.

The 271, the reason we were a little short had to do with a little bit of weather. It also had to do with some maintenance and student proficiency, and that’s pretty normal as you’re going through to meet your productions. As we forecast to the future, in 2017, we’re expecting to produce 346 MQ1 and MQ9, although we have closed our MQ1 RTU now. We are moving exclusively to MQ9.

Senator Cotton: Three-hundred and forty-six you said?

General Nowland: Yes, Mr. Chairman.

Senator Cotton: Does that meet the standard we need for a healthy force in the RPA community?

General Nowland: Yes, Mr. Chairman. We’ve got a very good number now on where we’re moving forward. We are driving to a 14-to-1 crew ratio, which will really enable us to start training, and that’s part of the CPIP. We also are looking forward to opening another wing at Shaw Air Force Base as we grow the capability. So that will enable us to do the transition as we move over and manage our force.
Senator Cotton: Two years ago in the NDAA, the committee authorized bonuses of up to $35,000 for these pilots. My understanding is that the bonus was at $25,000 for some time, but it recently may have gone to $35,000. Is that correct?

General Harris: Yes, it has. We expect to start paying that out this year. It’s the initial air crew that are now coming up being bonus eligible. So to this point it hasn’t mattered. They’re still on that first commitment that they haven’t been eligible for it. We expect it to help.

But, Mr. Chairman, I’d like to explain. We will look at how these people are being retained, because some of the contractors that we’re currently competing with are paying upwards of $40,000 a month for these RP operators to come off of active duty and to go fly other missions associated with what they’re doing. So again, we will never, even with our RPA team, compete with the prices that are available on the commercial market, but getting back to that quality of life, opening a new base at Shaw, the mission accomplishment, the sense of being a part of the team is everything that we’re putting into the CPIP program to retain these fantastic aviators.

Senator Cotton: Finally, to return to Senator King’s specific question about enlisted personnel and tie a bow on
it exactly, in the Fiscal Year 2017 NDAA we directed Air
Force to transition a significant number of those pilots to
enlisted personnel by Fiscal Year 2020, and to Guard and
Reserve by Fiscal Year 2023. Will you complete that
transition and compliance with the Fiscal Year 2017 NDAA?

    General Harris: Yes, sir. We are on track to meet
that. That was specific to the Global Hawk, the RQ4, and we
think we are on track at this time. So the first students,
as you heard, are graduating this year and will start
rolling through the mission. We will continue in that
process, and as we learn more about how the enlisted team
are doing in this, we will then take that information and
consider do we move that into the next RPA platform, maybe
an MQ9.

    But again, they're employed differently, so that is a
value judgment we'll have to look at as we understand how
well these airmen are doing, and right now in the training
they're doing outstanding.

    Senator Cotton: So you take it as an open question at
this point whether we should have enlisted personnel in the
future acting as pilots for MQ9s, to be considered in the
future based in light of the evidence we'll acquire during
the transition for the Global Hawk?

    General Harris: Yes, sir.

    Senator Cotton: Thank you.
Senator King?

Senator King: Just one follow-up on the B-21.

Whatever we build will be obsolete the day it comes off the line, and therefore I hope that the design takes that into account and will allow modular replacement upgrades, software, in some cases hardware, so that the platform itself can be maintained but that its capabilities can be modernized as technology develops. Is that the design concept, General?

General Bunch: Sir, that was a fundamental design concept. We went with the open mission systems architecture for the software so that everything would have an interface and we could advance technology as it evolved or we could make changes as adversaries evolved. We also designed the aircraft with additional power, electrical air conditioning in space in key areas that we may need to utilize so that we can grow the platform for the future.

Senator King: So if you have to add one cable, there’s a place for it.

General Bunch: If we need to add something, sir, we’ve got areas that we can do that. If we need to change out a component, if it ties into the open system architecture, we can do that. We can do it and keep competition in the platform for the life of the platform, and we can do it in a more efficient manner because we won’t have to test as much,
and I personally believe it will increase our cyber security as we go through that process.

