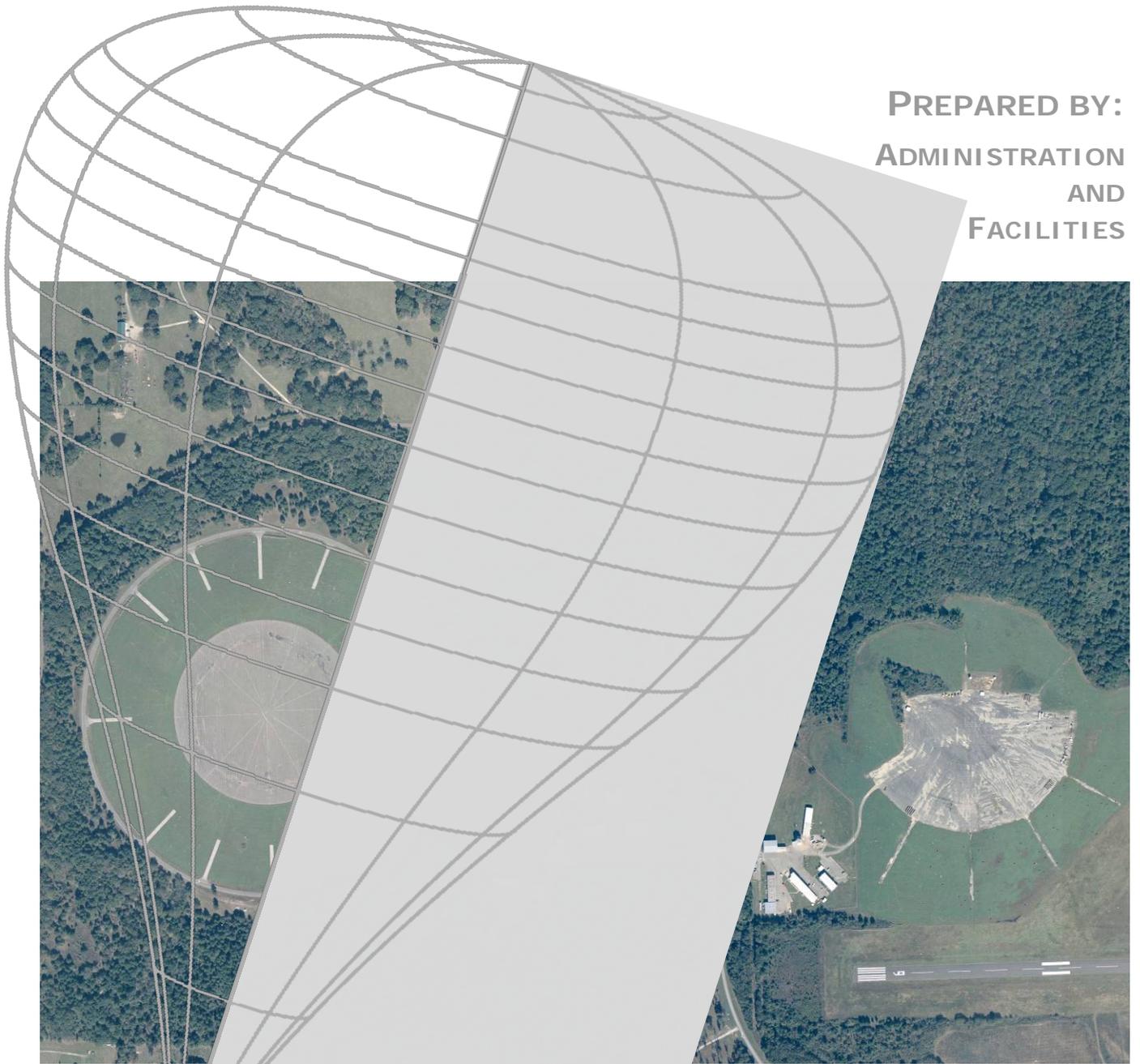


REAL PROPERTY MANUAL

PREPARED BY:
ADMINISTRATION
AND
FACILITIES



Revised July 2013



COLUMBIA SCIENTIFIC BALLOON FACILITY

COLUMBIA SCIENTIFIC BALLOON FACILITY

PALESTINE, TEXAS

REAL PROPERTY MANUAL

JULY 2013

ACRONYMS AND ABBREVIATIONS

AC	air conditioning
BTU	British thermal unit
CSBF	Columbia Scientific Balloon Facility
ft	feet
ft ²	square feet
GSA	General Services Administration
GSFC	Goddard Space Flight Center
HVAC	heating, ventilation, and air conditioning
NASA	National Aeronautics and Space Administration
NCAR	National Center for Atmospheric Research
NOAA	National Oceanic and Atmospheric Administration
NSBF	National Scientific Balloon Facility
NSF	National Science Foundation
QA	Quality Assurance
UCAR	University Corporation for Atmospheric Research
USCRM	U.S. Climate Reference Network
WC	Water Closet
WFF	Wallops Flight Facility

PREFACE

BACKGROUND

The Columbia Scientific Balloon Facility (CSBF) in Palestine, Texas was established in the early 1960s under the sponsorship of the National Science Foundation (NSF). The purpose of the CSBF is to provide a permanent complex for scientific balloon flight operations. Since its inception in the early 1960s, the CSBF has been a Government-owned, contractor-operated institution. Originally called the Scientific Balloon Facility, it was renamed the National Scientific Balloon Facility (NSBF) on 1 July 1972.

In October 1982, sponsorship of the NSBF was transferred from the National Science Foundation to the National Aeronautics and Space Administration (NASA), and the NSBF became a separate entity under the University Corporation for Atmospheric Research (UCAR). At that time, the NSF issued NASA an indefinite user permit for all land and other real property at NSBF in Palestine, Texas. In October 1987, the NASA contract to operate the NSBF was awarded to the Physical Science Laboratory under the auspices of New Mexico State University in Las Cruces, New Mexico. The contract is administered by Goddard Space Flight Center's (GSFC) Wallops Flight Facility in Wallops Island, Virginia.

