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United States Department of the Interior

National Park Service	DEC _ 7 1999
National Register of Historic Places	DEC = 1 1999
	TO TO TO TO THE TOTAL OF THE TO
This form is for use in nominating or requesting for individual proper	T NAT REGISTER THE HISTORIC PLACES INSTRUCTIONS IN HOW
to Complete the National Register of Historic Places Registration Form	(National Register Bulletin 16A). Complete
each item by Marking "x" in the appropriate box or by entering the inforto to the property being documented, enter "N/A" for "not applicable."	mation requested. If an item does not apply For functions, architectural classification.
materials, and areas of significance, enter only categories and s	subcategories from the instructions. Place
additional entries and narrative items on continuation sheets (NPA Form or computer, to complete all items.	10-900a). Use a typewriter, word processor,
1. Name of Property	
historic name Launch Control Center	
other names/site number 8BR1685	
other hames, site hamber bhildes	
2. Location	
street & number NASA, John F. Kennedy Space Ce	enter not for publication
city or town <u>Kennedy Space Center</u>	
state Florida code FL county Brevard	code_009 zip code_32899
3. State/Federal Agency Certification	
hereby certify that this _X nomination request for the documentation standards for registering properties in Places and meets the procedural and professional requirem In my opinion, the property _X _ meets does not meet I recommend that this property be considered significant locally. (See continuation sheet for additional locally. Signature of certifying official/Title NATIONAL AERONAUTICS AND SPACE ADMINISTRATE State of Federal agency and bureau In my opinion, the property meets does not meet (See continuation sheet for additional comments.) Signature of dertifying official/Title Florida State Historic Preservation Office, Divis	the National Register of Historic ments set forth in 36 CFR Part 60. Let the National Register criteria. Let X nationally statewide al comments.) OFFICER; Nov. 19,1999 Date Tool Date Date
State or Federal agency and bureau	
4. National Park Service Certification	nation of the Vegner Date of Action
I hereby certify that the property is: See continuation sheet determined eligible for the	nature of the Keeper Date of Action 21/2000

entered in the National Register. See continuation sheet.	Col R. Lorsier	1/21/2000
determined eligible for the		
National Register. See continuation sheet.		
determined not eligible for the		
National Register removed from the National		
Register.		
other, (explain:)		

Launch Control Cent	cer	Brevard, FL			
Name of Property		County and State			
5. Classification					
Ownership of Property (Check as many boxes as apply.)	Category of Property (Check only one box.)	Number of Resources within Property (Do not include previously listed resources in the count.)			
<pre> private public-local public-State _X public-Federal</pre>	<pre>_X building(s) district site structure object</pre>	Contributing Noncontributing 1 0 buildings 0 sites 0 0 structures 0 0 objects 1 0 Total			
Name of related multi (Enter "N/A" if property multiple property listing John F. Kennedy Space	is not part of a	Number of contributing resources previously listed in the National Register			
6. Function or Use					
Historic Functions (Enter categories from ininstructions.) INDUSTRY/PROCESSING/ communications	EXTRACTION:	Current Functions (Enter categories from INDUSTRY/PROCESSING/ EXTRACTION: communications			
TRANSPORTATION: air-		facility			
DEFENSE: aerospace fa	cility	TRANSPORTATION: air-related DEFENSE: aerospace facility			
7. Description					
(Enter categories from instructions.) MODERN MOVEMENT:		aterials Enter categories from instructions.) oundation_CONCRETE allsCONCRETE			
		fs <u>ASPHALT</u> er			

Narrative Description (Describe the historic and current condition of the property on one or more continuation sheets.)

Launch Control Center	Brevard, FL
Name of Property	County and State
8. Statement of Significance	
Applicable National Register Criteria (Mark "x" in one or more boxes for the criteria qualify the property for National Register Listing	Areas of Significance (Enter categories from instructions.)
_X A Property is associated with events that have made a significant contribution to the broad patterns of our history.	OTHER: SPACE EXPLORATION COMMUNICATIONS ARCHITECTURE
B Property is associated with the lives of persons significant in out past.	
_X C Property embodies the distinctive characteristics of a type, period, or method of construction or represents the work of a master, or possesses high artistic values, or represents a significant and distinguishable entity	Period of Significance 1965-1975
whose components lack individual distinct	1965
D Property has yielded, or is likely to yiel information important in prehistory or hi	
Criteria Considerations (Mark "x" in all the boxes that apply.) A owned by a religious institution or	(Complete if Criterion B is marked above.) N/A
used for religious purposes. B removed from its original locations. C a birthplace or grave. D a cemetery.	Cultural AffiliationN/A
<pre>E a reconstructed building, object or structure. F a commemorative property. X G less than 50 years of age or achieved</pre>	Architect/Builder UNKNOWN
significance within the past 50 years Narrative Statement of Significance	•
(Explain the significance of the property on one or	more continuation sneets.)
preliminary determination of individual listing (36 CFR 67) has been requested X previously listed in the National Register previously determined eligible by the National Register designated a National Historic Landmark recorded by Historic American Buildings Survey #	this form on one or more continuation sheets.) imary location of additional data: State Historic Preservation Office Other State agency Federal agency Local government University Other me of repository: NASA: Kennedy Space Center
recorded by Historic American Engineering Record #	