Senator King: Excellent. I hope that you’ll keep in touch with the committee on that project as it moves forward. I think it’s one of the most important that we have, that the Air Force and the government is undertaking, and I hope we can have a continuing dialogue on that.

General Bunch: Sir, we welcome that. We are committed to complete transparency with the appropriately cleared individuals on all the defense committees. We have been working with the defense committees for four years before we awarded the contract so that everyone knew what we were trying to do, and we’re balancing all other transmissions to the public and what we can communicate against the security and the risks involved so that we can be as transparent as possible with the American public as well.

Senator King: But you feel at this point the contract and the development is on track?

General Bunch: Sir, I get monthly updates. We’ve done our initial baseline review. We’ve completed the preliminary design review. We’re going into detailed design review. The contractor is hiring people at the appropriate level to get the work done, and we’re tracking what they’re doing. Everything right now indicates to me that we haven’t slipped anything.
Senator King: Gentlemen, thank you very much for your testimony. It’s been very illuminating, and we look forward to working with you.

Thank you, Mr. Chairman.

Senator Cotton: Let me ask maybe a broader philosophical question about the B-21, but also especially what we’ve learned over the last 25 years.

General Bunch, do you think, from a development perspective, it’s best to develop prototypes and have a fly-before-you-buy methodology for large and complex systems like these aircraft?

General Bunch: It depends, in my experience, on how you set up the prototype project to go. I believe the best thing we can do, and I think the B-21 is an example of this, whether you build an exact prototype, I think a robust tech maturation and risk reduction phase is critical. If you recall, in that program we invested in the B-21 program with multiple contractors for quite a few years before we awarded a contract so that they could develop the technologies, mature those technologies. We were more informed buyers, and we had everything almost up to the preliminary design review before we awarded the contract. That cost us money up-front to be able to do it, but it also made the technology much more mature and made it much better for us to do.
There are areas, though, that we can prototype and we can go procure straight out of that. That’s an area we’re trying to do with some of our experimentation campaigns to see what the art of the possible is there, and the Congress has been very willing to give us rapid prototyping and rapid filling authorities that we will employ in those opportunities where that arises.

Senator Cotton: Developmental planning experimentation prototyping used to be resident in the Air Force’s systems command, which was disbanded 25 years ago. Since then we’ve had struggles with programs like the B-2, the F-22, the C-17, the F-35. Do you think it’s a coincidence that that command was disbanded and we’ve had these struggles since then, or is it a cause?

General Bunch: Sir, I wouldn’t tie it directly to the way that we reorganized to go to Air Force materiel command from systems command or logistics command. What I will say, we the Air Force, we let that developmental planning skill atrophy. That’s something that our chief, General Welch, and Secretary James viewed as something we needed to get refocused on, and they believe we need to do more experimentation and more of that type of prototyping activity to see what technology can do so that we can respond more rapidly.

I believe they made a real strong commitment to that
when they started budgeting $100 million a year into the
budget so that we could have it for experimentation and for
developmental planning. They stood up an office that’s in
Air Force materiel command that leads those efforts for us.

So I believe our stepping away and letting that atrophy
as we looked at capabilities and technology hurt us more
than a reorg. We’re refocused on that, and we’re invested
in those areas to see what technology can do so that we make
wise investments.

Senator Cotton: So an atrophy of skill sets more so
than a reorganization?

General Bunch: That is my view, sir. I believe it was
an atrophy of skill sets and a loss of, a lack of importance
placed on that as we moved forward, and we needed to refocus
on those efforts.

Senator Cotton: Thank you.

General Nowland, I want to speak about force structure,
capacity. I mentioned in my opening statement General
Hoog’s remarks from 2014 about Air Force capacity. In
response to this situation, in the NDAA a couple of years
ago we directed the Air Force maintain a minimum inventory
of 1,900 total fighter aircraft and 1,100 combat coded
fighters. Do those numbers enable the Air Force to meet
combatant commanders’ demands and execute our national
defense strategy today?
General Nowland: Mr. Chairman, that’s a fantastic question. If you were to think about our 55 fighter squadrons, the seven years of declining budgets have caused cracks within those. So we are working on our chief’s number-one priority of strengthening the squadrons. By strengthening the squadrons, we see fantastic results. I just returned from Jordan, where we have an F-15E squadron that is doing fantastic work. It’s about to drop its 5,000th bomb in the war against Isis, because it has all its manning and it has the weapon system support.

