**THE HISTORY OF CAPE CANAVERAL CHAPTER 3
NASA ARRIVES (1959-PRESENT)**

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**Space Program Has A Space Problem And A New Spaceport Is Born**

By the late 1950's, it was clear that geographic Cape Canaveral was running out of room, with launch sites lining the coastline from tip to tail. In April, 1960 the Department of Defense issued a report stating that, "(Cape Canaveral is) substantially saturated with missile launching facilities and test instrumentation."

This revelation proved problematic for the space program, especially an ambitious effort by NASA to build a vigorous manned spaceflight program. In support of the NASA manned spaceflight activities, it was clear that more land for launch areas was necessary.

Even before NASA embarked on a manned lunar landing program, the space agency planned to dramatically expand its use of large, heavy lift rockets. The first of these was the Saturn I, which was designed in a number of configurations to meet manned and unmanned NASA applications.

Initial NASA forecasts called for as many as 100 launches of Saturn-type rockets per year. Cape Canaveral could host just two Saturn I launch complexes, Launch Complex 34 and Launch Complex 37. The former could accommodate a maximum of four Saturn I launches per year, while Launch Complex 37 could accommodate a maximum of eight Saturn I launches per year.

It was clear that if NASA required 100 Saturn-type launches per year, or even 20 Saturn-type launches per year as mentioned in more conservative forecasts, more land than was available on Cape Canaveral would be needed. NASA also envisioned larger and larger rockets for introduction in the future. These rockets could not be serviced in the relative confines of geographic Cape Canaveral.

By early 1961, NASA developed and refined a mobile launch concept, whereby a central processing area would service multiple launch pads. This would make launch processing more efficient, decrease the time a rocket spent at the launch pad and decrease the amount of land required for each individual launch area.

Initial mobile launch concepts called for a vertical transfer of the rocket from a central assembly area to the launch pad by barge or train. In April, 1961 the NASA Future Launch Systems Office issued a report recommending that the assembly area and transfer method be designed specifically for the rocket being used.

A design for the specific technical criteria for the next Saturn-type launch complex, designated Launch Complex 39, was scheduled to be decided upon not later than January, 1964. A decision was made to design the launch complex to be technically compatible with whatever program NASA would be supporting, even if this proved to be substantially more expensive than existing launch complexes.

At the time, NASA had not decided upon a method of sending men to the Moon and returning them safely to Earth. Hence, the design of a new launch complex would have to wait until a specific program was adopted. There were three basic methods proposed, each of which would require different launch concepts.

The first would employ one huge rocket called Nova, which would send the astronauts on a direct ascent to the Moon. The second called for the launch of multiple Saturn-type rockets followed by an Earth-orbit rendezvous, then a trip to the Moon. The third called for the launch of multiple Saturn-type rockets followed by lunar-orbit rendezvous.

An announcement by President John F. Kennedy on May 25, 1961 that the U.S. would send men to the Moon and return then safely to Earth by the close of the 1960's forced NASA to settle on one launch method and construct its new launch facilities as soon as possible.

The Nova super booster plan was rejected early, because it could not have been accomplished until after 1970 at the earliest. Either of the two multiple Saturn-type rocket launching methods would be better, but would still require the construction of a large, new launch site.

On June 16, 1961 an ad hoc committee of the NASA Office of Space Flight Programs, headed by William Fleming, recommended that the construction of a new NASA launch site be given a high national priority. The NASA Launch Operations Directorate (LOD) based at Cape Canaveral and the Air Force Missile Test Center (AFMTC) were given the responsibility of agreeing on a launch site.

By July, 1961 the basic technical requirements of the launch site were decided. These requirements included:

Vertical assembly and checkout of the rocket on a mobile launcher umbilical tower housed in an environmentally controlled building,

Transfer of the assembled rocket and mobile launcher to the launch pad for final checkout, fueling and launch,

Control of launch operations from a remote launch control center with two firing rooms, one for checkout and one for launch,

Automated checkout and launch of the rocket.

A railroad type transfer system of the rocket to the launch pad was initially considered most feasible, but transfer by barge or even roadway were also retained as viable options.

As larger variants of the Saturn rocket emerged from the drawing boards, NASA refined the criteria to include more buildings for spacecraft processing and launch control, a launcher/transporter with a pedestal for the rocket and an arming tower to be located midway between the assembly area and the launch pad where solid propellant devices and ordnance would be installed.

Although Merritt Island, located to the north of Cape Canaveral, remained the prime site selection for NASA, a conflict with the Air Force developed. The Air Force wanted to reserve that land to allow expansion of Air Force rocket programs. This forced NASA to review the following possible launch sites:

Merritt Island

Man-Made Facilities Offshore Cape Canaveral

Mayaguana Island, Bahamas

Cumberland Island, Georgia

Mainland Site Near Brownsville, Texas

White Sands Missile Range, New Mexico

Christmas Island, South Pacific

South Point, Island Of Hawaii

White Sands was rejected because the site was landlocked. Excessive cost of development ruled out Mayaguana, Christmas Island and Hawaii. Brownsville, Texas was eliminated because rockets would need to fly over populated areas. Cumberland Island was rejected due to unacceptable interference with the Intracoastal Waterway and a lack of infrastructure.