Launch Co	ntrol Cent	er	Breva	rd.	ŀΊ	
Name of Pro	perty		County and State			
10. Geogra	phical Dat	a				
Acreage of	Property	approximately	1.4 acres			
UTM Referen			2			
1 <u>17</u> <u>53</u>		erences on a conti	inuation sheet.)		
Zone East		Northing	s	7000	Easting	Northing
2	.IIIg	Not cliffing	4	Zone	Easting	3161940_
Zone East	ing	Northing	-	Zone	Easting	Northing
Verbal Boun		_				
(Describe t	he boundar	cies of the prop	perty on a co	ntinu	ation sheet.)
.						
Boundary Ju						,
		daries were se	lected on a c	conti	nuation sheet	•)
11. Form Pr						
		ahaye and Kimb				
		ogical Consulta				
		Box 5103				
city or tow	n <u>Sarasota</u>		state_	FL	zip cod	le_34277
Additional	Dogumentat	ion				
Continuation	-	items with the	completed ic	orm:		
Continuatio	n Sneets					
Maps						
	9 (7.5 or 1	5 minute series)	indicating th	e pro	perty's locati	on.
A Sketch in numerous rese	-	toric districts	and properties	havi	ng large acrea	ge or
Photographs						
		and white photo	ographs of the	nrone	rtu	
vebresenc	active black	. and white photo	grapino or the	prope	rcy.	
Additional	items					
(Check with	the SHPO	or FPO for any	additional i	tems	.)	
Property Ow						
		at the request	of SHPO or FR	20.)		
				,		
street & nu	mber		t	elepl	none	
city or tow	n		state		zip code	
Paperwork Reduct Register of Hist list properties, in accordance w Estimated Burder response includer reviewing the in	cion Act State coric Places t and to amend ith he Nation Statement: I ling time for form. Direct	ment: This information nominate properties existing listings. It all historic Preserva Public reporting burder reviewing instruction comments regarding Division, National Possible Public Publ	ion is being collers for listing or Response to this ration Act, as Amen en for this form ion, gathering and this burden estime	ected for determined d	or applications tine eligibility fis required to ob 5 U.S.C. 470 et somated to average aining data, and any aspect of the	o the National or listing, to tain a benefit eq.). 18.1 hours per completing and is form to the
and the Office of	of Management a	and Budget, Paperwork	reductions Project	ts (10	24-0018), Washing	ton, DC 20503.

National Register of Historic Places Continuation Sheet

Section number __7__ Page __1

Narrative Description Launch Control Center

Year Built: 1965

Facility Name: Launch Control Center

Facility Number: K6-900

Functional Name: Missile Control Facility (LC-39)

Technological Areas Supported: Central control for vehicle checkout and

launch.

Narrative Description of Facility Capabilities & Functions: Designed to control prelaunch and launch operations (NASA 1967:10-69; Butowsky 1981:27).

The Launch Control Center (LCC) is a reinforced concrete building on a mat foundation. It is 385 feet long by 166 feet wide by 76 feet high, with a total of 213,250 square feet of floor space. The building was designed to control the prelaunch and launch operations of the Saturn V and Saturn IB vehicles in the Apollo program. It has since been modified and refurnished to support Space Shuttle launches and is still in use (NASA 1967:10-69-70; Butowsky 1981:54).

Office, shop, and laboratory areas are primarily on the first two floors of the structure. The telemetry checkout station is on the second floor. has a net area of 5,614 square feet and serves as a telemetry relay station as well as a checkout for various stages of the spacecraft. Four firing bays are on the third floor, one for each of the high-bay cells in the VAB. However, only three of the bays are outfitted. The outfitted firing bays house equipment for launch operations and closed circuit television for supervision and control of all launch operations. Each of the equipped firing rooms has approximately 450 consoles containing the controls and displays required during spacecraft checkout. Fifteen display systems are required in each firing room. The firing rooms include a raised floor that permits delivery of cooling air to all operating equipment and provides adequate space for equipment interconnection and cabling. The side of the firing rooms facing the launch pads provides direct visual observation (Butowsky 1981:54).