So when we strengthen all of them, and if we could strengthen all of our squadrons to be at the maximum capacity, we can absolutely execute the national defense strategy, but we would be very tight if you think about the changes that have happened with our adversary. That’s why the Air Force would like to grow to 60 fighter squadrons, and we would also like to build some attack squadrons in the future.

But in the end, Mr. Chairman, we can execute the strategy. But to be perfectly honest, it will be great airmen that will make it happen, and we’ll do it on the back of our airmen.

Senator Cotton: So Congress did so with an intent to stem further divestment in combat air power, and sometimes Congress can act as a blunt instrument, not a fine scalpel.
So given that intent, can you tell us what the Air Force’s actual requirement today is for total fighter aircraft and for total combat coded aircraft?

General Harris, you look like you’d like to answer.

General Harris: I would. As part of the requirements, sir, one of the things we’re looking at is we think the 1,900 number is a bare minimum at the floor. We think it’s probably closer to 2,100, a little above that for our fighter aircraft so that we can maintain probably 60 squadrons. We don’t want to grow to 60 now and still have a broken force or a force that is not as ready as it can be. We want to fix the 55 we have. We are not planning to go below the 1,900. We are struggling with the way the budget is rolling out to us to maintain that in the long term, but we do understand the task of the NDAA. We do not intend to go below the 1,900. We will keep our 55 squadrons. We will grow them healthy if we are able to get a stable, predictable budget that comes to us and continue to improve along that line.

General Bunch: It’s a complicated answer.

Senator Cotton: A simple question, complicated answer maybe?

General Bunch: Fifty-five fighter squadrons. We would like to have 24 aircraft per squadron, and that’s probably our most efficient use of those airplanes. Fifty-five times
24 is not 1,900. It is slightly above that number. Where we believe we have some of that change is some of our aircraft, our squadrons are manned at 18 airplanes per squadron. So that’s what drives some of these changes --

Senator Cotton: Is that a concession to budgetary necessity?

General Bunch: It really is. If we were unconstrained, we would have every squadron with 24 combat coded airplanes, plus a couple of backup or BAI spares, which is common in each one of these units, so if you lose an airplane you have it available already maintained and ready to go, employed on a daily basis.

Senator Cotton: Okay. General Bunch, I need to ask about the UH1 November helicopter replacement program. There’s a little bit of history here. Last year you submitted an out-of-cycle request to Chairman McCain for authorization to use provisions of the Economy Act of 1932 to purchase UH-60 Mike Model helicopters on the Army’s contract. These aircraft would be replacements for our aging November model helicopters used for the ICBM missile fields security and other utility missions as determined by the commander of STRATCOM.

The committee agreed, and we passed that request and authorization in the Senate version of the NDAA. Afterwards, the Air Force reversed that decision and decided
to proceed with the full and open competition, and then after receiving responses from potential offerors on the draft request for proposals, the Air Force determined none of the offerors, including the 60 Mike Model, met the requirements for the program.

What was the reason the Air Force rescinded the request for authorization to use the provisions of the Economy Act when your own business case analysis showed that the course of action met the requirement and provided the best value for the taxpayer?

General Bunch: Sir, the Department made a decision based on the amount of money that we were going to move into the year that we needed to --

Senator Cotton: The Department of Air Force or the Department of Defense?

General Bunch: The Department of Defense made a decision based on the amount of money we were going to need to move into those areas, and we were going on a full and open competition from that point forward.

Senator Cotton: Have requirements changed from the time the decision was made to use the Economy Act until the draft RFP was opened for full and open?

General Bunch: Sir, let me take that. I don’t believe we changed the requirements from that point forward. We did not.
Senator Cotton: General Harris --

General Bunch: We did not. He’s the requirements guy, and I’m the --

Senator Cotton: You’re shaking your heads. Can you answer for the record?