In point of fact, constructing a man-made launch site offshore Cape Canaveral was found to cost only 10% more than constructing a launch site on Merritt Island, but maintenance costs were projected to be astronomical. These prevailing factors left Merritt Island as the only logical choice.

Merritt Island produced just two negative factors, which were the high cost of land acquisition and higher than average cost of utilities. Merritt Island remained a natural choice due to a strong, rocket-based economy, talented work force and existing range infrastructure at Cape Canaveral that would not need to be duplicated.

As a result, NASA requested appropriation for initial land purchases on Merritt Island on September 1, 1961. The first request was for a 200 square mile area immediately north and west of existing launch sites on Cape Canaveral.

On September 21, 1961 the Army Corps of Engineers was requested to begin acquiring the land by purchase or condemnation. Most of the land was purchased with the cooperation of the owners, but as was the case with Cape Canaveral, some land owners exhausted court action prior to leaving or selling.

This gave NASA access to land, but no firm plans for a launch site. In November, 1961 the Saturn C-5 (later renamed Saturn V) was proposed as a launch vehicle considered to be more efficient to support the lunar landing missions. It was not large enough to support a direct ascent to the Moon, but it was large enough to fly all elements on a single rocket for the other lunar landing options.

Development of the Saturn V was approved on December 4, 1961. In January, 1962 the Saturn V was officially selected as the rocket which would be used to support manned flights to the Moon. With the decision in hand, NASA began refining its design of Launch Complex 39 on Merritt Island.

Conflicts with the Air Force continued over use of the range, because NASA sought their own jurisdiction over their own launch activities. The Air Force sought to continue control of the range at Cape Canaveral, with NASA as a tenant. The Air Force viewed Merritt Island as an extension of the range at Cape Canaveral, but NASA wanted their own property rights.

With the issue of the placement of expanded Air Force facilities on Merritt Island also in question, a joint NASA-Air Force team began meeting on February 19, 1962 to iron out the logistical problems. It would take about a year to settle these issues.

Meanwhile, design of Launch Complex 39 took shape quickly. The main technical challenge was the method of transporting the huge Saturn V from the assembly area to the launch pad. Transport by barge was considered unsafe due to wind resistance, and a railway was considered to be too expensive.

NASA settled on a crawler/transporter, based upon the Bucyrus-Erie 2700 metric ton crawler shovel. A crawler roadway bed could be constructed for half the cost of a railway, so Bucyrus-Erie submitted design modifications of their crawler shovel for the purpose of transporting a Saturn V to NASA in March, 1962. The crawler/transporter concept was approved by NASA on June 13, 1962.

Designs for the rocket assembly area, launch control center, launch pads and a sprawling industrial support area also took shape in 1962. The total cost of Launch Complex 39 was estimated at $500 million, with construction time estimated at three years.

Marshall Space Flight Center in Huntsville, Alabama was selected to manage construction of the Saturn V rocket, the Manned Spacecraft Center in Houston, Texas was selected to manage construction of the spacecraft and the Launch Operations Directorate (LOD) at Cape Canaveral was selected to manage overall integration, testing and launch.

On March 7, 1962 NASA announced that Launch Complex 39 would be established as an independent NASA installation. As a result, the Launch Operations Directorate (LOD) was redesignated the Launch Operations Center (LOC). Dr. Kurt Debus was named LOC Director, after having served previously as LOD Director and Director of the Army Ballistic Missile Agency Missile Firing Laboratory on the Cape.

The conflict between the Air Force and NASA over the management of launch facilities on Merritt Island was settled on January 16, 1963 when an agreement was signed by NASA Administrator James Webb and Secretary of Defense Robert McNamara.

The agreement stressed the high national priority of the NASA manned lunar landing effort, and stated, "The Merritt Island Launch Area (MILA) is considered a NASA installation separate and distinct from the Atlantic Missile Range." NASA was given title and management of its property on Merritt Island.

The Air Force continued to manage the range, with NASA designated a user. NASA agreed to expand its land purchases by 40 square miles to provide enough land for future Air Force expansion. The Air Force decided to construct a huge launch facility for its Titan III rockets on land dredged from the Banana River north of Cape Canaveral. Only a tiny sliver of south Merritt Island was ever required.

In 1963, NASA negotiated land use agreements for submerged lands, and the National Wildlife Service was authorized to administer lands not needed for development. This resulted in the creation of the Merritt Island National Wildlife Refuge.

The National Wildlife Refuge was authorized to administer leases on citrus groves, fishing camps and operate Playalinda Beach, a long, pristine beach running north from Launch Complex 39. NASA maintained all other aspects of MILA management.

NASA land acquisition totaling about 88,000 acres was completed by February 1, 1964. As was the case on Cape Canaveral, existing buildings, including an abandoned Standard Oil gasoline station, were adapted for other use by NASA.

Dates differ as to exactly when Launch Complex 39 was activated, but there are three key dates to consider, one for each of the three main areas of the launch site.