The LCC, constructed in 1965, was designed in the International Style which started with architects Walter Gropius, Ludwig Mies van der Rohe, and Le Corbusier in Europe in the late 1920s. The style gained popularity in the 1930s which tapered off in the late 1940s. By the late 1960s and early 1970s

National Register of Historic Places Continuation Sheet

Section number __7__ Page __2_

it again gained favor for its sleek, modern lines. Typical examples of this style are characterized by:

a complete absence of ornament and by forms in which effects of mass and weight are minimized for the sake of an effect of pure volume; compositionally, a balance of unlike parts is more often than not substituted for axial symmetry. Flat roofs, smooth and uniform wall surfaces, windows with minimal exterior reveals...and windows that turn the corner of the building are among the means by which the effect of volume is obtained. Skeleton construction of steel or reinforced concrete is typical... Much use is made of the cantilever principle...Horizontality - most marked in the ribbon window - and rectilinearity predominate (Whiffen 1992:247-249).

The LCC displays the lack of ornament, effect of volume, flat roof, ribbon windows, skeleton construction of reinforced concrete, cantilevered upper floors, and horizontality which are hallmarks of the International Style. However, the LCC is symmetrical unlike many International Style structures. The LCC largely retains the same configuration as when constructed and continues to control prelaunch and launch operations.

National Register of Historic Places Continuation Sheet

Section number 8 Page 1

Narrative Statement of Significance Launch Control Center

The LCC contributes to the Historic Cultural Resources of the John F. Kennedy Space Center, Florida, under the historic context Apollo Program 1961-1975 and each of its three subcontexts under property type F.3, Launch Operation Facilities. It is significant at the national level under NRHP Criterion A in the area of space exploration and communications. The LCC is also significant under Criterion C under architecture. Because this structure has achieved significance within the past 50 years and is of exceptional importance in the areas of space exploration, communications, architecture, Criteria Consideration G applies. As the building designed to control the prelaunch and launch operations of the Saturn V and Saturn IB vehicles, it was vital to the operation of the Apollo program. modified with updated technology, the LCC still performs these vital operations for the Space Shuttle launches. It has substantially maintained its integrity of design, materials, workmanship, feeling, setting, location, and association, as an intact resource still serving as the "brain" of Launch Complex 39.

National Register of Historic Places Continuation Sheet

Section number 9 Page 1

Bibliography Launch Control Center

Anon.

1994 Facts: John F. Kennedy Space Center.

Butowsky, Dr. Harry A.

1981 <u>Reconnaissance Survey: Man in Space</u>. U.S. Department of the Interior, National Park Service, Washington, D.C. November.

National Aeronautics and Space Administration (NASA)

1967 <u>Technical Facilities Catalog Volume II</u> [NHB 8800.5 (II)].

March.

1974 <u>Technical Facilities Catalog Volume II</u> [NHB 8800.5A (II)].

October.

1995 Facility Utilization Charts: NASA Facilities at KSC, CCAFS, and

PAFB. July 1.

Whiffen, Marcus

1992 American Architecture Since 1780: A Guide to the Styles. Revised

ed. MIT Press, Cambridge, Massachusetts.

National Register of Historic Places Continuation Sheet

Section number 10 Page 1

Verbal Boundary Description Launch Control Center

The boundary extends from and parallel to the footprint of the Launch Control Center approximately 10 ft.