General Harris: The requirements did not change. Yes, sir.

Senator Cotton: Okay.

General Nowland, I understand that the commander of STRATCOM has rescinded the request for forces to provide additional security since mitigation measures have been in place to satisfy his security concerns. Do these mitigation measures now supplant entirely the need to recapitalize --

General Bunch: They do not, sir. They do not change the need to replace the UH1.

General Nowland: Sir, I’ll pitch in also, Mr. Chairman. What they’ve done is they’ve done tactic techniques and procedures and had airmen that have been able to. It does not replace the need to replace the airplane. The requirements are still valid. It’s just that the airmen have figured out a way to meet the requirements, but it’s a band-aid type of solution. We need new aircraft for that mission set.

General Bunch: Chairman Cotton, our nuclear arsenal remains secure, and we’re able to execute the mission, but
we still need the recap. We still need to get those in.

We’re doing a draft RFP in April. We will do the final RFP this summer. We’ll award a contract next year. We plan to field helicopters in the ’20 to ’21 timeframe, sir, depending on what the winner comes in with.

Senator Cotton: Thank you.

I have one final question about the budget, which will probably tie a bow on it. My first question, the constraints of a CR in the short term. This is going to be facing the long term, General Harris. You have many large, long-term procurement programs over the next decade. We touched on some of those but not all of them, nuclear enterprise modernization, F-35A, KC-46A, the B-21, JSTARS, the TXT-38 replacement, the Presidential aircraft replacement, and now there’s growing discussion of a penetrating counter-air and associated capability required to outpace our strategic competitors in the realm of air superiority.

I think it’s safe to say that these represent hundreds of billions of dollars required to recapitalize and modernize the Air Force and remain ahead of our near-peer competitors. Have you received indications from the new administration that the Air Force budget modernization program will support all of these modernization programs?

General Harris: Yes, sir, we have. We continue to
ensure that those modernization programs, which are large,
continue to fit into the budget and the planning cycle that we have. So that’s the work that my team does on a day-in and day-out basis. We’re doing as much as we can in parallel to solve as many problems as we can, and then we will also continue to modernize the current fleets and assets to make sure that we can sustain the capacity that we have and not drop below any of the requirements over the long term.

So it is part parallel, part serial to get at what you’re rightly pointing out are some of the concerns we have with the large budget of the future. The best thing we can get out of Congress is a stable budget that predicts, allows us to have a good prediction of where we will be in the future, and then we can right-size our acquisition and our approach to that to make sure we’re getting the best value we can.

Senator Cotton: General Bunch, General Nowland, do you have anything to add to General Harris’ answer?

General Bunch: I do not, sir.

General Nowland: Mr. Chairman, the modernization byway that we face is critical, and Congress and working with everyone, it’s critical to our operators to give our airmen the best chance of success. We are also thinking about how do we out-think our enemy. It’s multi-domain operations.
We need to think about how we operate in space, cyber, air domain, land, maritime domain, and bring joint effects to the battlefield.

I know we focus on all the money and how we’re doing it, but what we’re really going to do is enable our airmen to think multi-domain of how we can defeat our enemy who has watched us for 26 years and is working to defeat us. So we’re going to out-think our enemy while we simultaneously, with your help, reestablish and renew our weapons systems.

Senator Cotton: General Bunch?

General Bunch: Chairman Cotton, what I want to stress is our role as the acquisition, we have to do that efficiently and effectively to maximize the use of those dollars to get that capability, and our most important treasure, our airmen, America’s sons and daughters, that were entrusted to provide that equipment and have a decided advantage on the battlefield, which, as you’ve talked about earlier, we do not have as much as we did before. That has atrophied away, and we need to continue to go after that. That’s our commitment in the acquisition community to do that each and every day.

Senator Cotton: Thank you, gentlemen. Thank you very much for your time and your views. This has been a very wide-ranging and informative hearing. We appreciate your service to our country, and on behalf of all the airmen you
represent, thank you for their service as well.

This hearing is adjourned.

[Whereupon, at 5:02 p.m., the hearing was adjourned.]