



HISTORICAL STRUCTURE FORM
FLORIDA MASTER SITE FILE
Version 4.0 1/07

Site #8 BR02908
Field Date 1-24-2012
Form Date 2-8-2012
Recorder # 2

[X] Original
[ ] Update

Shaded Fields represent the minimum acceptable level of documentation.
Consult the Guide to Historical Structure Forms for detailed instructions.

Site Name(s) (address if none) NLAX 170
Survey Project Name Historic Survey of NASA Railroad System
National Register Category (please check one) [ ] building [X] structure [ ] district [ ] site [ ] object
Ownership [ ] private-profit [ ] private-nonprofit [ ] private-individual [ ] private-nonspecific [ ] city [ ] county [ ] state [ ] federal [X] Native American [ ] foreign [ ] unknown

LOCATION & MAPPING

Street Number Direction Street Name Street Type Suffix Direction
Address Contractor Road
Cross Streets (nearest / between) Schwartz Road and Saturn Causeway
USGS 7.5 Map Name ORSINO USGS Date 1976 Plat or Other Map
City / Town (within 3 miles) Titusville In City Limits? [ ] yes [X] no [ ] unknown County Brevard
Township 22S Range 37E Section 19 1/4 section: [ ] NW [ ] SW [ ] SE [X] NE Irregular-name:
Tax Parcel # Landgrant
Subdivision Name Block Lot
UTM Coordinates: Zone [ ] 16 [X] 17 Easting 533794 Northing 3160101
Other Coordinates: X: Y: Coordinate System & Datum
Name of Public Tract (e.g., park)

HISTORY

Construction Year: 1985 [X] approximately [ ] year listed or earlier [ ] year listed or later
Original Use Other From (year): To (year):
Current Use Other From (year): To (year):
Other Use Railcar From (year): To (year):
Moves: [ ] yes [X] no [ ] unknown Date: Original address
Alterations: [ ] yes [X] no [ ] unknown Date: Nature
Additions [ ] yes [X] no [ ] unknown Date: Nature
Architect (last name first): Builder (last name first): Davidson-Kennedy
Ownership History (especially original owner, dates, profession, etc.) NASA, 1985-present

Is the Resource Affected by a Local Preservation Ordinance? [ ] yes [X] no [ ] unknown Describe

DESCRIPTION

Style Not applicable Exterior Plan Not applicable Number of Stories NA
Exterior Fabric(s) 1. Steel 2. 3.
Roof Type(s) 1. 2. 3.
Roof Material(s) 1. 2. 3.
Roof secondary strucs. (dormers etc.) 1. 2.
Windows (types, materials, etc.)

Distinguishing Architectural Features (exterior or interior ornaments)

Ancillary Features / Outbuildings (record outbuildings, major landscape features; use continuation sheet if needed.)

Table with 3 columns: DHR USE ONLY, OFFICIAL EVALUATION, DHR USE ONLY. Contains fields for NR List Date, SHPO criteria, OWNER OBJECTION, and NR Criteria for Evaluation.

## DESCRIPTION (continued)

Chimney: No. \_\_\_\_\_ Chimney Material(s): 1. \_\_\_\_\_ 2. \_\_\_\_\_ 3. \_\_\_\_\_  
 Structural System(s): 1. \_\_\_\_\_ 2. \_\_\_\_\_ 3. \_\_\_\_\_  
 Foundation Type(s): 1. \_\_\_\_\_ 2. \_\_\_\_\_  
 Foundation Material(s): 1. \_\_\_\_\_ 2. \_\_\_\_\_  
 Main Entrance (stylistic details) \_\_\_\_\_

Porch Descriptions (types, locations, roof types, etc.) \_\_\_\_\_

Condition (overall resource condition):  excellent  good  fair  deteriorated  ruinous