On 23 August 2005, NASA signed off on a plan by U.S. Congressman Jeb Hensarling (R-Texas) to rename the NSBF to the Columbia Scientific Balloon Facility (CSBF) in honor of the seven astronauts who perished during the loss of the Space Shuttle Columbia.

SERVICES

The CSBF has the following threefold mission:

- To plan and develop facilities and provide operations services to meet the approved ballooning requirements of the scientific community
- To perform the necessary research and development to meet future scientific ballooning requirements
- To provide consulting services in the field of scientific ballooning

The CSBF provides complete balloon operations services and engineering support to the United States and foreign scientific communities. The operational services include:

- Balloon inflation
- Launching
- Tracking and recovering the balloon payload
- Telecommanding and data retrieval with reliable electronics systems

Engineering support services include:

- Balloon systems design
- Balloon material research
- Electronics design
- Gondola design
- Thermal analysis

PALESTINE, TEXAS FACILITY

The CSBF is five miles northwest of the City of Palestine in Anderson County, Texas. The facility is west of the Palestine Municipal Airport, accessible from U.S. Highway 287 via Farm-to-Market Road 3224. Two sides of the property are defined by the north-south and east-west runways of the airport (see Figure 1). There are 22 buildings in the complex; 10 are NSF-owned and 12 are NASA-owned. The buildings and two paved launch areas are situated on 473.85 acres of land, of which 165.97 acres are leased from the City of Palestine and the remaining 307.88 acres are listed as NSF real property. The facility is used exclusively for scientific balloon flight operations and engineering. All properties are being fully used in support of the CSBF mission and are essential to program requirements.



