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Subcommittee on Aviation

Hearing: "Starships and Stripes Forever – An Examination of the FAA's Role in the Future of Spaceflight"

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Chairman Larsen, Ranking Member Graves, and distinguished members of the subcommittee, thank you for the invitation to testify before you today. I am honored to appear alongside my esteemed industry colleagues, to share with you a Florida perspective on this topic of crucial importance to our nation's leadership in space transportation. I applaud your leadership and willingness to examine a broad range of issues regarding the role of the FAA in regulating and enabling space transportation, and the importance of smart investments by all in growing the U.S. space transportation infrastructure to compete successfully in this global enterprise - an enterprise exceeding $400 Billion in annual revenues.[1]

Background

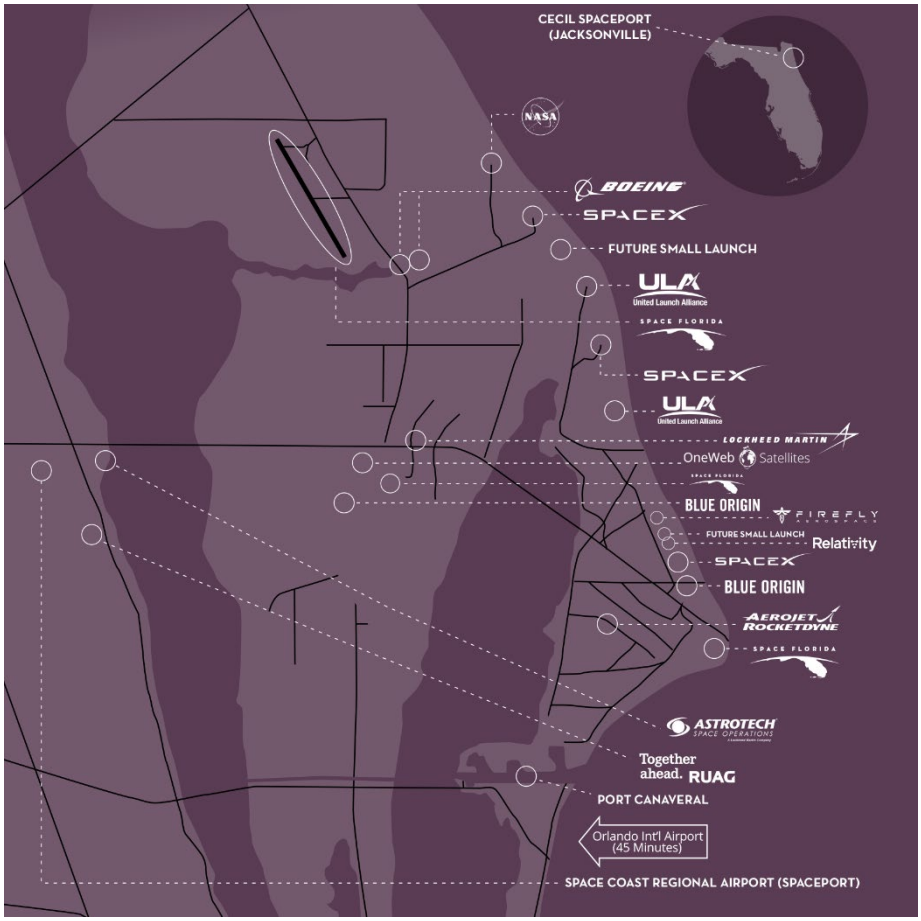
Space Florida is a public corporation and Independent Special District of the State of Florida, established by an act of the Florida Legislature in 2006 to strengthen Florida's position as a global leader in aerospace research, investment, exploration, and commerce[2]. To that end, it is the intent of the Legislature that Space Florida serve as the single point of contact for state aerospace-related activities with federal and state agencies, the military, and the private sector.

As Florida's aerospace industry development organization, we are committed to attracting and expanding the next generation of space industry businesses. Our team fosters the growth of a sustainable and world-leading aerospace industry in Florida, and supports the development of the Cape Canaveral Spaceport and other spaceport territories around the state. We accomplish this mission by implementing strategies and utilizing financial and other development tools designed to foster the growth of Florida's aerospace industry:

- Developing a master plan for growth and development of the Cape Canaveral Spaceport, and a statewide spaceports systems plan to guide development of a network of commercial spaceports and the supporting freight, logistics and supply chain infrastructure around Florida
- Partnering with NASA and the U.S. Space Force to make underutilized federal assets or assets no longer needed for mission purposes at Kennedy Space Center and Cape Canaveral Space Force Station available to commercial customers of the Cape Canaveral Spaceport

[1] The Space Report 2020: The Authoritative Guide to Global Space Activity, Space Foundation
[2] Chapter 331, Part II Florida Statutes

- Supporting infrastructure development to enable growth of commercial space companies at the Florida spaceports, aided by Florida Department of Transportation's Spaceport Improvement Program infrastructure funding
- Providing appropriate financing structures to enable growth of aerospace companies around Florida by constructing new facilities and acquiring machinery and equipment
- Increasing capital sources available to growing Florida aerospace companies through capital acceleration events conducted with the Florida Venture Forum and other financial institutions