Narrative Description of Resource See continuation sheet

Archaeological Remains \_\_\_\_\_  Check if Archaeological Form Completed

## RESEARCH METHODS (check all that apply)

- |                                                                        |                                                      |                                                              |                                                    |
|------------------------------------------------------------------------|------------------------------------------------------|--------------------------------------------------------------|----------------------------------------------------|
| <input checked="" type="checkbox"/> FMSF record search (sites/surveys) | <input checked="" type="checkbox"/> library research | <input type="checkbox"/> building permits                    | <input type="checkbox"/> Sanborn maps              |
| <input type="checkbox"/> FL State Archives/photo collection            | <input type="checkbox"/> city directory              | <input checked="" type="checkbox"/> occupant/owner interview | <input type="checkbox"/> plat maps                 |
| <input type="checkbox"/> property appraiser / tax records              | <input checked="" type="checkbox"/> newspaper files  | <input type="checkbox"/> neighbor interview                  | <input type="checkbox"/> Public Lands Survey (DEP) |
| <input type="checkbox"/> cultural resource survey (CRAS)               | <input checked="" type="checkbox"/> historic photos  | <input checked="" type="checkbox"/> interior inspection      | <input type="checkbox"/> HABS/HAER record search   |
| <input type="checkbox"/> other methods (describe) _____                |                                                      |                                                              |                                                    |

Bibliographic References (give FMSF manuscript # if relevant, use continuation sheet if needed) See continuation sheet

## OPINION OF RESOURCE SIGNIFICANCE

Appears to meet the criteria for National Register listing individually?  yes  no  insufficient information

Appears to meet the criteria for National Register listing as part of a district?  yes  no  insufficient information

Explanation of Evaluation (required, whether significant or not; use separate sheet if needed) See continuation sheet

Area(s) of Historical Significance (see *National Register Bulletin 15*, p. 8 for categories: e.g. "architecture", "ethnic heritage", "community planning & development", etc.)

1. Other 3. \_\_\_\_\_ 5. \_\_\_\_\_  
 2. Transportation 4. \_\_\_\_\_ 6. \_\_\_\_\_

## DOCUMENTATION

Accessible Documentation Not Filed with the Site File - including field notes, analysis notes, photos, plans and other important documents

- 1) Document type All materials at one location Maintaining organization Archaeological Consultants Inc  
 Document description \_\_\_\_\_ File or accession #'s P90260
- 2) Document type \_\_\_\_\_ Maintaining organization \_\_\_\_\_  
 Document description \_\_\_\_\_ File or accession #'s \_\_\_\_\_

## RECORDER INFORMATION

Recorder Name Christopher Berger Affiliation Archaeological Consultants Inc  
 Recorder Contact Information 8110 Blaikie Court, Suite A, Sarasota, FL 34240/941-379-6206/ACIFlorida@comcast.net  
 (address / phone / fax / e-mail)

## Required Attachments

- ① USGS 7.5' MAP WITH STRUCTURE LOCATION PINPOINTED IN RED
- ② LARGE SCALE STREET, PLAT OR PARCEL MAP (available from most property appraiser web sites)
- ③ PHOTO OF MAIN FACADE, ARCHIVAL B&W PRINT OR DIGITAL IMAGE FILE  
 If submitting an image file, it must be included on disk or CD AND in hard copy format (plain paper is acceptable).  
 Digital image must be at least 1600 x 1200 pixels, 24-bit color, jpeg or tiff.

## CONTINUATION SHEET

**Narrative Description**

NLAX 170 (8BR2908) is a 70-ton aft skirt railroad car within the NASA Kennedy Space Center (KSC) Railroad System. The steel flatcar is 66' long, weighs 70 tons, and features a double well design. The car rests on four axles, and two steel vertical bulkhead beams approximately 12' tall with supports are located at both ends (KSC-TO, Folder No. 6670-5-170).