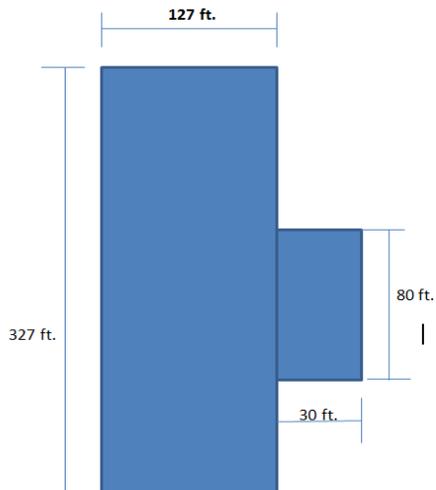
Figure 1 CSBF Base and Palestine Airport

FORT SUMNER, NEW MEXICO FACILITY

Remote site operations include a launch facility in Fort Sumner, New Mexico (see Figure 2). NASA purchased from the City of Fort Sumner, New Mexico 8.15 acres of land for use as a remote launch site at the Fort Sumner, New Mexico Municipal Airport. In 1991, an 80 x 80-ft building was erected on this acreage to serve as the staging facility for balloon missions launched from Fort Sumner. There is currently no permanent staff at the Fort Sumner location. Two leases are in place in connection with the Fort Sumner facility. A hangar is leased from the Village of Fort Sumner which ends 31 December 2013 at an annual cost of \$12,000.00 and a parcel of land used as a down-range facility at the Winslow-Lindbergh Regional Airport was leased from the City of Winslow AZ, commencing 5 March 2009 and ending 28 February 2014.



Figure 2 Fort Sumner Launch Facility at the Fort Sumner Municipal Airport



Leased Hangar at Fort Sumner Airport



Leased Parcel of Land at Winslow Airport

ADDITIONAL INFORMATION

CURRENT OUT-GRANTS

NOAA WIND PROFILER

Through an agreement between the National Oceanic and Atmospheric Administration (NOAA) and NASA, NOAA installed a 404-MHz wind profiler at CSBF. Wind profilers are specifically designed to measure vertical profiles of horizontal wind speed and direction from near the surface to above the tropopause. The NOAA Profiler Network (NPN), consisting of 35 unmanned Doppler radar sites located in 18 central US states and Alaska, provides hourly vertical wind profile data. The data produced by this network are distributed to the National Weather Service (NWS), environmental research groups, and Universities.

U.S. CLIMATE REFERENCE NETWORK

NOAA has set up a U.S. Climate Reference Network (USCRN) data collection center at the CSBF. Its purpose is to provide future long-term high-quality observations of surface air temperature and precipitation that can be coupled to past long-term observations for the detection and attribution of present and future climate change. USCRN measures the following:

- Air temperature
- Ground surface temperature
- Precipitation
- Relative humidity
- Soil moisture and temperature
- Solar radiation
- Wind speed

VERIZON CELLULAR SITE

To improve the quality of CSBF cellular signal, Alltel has placed an antenna on the NASA water tower. A small fenced building was erected at the base of the water tower to house the receiver and transmitters.

FLOODPLAINS OR WETLANDS

According to a survey dated 18 September 1972, which is available for review, the property is not in a floodplain or wetland area.

HISTORIC OR CULTURAL SIGNIFICANCE

None of the real property at the CSBF is listed in the National Register of Historic Places.

MINERAL ACTIVITY

The PSL/CSBF does not have records or information regarding the mineral rights or deposits of the NSF owned Acreage.

UTILITIES

Table 1 lists companies currently providing utility services to CSBF.

Table 1 Utility Providers

SERVICE	COMPANY
Electricity	TXU Energy
LP Gas	Gregg LP Gas Co.
Telephone	CenturyLink
Water	City of Palestine

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1 INTRODUCTION

1.1 ORIGIN OF REAL PROPERTY DATA

An Indefinite Use Permit, effective 1 October 1982, was issued by the NSF to NASA for all land and other real property at the Columbia Scientific Balloon Facility (CSBF) in Anderson County, Palestine, Texas.