A topping out ceremony was held atop the Vehicle Assembly Building on April 14, 1965 marking a milestone in the assembly area. Kennedy Space Center Headquarters was formally opened on May 26, 1965 marking a milestone in the industrial area.

And on May 25, 1966 just five years after the famous mandate from President Kennedy, a dummy Saturn V designated Saturn V 500-F was rolled out of the Vehicle Assembly Building to Launch Pad 39A, marking a milestone in the launch pad area.

A flurry of activity followed, involving two launch pads, Launch Pad 39A to the south and Launch Pad 39B to the north. This activity culminated in the launch of Apollo 11 from Launch Pad 39A on July 16, 1969. Indeed, a new spaceport had sent the first men to the Moon and back. Today, Launch Complex 39 remains largely intact, now in support of the NASA Space Shuttle program.

**Cape Canaveral Receives A Controversial Name Change**

On November 28, 1963 President Lyndon B. Johnson announced in a televised address that Cape Canaveral would be renamed Cape Kennedy in memory of President John F. Kennedy, who was assassinated six days earlier. President Johnson said the name change had been sanctioned by the U.S. Board of Geographic Names.

Executive Order Number 11129, issued by President Johnson on November 29, 1963 decreed that the NASA Launch Operations Center (LOC), including facilities on Merritt Island and Cape Canaveral, would be renamed the John F. Kennedy Space Center, NASA. That name change officially took effect on December 20, 1963.

The Air Force subsequently changed the name of the Cape Canaveral Missile Test Annex to Cape Kennedy Air Force Station (CKAFS). That name change took somewhat longer, but became official on January 22, 1964.

The City of Cape Canaveral, incorporated in 1962 and sandwiched between Port Canaveral to the north and Cocoa Beach to the south, decided by city council vote not to change its name, although debate was bitter. The name of Port Canaveral also remained unchanged.

The U.S. Board of Geographic Names confirmed the name change of geographic Cape Canaveral to Cape Kennedy in their Decision List Number 6303, September through December, 1963 published in the spring of 1964.

**The Range Receives Another Name**

On May 15, 1964 the Air Force Missile Test Center was redesignated the Air Force Eastern Test Range. This decision was made by the National Range Division, established by the Air Force on January 2, 1964 to develop a global network of integrated national missile ranges.

Also on May 15, 1964 the Atlantic Missile Range was redesignated the Eastern Test Range, the name it holds today. This name change, however, caused no controversy at all while a battle was raging over the name Cape Kennedy versus the name Cape Canaveral.

**Cape Kennedy Renamed Cape Canaveral Via The Back Door**

After a ten-year campaign by Florida residents failed to convince the U.S Congress to change the name Cape Kennedy back to Cape Canaveral, the name it had held for 400 years, the Florida Legislature took action. On May 18, 1973 Florida Governor Reubin Askew signed a Florida statute requiring that Cape Kennedy be renamed Cape Canaveral on all State of Florida official documents and maps.

The U.S. Board of Geographic Names responded on October 9, 1973 by agreeing to officially recognize the name change from Cape Kennedy to Cape Canaveral at the national level. The name John F. Kennedy Space Center, NASA remained the same.

Cape Kennedy Air Force Station was subsequently renamed Cape Canaveral Air Force Station (CCAFS), a name it would carry for the next two decades.

**Air Force Management Changes Hands At Cape Canaveral**

The Air Force Eastern Test Range was deactivated on February 1, 1977. Resources at Patrick Air Force Base were assigned to the 6550th Air Base Group while range activities were assigned to Detachment 1 of the Space and Missile Test Center, based at Vandenberg Air Force Base, California.

This reorganization was viewed as a temporary cost saving measure only. The immediate result was to place the Eastern Test Range, which retained its name, and the Western Test Range at Vandenberg Air Force Base under the same leadership.

The Eastern Space and Missile Center was activated at Patrick Air Force Base on October 1, 1979 to assume responsibility over all activities at the Eastern Test Range.

On October 1, 1990 the Eastern Space and Missile Center was transferred from Air Force Systems Command to Air Force Space Command, with the goal of establishing a new operational wing to oversee Eastern Test Range operations. The new operational wing was established as the 45th Space Wing on November 12, 1991.

In 1992, Air Force Space Command issued a special order which struck the name "Force" from all Air Force Stations under its command. This was done in an effort to standardize installation names within the Air Force Space Command. As a result, Cape Canaveral Air Force Station (CCAFS) was redesignated Cape Canaveral Air Station (CCAS).

On February 4, 2000 Air Force Space Command reversed its 1992 decision with Special Order GB-005, this special order reinstated the word "Force" to all Air Station names under its command.

The decision was made to counter criticism within the Air Force community that "Air Stations" by name did not distinguish Air Force Air Stations from Air Stations in other branches of service, such as Naval Air Stations. The decision was also intended to give named credit to Air Force personnel involved in the day to day operations of each Air Station.

As a result, Cape Canaveral Air Station (CCAS) was redesignated Cape Canaveral Air Force Station (CCAFS), the name it was originally given in 1973.

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