Map of Cape Canaveral Spaceport tenants, with Space Coast Regional Spaceport and Cecil Spaceport inset

Florida's Place in 21st Century Commercial Space Transportation and the FAA's Role

Florida was where the nation entered the global commercial market for space transportation, beginning with the Government's launching of the earliest commercial telecommunications satellites. In 1998, Spaceport Florida's Cape Canaveral Spaceport launch site was used for the first launch from an FAA-licensed, state-operated site.[3]

[3] FAA Office of Commercial Space Transportation database of licensed launches; 2017 Cape Canaveral Spaceport Master Plan

Today, Florida hosts four of the FAA's 12 licensed commercial spaceports[4] and a corresponding majority of the launch licensing demand on the FAA. Of the licensed U.S. launches thus far this year, nearly 60% lifted off from privately developed and operated facilities at the Cape Canaveral Spaceport[5], the state's statutory designation of the territory comprised of the Cape Canaveral Space Force Station and the Kennedy Space Center[6]. Since the beginning of the FAA launch licensing program in 1989, Florida has accounted for more than half of this launch activity[7]. Landings are also becoming commonplace, adding to the activity at the spaceport.

It should be apparent then why Florida designated space transportation as a distinct modal element of its statewide Strategic Intermodal System, almost two decades ago. Space transportation is critical to our state and our country's inter-connected networks of air, maritime, and surface transportation. Just over the past six months, launches from the Cape have demonstrated a capability of lifting nearly 400 metric tons[8] of cargo into space. This may not seem like a lot of freight to the experts who are familiar with the metrics of U.S. seaport shipping, domestic air freight movement, or the volume of cargo hauled across our National Highway System. But this concentration of space launch capacity, all enabled by a growing fleet of commercially owned and operated U.S. launch providers, is unmatched anywhere else on the planet. It offers America a significant advantage as the international competition for economic and military dominance in space accelerates.

The launch cadence has increased dramatically over the last few years, with 20 launches in the last six months and 24 additional launches projected by the end of the year. 50+ launches a year for Florida will become the norm, with future projections far exceeding that number[9]. Yet, this is still an emerging industry, and requires care in allowing new systems entering the market to operate with a flexible regulatory framework. Accordingly, the FAA's challenge in effectively applying this framework and meeting an increasing cadence is placing new demands on its human and technical resources. Further, despite the efforts of the FAA and the other installation owners at the U.S. Eastern Range, not all overlapping and duplicative rule sets have been eliminated. While these streamlining efforts are continuing, as long as duplication and overlap continues, there will be an unnecessary burden on all parties, burden that does nothing to enhance public safety.

With Florida's increasing share of FAA licensing activity, coupled with the heavily-used domestic and international air traffic corridors along our coast, Space Florida urges an increased FAA effort in technology development and deployment to advance the safe and efficient integration of routine space transportation with commercial aviation. Florida is already providing an operational environment where industry working with FAA can identify and mature improvements to existing systems and procedures. We are eager to support further FAA focus in this area.

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[4] FAA Office of Spaceports
[5] FAA Office of Commercial Space Transportation database of licensed launches
[6] Chapter 331, Sec. 304(1), Part II Florida Statutes
[7] FAA Office of Commercial Space Transportation database of licensed launches
[8] 45th Space Launch Delta manifest; commercial launch provider vehicle payload capacity
[9] 45th Space Launch Delta launch data and forecast

Commercial Space Transportation Infrastructure: Role of USDOT and the FAA

The final Space Shuttle launch took place 10 years ago this July. In the past decade, there have been more launches of commercially owned and operated launch vehicles than there were Space Shuttle launches during that 30-year program. This commercial success has been enabled by more than $1.5 Billion in commercial spaceport investment by Florida and its industry partners[10]. This investment has produced a landscape of new and redeveloped launch complexes on sites once used for Government systems. It has also brought new manufacturing and support facilities operated by or for the commercial providers and customers.

Cape Canaveral Spaceport has emerged as the world's busiest commercial spaceport. This success validates the wisdom of a national space policy that promotes the participation of state governments to facilitate private sector investment and operation of space transportation infrastructure. States are powerful tools, with unique capabilities not found in federal agencies. To meet the challenge of assuring US leadership in the commercial marketplace, in exploration, and in national security space, this nation must bring all of its capacity to the contest. The metrics of commercial launch activity in Florida highlight the space mission outcomes of that policy: more than two dozen missions to the International Space Station, including the return of U.S. human spaceflight from American soil; hundreds of satellites serving global user markets for telecommunications, navigation, and other services; and new capabilities and services in support of NASA, U.S. Space Force, and international demand for space access.

The 2013 National Space Transportation Policy, which remains in place, directs federal agencies to facilitate access to the launch property on its ranges, purchase and use U.S. commercial space transportation capabilities and services, and refrain from activities that preclude, discourage, or compete with U.S. commercial space transportation activities[11].