The information compiled for the CSBF Real Property Manual resulted from extensive research. Information and assistance were received from the following sources:

- National Science Foundation (NSF)
- University Corporation for Atmospheric Research (UCAR)
- National Center for Atmospheric Research (NCAR)
- Deloitte, Haskins, Sells – NCAR Accounting Firm
- The July 1972 Master Plan Study for NCAR Scientific Balloon Facility compiled by Bernard Johnson Inc., Architects, Planners, Engineers
- NCAR Financial Statement totals obtained 9-27-85 (see Table 2)
- General Services Administration (GSA) Real Property Survey, June 1990
- Anderson County Appraisal District
- Drawings and plats
- Existing property records
- Purchase orders/vendor files
- Building measurements
- CSBF personnel
- Local building contractors
- Real estate agents

The values were determined by measuring the buildings; using drawings and plats along with a process of elimination using known values; comparing buildings of similar design, composition, and construction dates; and using historical information.

Table 2 NCAR Financial Statement of NSF Real Property Transferred on 27 September 1985

PROPERTY	COST	TOTAL
Land		\$35,141.44
Buildings	\$152,472.34 555,820.24 37,413.44 10,202.54 8,914.74	764,823.30
Other Structures	1,809.81 999,762.79 4,565.14	1,006,137.74
New Launch Pad		30,000.00
Other Costs on NCAR General Ledger (New Pad)		245,991.22
TOTAL VALUE OF NSF REAL PROPERTY TRANSFERRED TO NASA 27 SEPTEMBER 1985		\$2,082,092.70

1.2 CHRONOLOGICAL LISTING OF NSF REAL PROPERTY

Table 3 Chronological Listing of NSF Real Property

YEAR ACQUIRED	DESCRIPTION	BUILDING NUMBER	COST/VALUE
1962	Land – 307.88 acres		\$ 35,141.44
	Administration Transferred to NASA 1998	1	152,472.34 (152,472.34)
1963	Launch Pad – East (Leased)		n/a
	Fire Station and Battery Storage	2	37,413.44
	Stratoport I	5	52,779.90
	Facilities Storage	6	4,564.14
1963 1978 1989	Flight Operations Front Shop \$24,500.00 Parachute Pull Tunnel \$10,202.54 New Addition \$114,832.00	4	149,534.54
1965	Coronaport Disposition April 2000	8	41,469.92 (41,469.92)
1966/68/94	Facility Services/Equipment Maintenance	3	31,405.00
1966	Communications System		10,000.00
1968	Vehicle Storage I (Old Tim Shed)	7	25,000.00
1971	Portable Offices Disposition April 2000	1A, 1B	8,914.74 (8,914.74)
1974/78	Launch Pad – West		1,103,252.73
1974/94	Roads, Walkways, and Parking Lots		169,000.00
1975	Stratoport II Disposition 2002	13	20,132.80 (20,132.80)
1977	Guard House Disposition 1991	10	1,809.81 (1,809.81)
	Staging	11	459,302.00
1979	Balloon Storage	14	42,070.00
	Tractor Shed	17	7,257.00
1980	Office Trailer Disposition 2003	12	4,025.20 (4,025.20)
1982	Warehouse I	15	25,385.00
	Security Disposition 2013	9	1,200.00 (1,200.00)
TOTAL NSF REAL PROPERTY			\$2,152,105.19