NLAX 170, along with NLAX 171 (8BR3042), was built for NASA specifically to transport solid rocket booster (SRB) components. Davidson-Kennedy Company of Atlanta, Georgia, was awarded the contract to build the car on July 22, 1983, and they subcontracted the carbody design to Nelson Associates of Springfield, Virginia. The railcars were slow to receive Association of American Railroad approval, likely because of their uncommon design. NLAX 170 cost \$84,571 and arrived at the KSC on April 19, 1985 (KSC-TO, Folder No. 6670-5-171). It was designed to hold one frustum, one forward skirt, and two aft skirts. Boxes that contained the ground support equipment used to load, transport, and off load SRB components were strapped to the car's deck. According to correspondence dated July 30, 1987, the car traveled from NASA's Marshall Space Flight Center and McDonnell Douglas Astronautics Company West in Huntington Beach, California, where the SRB components were manufactured, to KSC. Before NLAX 170 and NLAX 171, these four SRB components required three trucks and a railcar for transport. They are the only two of their kind in the world, and the NASA Railroad crew referred to them as "Carnival Cars" because of their unique appearance.

According to NASA KSC Transportation Office correspondence, NLAX 170 was leased to United Space Boosters Inc. for cross-country conveyance in the late 1980s. Records also show NLAX 170 received minor damage when it scraped a bridge abutment in Missouri on March 1, 1990, while en route from Long Beach to the KSC; however, the railcar was allowed to continue to the center (KSC-TO, Folder No. 6670-5-170).

**Explanation of Evaluation**

NLAX 170 is considered eligible for listing in the National Register of Historic Places as a contributing resource to the NASA KSC Railroad System Historic District (8BR2932), which is eligible in the context of the U.S. Space Shuttle Program (ca. 1969-2011). The car is significant because it is one of only two railcars within the NASA KSC Railroad System commissioned by NASA and designed for a specified use. The railcar is also significant because of the role it played in support of the Space Shuttle Program in the transport of SRB components; it could carry four irregularly shaped SRB components that would have otherwise required three trucks and a railcar to transport. Thus, the cars offered a great deal of time and financial savings to NASA in their more than two decades of service. NLAX 170 has retained a high level of integrity and appears nearly identical to its original appearance.

**Bibliographic References**

NASA KSC, Transportation Office (KSC-TO)

Var. Folder No. 6670-5-170: NLAX 170 SRB Components Railcar

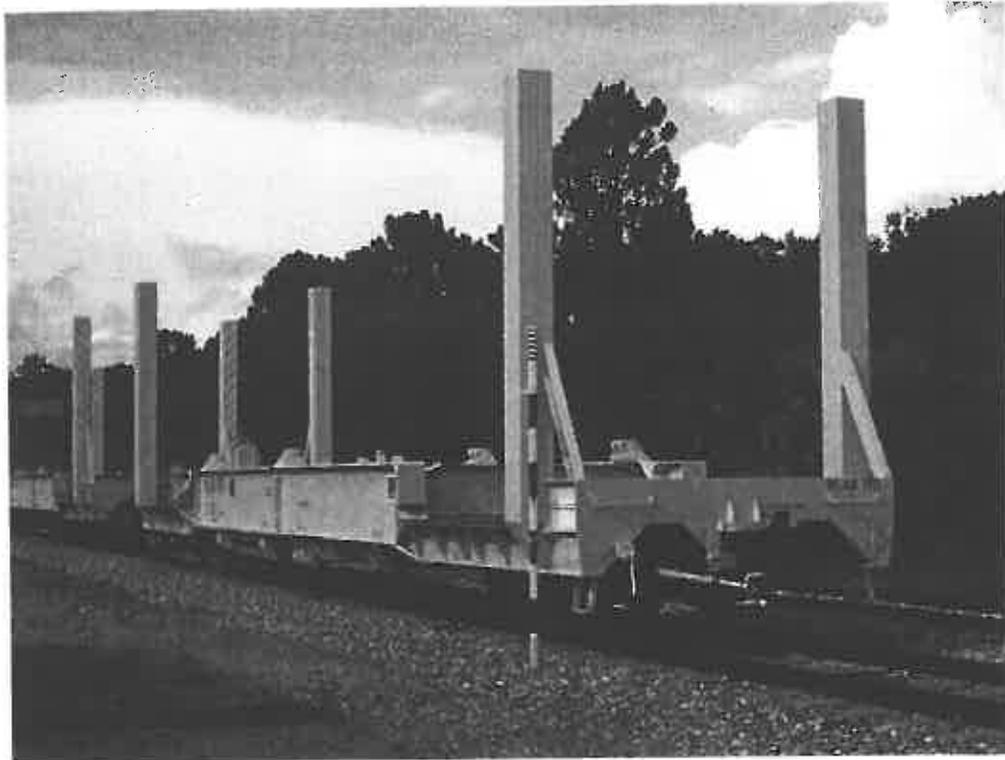
Var. Folder No. 6670-5-171: NLAX 170 SRB Components Railcar