While these policies have been very successful in renewing America's space launch capacity with commercial capabilities, the common use infrastructure that is vital to connecting these capabilities to the required support infrastructure has not kept up at the Cape and other locations around the country. Much of the property is still owned and operated in large measure by the Government, or by other public entities. The US Government should consider enabling the private partnership redevelopment of infrastructure at individual sites it no longer needs, upkeep of aging road and utility networks, and development of increased commodities and services needed for these commercial providers.

It is time for a strategic and effective infrastructure policy and program to grow the nation's commercial space transportation system. The U.S. Department of Transportation and the FAA should embrace space transportation as another modal element critical to the well-being of the nation's economy by including space transportation in the nation's infrastructure investments.

[10] Florida Department of Transportation/Space Florida rollup of 34 major projects funded with over $312 million from Florida's Spaceport Improvement Program combined with over $1.26 billion in private contribution from industry participants in the program since July 2011 (FY 2012). Does not include more than $450 million in Space Florida-facilitated private financing for commercial spaceport investments prior to the end of 2012.
[11] National Space Transportation Policy, 2013. Accessed through the Department of Commerce

Space Florida was a successful applicant for a USDOT $90 million Infrastructure for Rebuilding America (INFRA) Grant to enable the replacement of NASA's failing 1964 bridge over the Indian River[12], a primary surface transportation route used to transport both freight and people to the entire Cape Canaveral Spaceport. Florida's Department of Transportation and Space Florida are providing the non-federal match for this new asset as well as a connector highway to Space Florida's space commerce park located on NASA property.

We join with many of our colleagues in the commercial space transportation industry – licensed commercial spaceports and operators, including those using their own private sites – in calling on the Congress to authorize and fund an infrastructure program aimed at enabling America's space transportation leadership. We believe such a program should be adequately funded on a recurring annual basis, prioritize grant funding for sites where there is a demonstrated need by operational activity or clear market demand, and advance the objectives of a national strategy. Florida has employed such approaches in its own Spaceport Improvement Program. We would be happy to lend our experience and discuss this further with the Committee if helpful.

In reviewing the GAO report on commercial space transportation infrastructure[13], we agree with its findings that a broader consideration of approaches and funding sources other than those existing programs initially identified by the FAA is not only appropriate and timely, but necessary for the U.S. to sustain its leadership.

Why FAA's Role in Assuring Public Safety for People and Property Must Be Retooled

Just as we concur with the GAO's findings regarding the FAA's need to find new approaches to enabling infrastructure, we also concur with its findings that the FAA must adapt and grow its workforce to meet the challenges of a dynamic and rapidly expanding space industry. I want to acknowledge the progress that has been made by Associate Administrator Monteith in reorganizing and staffing to respond to these challenges. It is no easy task he has. We know that the successful implementation of new performance-based rules, and the ongoing revolution in emerging space technologies require the right people with the right skills doing the right jobs in the most efficient and effective manner possible.

The Federal Aviation Administration chartered the Streamlined Launch and Reentry Licensing Requirements Aviation Rulemaking Committee (ARC) in 2018 to provide a forum to discuss current and potential future regulations setting forth procedures and requirements for commercial space transportation launch and reentry licensing for the FAA's consideration. The FAA tasked the ARC to develop recommendations for a performance-based regulatory approach in which the regulations state safety objectives to be achieved, and leave design or operational solutions up to the applicant. Space Florida was honored to participate in this activity. Along with the rest of our industry, we are continuing to evaluate how the new Part 450 regulations will affect our ability to increase the operational density (geographic proximity) and intensity (frequency of operational activity) of space transportation operations at the Cape. We are keenly aware that the FAA's

[12] INFRA Grant Award, announced July 25, 2019 by the US Department of Transportation
[13] Commercial Space Transportation: FAA Should Examine a Range of Options to Support U.S. Launch Infrastructure, GAO report 21-154, released December 22, 2020

elaboration on how spaceports and operators may meet the new regulations through acceptable means of compliance will depend on the content of many Advisory Circulars which still need to be produced.

We continue to believe, as do many of the commercial operators we served on the ARC with, that the FAA should focus its public safety efforts on protection of people and property outside the controlled boundaries of a federal, state, or private launch site and redefine its safety role when it comes to regulating the activities of personnel that are not directly participating in a licensed activity, such as neighboring operators, or others on a space launch facility. That would mean a greater role and responsibility for the site operators to mitigate hazard risks to their employees and vendors.

The competitiveness of the U.S. in the international rivalry for space dominance depends on ensuring a regulatory structure that achieves its focus on public safety, while retaining the flexibility to enable new technologies and operational approaches to advance U.S. space transportation capabilities. Rulemaking is a lengthy process with long-lasting consequences. It is imperative to hear from all involved stakeholders to ensure we can get it right. For all future rulemaking and associated regulatory processes, I urge this Committee to ensure that the FAA engages with this unique industry early and often, so that the companies most knowledgeable about the risks and technologies involved can do their best to help inform the development of the FAA rules that all, regulators as well as operators, will have to live by.

Chairman Larsen, Ranking Member Graves, and members of the subcommittee, thank you again for the opportunity to testify today. I look forward to your questions.