1.3 CHRONOLOGICAL LISTING OF NASA REAL PROPERTY

Table 4 Chronological Listing of NASA Real Property

YEAR ACQUIRED	PROPERTY	BUILDING NUMBER	NASA CONTRACT	COST/VALUE
1978	Scientist Workshop Disposition 2010	33	n/a	\$ 3,900.00 (3,900.00)
1985	Warehouse II	18	Original: NAS5-28218 Added: NAS5-31125	151,363.17
1988	Demountable Building – Alice Springs, Australia	R2	NAS5-29800	11,210.94
1989	Office Trailer Disposition 2001	1C	NAS5-29800	4,455.00 (4,455.00)
1990	Engineering Support	23	NAS5-29800	259,463.00
1991	Visitor Center – Winslow, AZ	10W	NAS5-29800	12,241.11
1991/94	Staging– Fort Sumner, New Mexico	R1	Phase I: NAS5-29800 Phase II: NAS5-31125	1,232,338.83
1992	Water Tower and Distribution System	24	NAS5-29800	432,995.00
	Econo Vault Fuel Storage	27	NAS5-29800	34,662.00
1993	Test and Evaluation	25	NAS5-31125	459,061.00
	Fire Protection Sprinkler System		NAS5-31125	521,473.33
1995	Loading Dock	26	NAS5-31125	20,200.00
1997	Engineering Support	28	NAS5-31125	698,999.00
1998	Administration	1	NAS5-31125 NAS5-98005	623,885.93
	West Side Sign-In No longer used as building. Moved to Fort Sumner in 2001.		NAS5-98009	595.00 (595.00)
2003	East Pavilion	29	NAS5-98008	5,400.00
	West Pavilion	30	NAS5-98008	5,400.00
	Engineering Support Storage	32	NAS5-03003	5,217.51
	Sign	22	NAS5-03003	3,900.00
2004	Operational Control Center	12	NAS5-03003	48,687.00
	Vehicle Storage II (New Tim Shed)	13	NAS5-03003	334,025.00
	Lithium Battery Storage (Fort Sumner, New Mexico)	R3	NAS5-03003	7,606.66
2009	Visitor Center	10	NAS5-03003	63,580.00
TOTAL NASA REAL PROPERTY				\$4,931,709.48

1.4 SUMMARY OF REAL PROPERTY

Table 5 Total NSF and NASA Real Property

DESCRIPTION	COST/VALUE
<i>NSF Real Property</i>	\$2,152,105.19
<i>NASA Real Property</i>	4,931,709.48
TOTAL NSF AND NASA	\$7,083,814.67

2 LAND: OWNED AND LEASED

2.1 NSF

2.1.1 SUMMARY

NASA has an indefinite use permit for the land. Table 6 summarizes NSF owned and leased land.

Table 6 NSF Owned and Leased Land

OWNED/LEASED	DESCRIPTION	DETAILS
<i>Owned</i>	Purchased	1963
	Acreage	307.88
	Value	\$35,141.44
<i>Leased</i>	Lease (25 years)	2012 to 2037
	Acreage	165.97

2.1.2 CHRONOLOGICAL LISTING

The following is a chronology of NSF owned and leased land.

1962	NSF Leased 183.17 Acres (two parcels) from the City of Palestine	The first lease of 165.97 acres from the City of Palestine was for five years, 26 April 1962 through 25 April 1967, with a 20-year option. The second lease of 17.2 acres was also for five years with an option to purchase.
1963	NSF Purchased 307.88 Acres	NSF purchased 307.88 acres in nine parcels of land. The \$35,141.44 value of this land was provided by NCAR on 27 September 1985.
1967	NSF Exercised 20-Year Option	On 15 March 1967, NSF exercised the option to lease the 165.97 acres from the City of Palestine for a period of 20 years, expiring 15 March 1987.
1973	NSF Conveyed 7.23 Acres to the State of Texas	NSF conveyed 4.52 acres and 2.71 acres (approximately 7.23 acres) to the State of Texas for a right-of-way easement for Farm-to-Market Road 3224.

1985 CSBF Acreage and Land Value as provided by Anderson County Appraisal District

Table 7 CSBF Acreage and Land Values

ACRES	VALUE
46.70	\$ 46,230
14.00	13,860
16.42	14,780
35.00	31,500
60.00	54,000
40.00	36,000
.78	700
17.20	15,480
1.24	1,120
55.53	49,980
29.76	26,780
316.63	\$290,430

1987 PSL Renewed Lease Agreement for 25 Years

PSL renewed the lease agreement with the City of Palestine for 25 years commencing on 27 April 1987, to end on 27 April 2012, for the sum of \$1.00 per year.

1990 Real Property Survey by GSA Representative

The results of the Real Property Survey conducted by GSA revealed the following out-grants:

Table 8 GSA Real Property Survey Results

ACRES	DESCRIPTION
7.096	Conveyed an easement to the State of Texas for Farm-to-Market Road 3224.
.230	Conveyed to the State of Texas for highway use.
7.326	Total conveyed to the State of Texas.