Stephens, Mike (KSC Railroad technician)

2012 Email interview by Christopher Berger. March 7, 2012. Notes on file at Archaeological Consultants Inc.



PHOTOGRAPHS



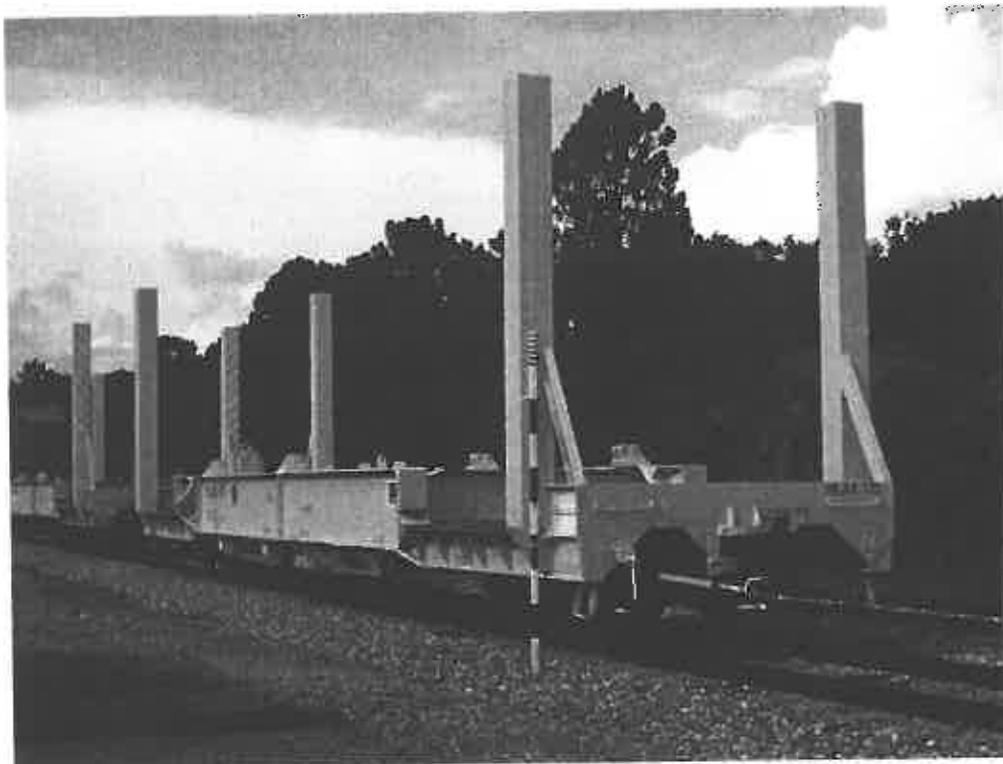
NLAX 170, 70-Ton Aft Skirt, sides



NLAX 170 and NLAX 171, 70-Ton Aft Skirt railcars, top  
**ARCHAEOLOGICAL CONSULTANTS, INC.**



PHOTOGRAPHS



NLAX 170, 70-Ton Aft Skirt, sides



NLAX 170 and NLAX 171, 70-Ton Aft Skirt railcars, top  
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**USGS**

Orsino

Township 22 South, Range 37 East, Section 19  
National Geographic Society (2011) *USA Topo Maps*.