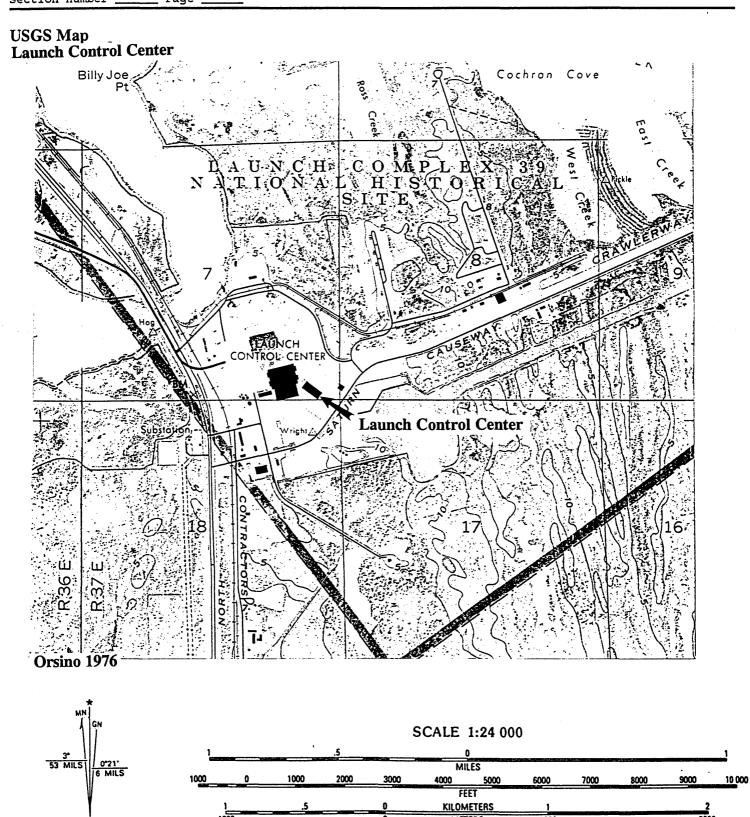
Boundary Justification

This includes the LCC, historically required for its functions, as well as the enclosed elevated bridge that links the LCC to the VAB.

National Register of Historic Places Continuation Sheet

Section number 11 Page 1

UTM GRID AND 1988 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

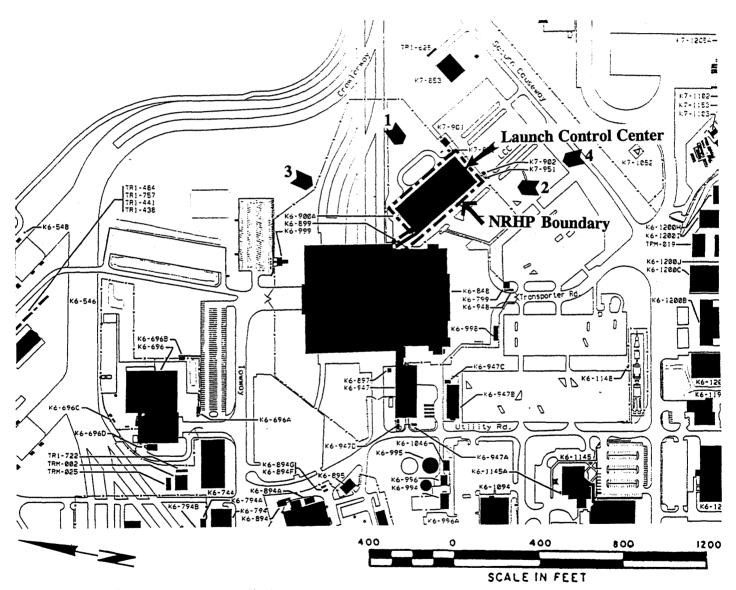


National Register of Historic Places Continuation Sheet

Section number 11 Page 2

Site Plan

Launch Control Center (1995)



 \blacksquare # = photo number and direction

Source: NASA Facility Utilization Charts, Chart F, July 1, 1995.

National Register of Historic Places Continuation Sheet

Section number ___11 Page ___3

List of Photographs Launch Control Center

- 1. Launch Control Center (LCC)
- 2. Brevard County, Florida
- 3. Kennedy Space Center
- 4. June 1965
- 5. Kennedy Space Center
- 6. LCC, northeast elevation, looking southwest (KSC-65C-3819)
- 7. 1 of 7
- 1. LCC
- 2. Brevard County, Florida
- 3. Kennedy Space Center
- 4. September 1965
- 5. Kennedy Space Center
- 6. LCC, southwest and southeast elevations, looking north (KSC-65C-6143)
- 7. 2 of 7
- 1. LCC
- 2. Brevard County, Florida
- 3. Daniel Delahaye & Kimberly Hinder
- 4. September 1996
- 5. Archaeological Consultants, Inc.
- 6. LCC, northeast and northwest elevations, looking south
- 7. 3 of 7
- 1. LCC
- 2. Brevard County, Florida
- 3. Daniel Delahaye & Kimberly Hinder
- 4. September 1996
- 5. Archaeological Consultants, Inc.
- 6. LCC, southeast and southwest elevations, looking north
- 7. 4 of 7

National Register of Historic Places Continuation Sheet

Section number 11 Page 4

List of Photographs Launch Control Center

- 1. LCC
- 2. Brevard County, Florida
- 3. Kennedy Space Center
- 4. November 1967
- 5. Kennedy Space Center
- 6. LCC, interior, Firing Room 1 (KSC-67-18315)
- 7. 5 of 7
- 1. LCC
- 2. Brevard County, Florida
- 3. Kennedy Space Center
- 4. January 1971
- 5. Kennedy Space Center
- 6. LCC, interior, Firing Room 2 (KSC-71P-102)
- 7. 6 of 7
- 1. LCC
- 2. Brevard County, Florida
- 3. Kennedy Space Center
- 4. April 1990
- 5. Kennedy Space Center
- 6. LCC, interior, Firing Room (KSC-90PC-626)
- 7. 7 of 7