Upon the GSA Representative's recommendation, the GSA Form 1166 Report of Real Property Owned by or Leased to the United States was updated to reflect the land grants shown in Table 8.

2012 NASA Renewed Lease Agreement for 25 Years

The lease of two parcels, one 165.97 acres and one 17.2 acres from the City of Palestine was extended for twenty-five years, beginning 30 June 2012 through 29 June 2037 at a cost of \$5,000 per year.

2.2 NASA

2.2.1 SUMMARY

Table 9 summarizes NASA owned and leased land in Fort Sumner, New Mexico (see Section 5 on page 65). For additional information contact NASA Wallops Flight Facility Property Office.

Table 9 NASA Owned and Leased Land

OWNED/LEASED	DESCRIPTION	DETAILS
<i>Owned</i>	Purchased	1992
	Acreage	8.1499
	Value	\$8,150.00
<i>Leased</i>	n/a	n/a
	n/a	n/a

2.2.2 CHRONOLOGICAL LISTING

The following is a chronology of NASA owned and leased land.

1992	NASA Purchase from the City Fort Sumner, New Mexico	A certified Corrected Warranty Deed for 8.1499 acres of land was signed by NASA's Donald Satz on 11 June 1992. The tract is located within Section 16, Township 3 North, Range 26 East, New Mexico Prime Meridian (N.M.P.M.), DeBaca County, New Mexico. The check in the amount of \$8,150.00 was transmitted by letter dated 30 June 1992. The deed was recorded in the DeBaca County, New Mexico Courthouse on 17 June 1992.
2009	NASA Leased Land at Winslow-Lindbergh Regional Airport	A 5 year lease agreement was signed with the City of Winslow for a parcel of land at Winslow Airport used as a down-range station for Fort Sumner launches, commencing on 5 March 2009 and ending on 28 February 2014, for \$6,000 annually.

3 BUILDINGS AND STRUCTURES

3.1 ADMINISTRATION – BUILDING 1

CONSTRUCTED:	1962
SQUARE FEET:	9,660
VALUE:	\$623,885.93
OWNERSHIP:	NASA
NASA CONTRACT:	NAS5-31125 NAS5-98005
PROPERTY ID:	3648

1962	Original Construction	The value of Administration (building 1) as provided by NCAR on 27 September 1985 was \$152,472.34. This value was part of the total value of \$764,823.30 for all six buildings. By process of elimination this appears to be the original cost of the building.
1965	Expansion	The building was enlarged by adding four offices and a briefing room.
1975	Expansion	The upstairs control tower and the high bay expansion areas were completed.
1976	Expansion	A loading ramp was constructed.

LOCATION	DIMENSIONS (FT)	SQUARE FOOTAGE (FT ²)
<i>Downstairs</i>	180 x 40	7,200
<i>Loading Ramp</i>	10 x 20	200
<i>Total Downstairs</i>		7,400
<i>Upstairs Expansion</i>	20 x 53	1,060
Total		8,460

A value of \$18.02/ft² (\$152,472.34 divided by 8,460-ft²) appears to be a fair value considering the dates of construction range from 1962 to 1976 (a period of fourteen years), and the square footage cost of other buildings and construction during these years.

1997-98	Major Rehabilitation	The building underwent a major rehabilitation. The scope of work for the project included the following: demolition of miscellaneous architectural items such as existing metal siding panels, windows, personnel doors, overhead coiling doors, roof mounted structural platforms, and associated metal stairs gutters and down spouts, gypsum wallboard and plywood partitions, suspended ceiling system, resilient flooring, and associated mechanical and electrical equipment, the installation of new metal siding panels, gutters and down spouts, installation of new personnel doors, insulated aluminum windows and an over head coiling doors, repair of roof due to demolition of various items, installation of new metal studs and gypsum wallboard plywood partitions, installation of new suspended acoustical tile ceiling system, vinyl composition tile flooring, and resilient stair treads, installation of a
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new exterior metal stair, architectural painting, structural framing, new electrical lighting and power distribution, new mechanical systems, and the construction of new handicap accessible restroom facilities. The work included the extension of the existing sewage drain field and the construction of a new retaining wall. Also included in the rehab was the installation of a new circuit panel, breakers, circuits, duplex receptacles, wire molds, uninterruptible power system, and accessories.

This work was accomplished by contractor Jacobe Brothers Construction of Tyler, Texas under NASA contract NAS5-31125.

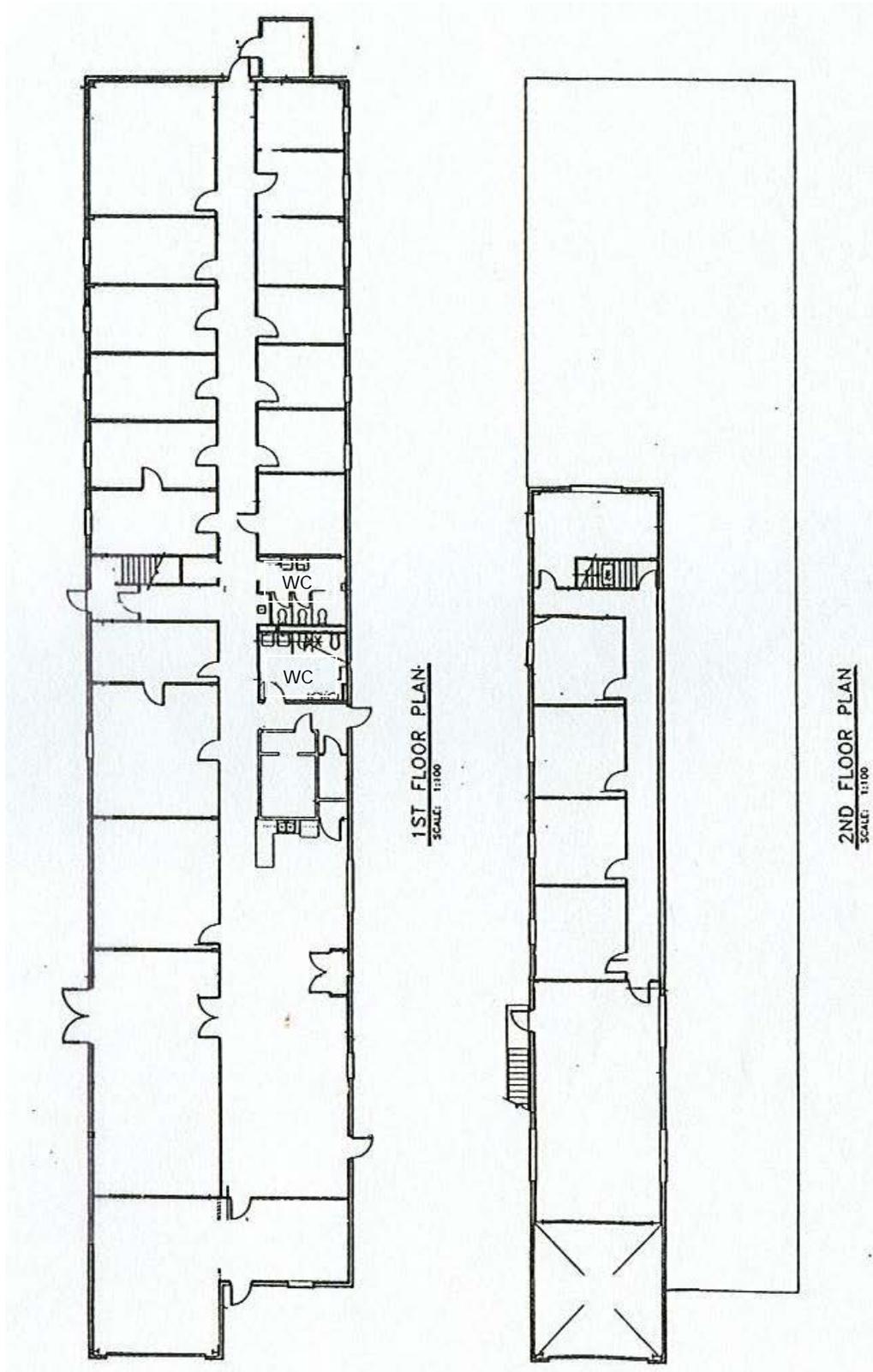
This resulted in the building being deleted from the NSF Real Property Records and added to NASA Real Property Records.

1999 Awnings

Striped aluminum awnings were added above five doorways. The work was done by Glenwood Blind and Awning of Tyler, Texas under NASA contract NAS5-98005.



Figure 3 Administration (Building 1)



3.2 FIRE STATION/BATTERY STORAGE – BUILDING 2

CONSTRUCTED:	1963
SQUARE FEET:	5,600
VALUE:	\$37,413.44
OWNERSHIP:	NSF
PROPERTY ID:	N/A

1963	Original Construction	This single-story 140 x 40–ft building was originally constructed for balloon storage and later converted to the Electronics Shop (building 2), Facility Services (building 2A), and the Machine Shop (building 2B). As advised by NCAR on 27 September 1985, their records revealed the \$37,413.44 as part of the total value given for six buildings. A value of \$6.68/ft ² (\$37,413.44 divided by 5,600-ft ²) appears to be a fair value.
1989	Mezzanines and Office Space	A mezzanine was built in the Machine Shop (building 2B) by CSBF personnel. Two offices and a storage room with mezzanine above were also built in Facility Services (building 2A). This work was performed under NASA contract NAS5-29800.
1991	Electronics Shop Expansion	The Electronics Shop was expanded to include building 2A after Facility Services moved to building 3.
1993	HVAC	An HVAC unit including ductwork was installed in building 2A by Palestine Air and Refrigeration of Palestine, Texas.
1994	HVAC	An HVAC unit was installed in building 2 and a thermostat to control heat strips was installed in building 2B by Palestine Air and Refrigeration of Palestine, Texas.
1998	Electronics and Machine Shop relocated	The Electronics section and Machine Shop were moved to the newly constructed Engineering Support (building 28). The building is now being used as the base fire station and for climate-controlled battery storage.
2000	AC Unit	A 3 ton AC unit was installed in the bay area where the lithium batteries are stored.
2012	Building Enclosed and AC	The building was enclosed and a 4 ton AC unit was installed at a cost of \$3,800.



Figure 5 Fire Station/Battery Storage (Building 2)



Figure 6 Fire Station/Battery Storage (Building 2) Floor Plan

3.3 FACILITY SERVICES/EQUIPMENT MAINTENANCE – BUILDING 3

	CONSTRUCTED:	1966
	SQUARE FEET:	3,600
	VALUE:	\$31,405.00
	OWNERSHIP:	NSF
	PROPERTY ID:	N/A
1966	Original construction	An open 60 x 60-ft shelter was added to the shop buildings referred to in Section 0 on page 11. A 40 x 20-ft area of this space was enclosed in 1968 to be used as the welding shop. The remaining space was used as a helium shed. The cost of the original shop buildings (2, 2A, and 2B) in 1963 was \$6.68/ft ² . Therefore, it is reasonable to use \$7.00/ft ² for the 3,600-ft ² addition constructed in 1966 and 1968.
1984	Enclosure	The 20 x 20-ft area behind the helium shed area was enclosed and converted to equipment maintenance under NASA contract NAS5-28218.
1990	Dirt Floor Covered with Concrete Slab	A 40 x 20-ft concrete slab was poured to cover the dirt floor of the equipment maintenance area. The work was performed under NASA contract NAS5-29800.
1991	New Facility Services Work Area	A 19 x 60-ft area was enclosed by CSBF personnel for a new facility services work area. A work area, three small offices, a mezzanine, and a storage area were added. One of CSBF's heating and air conditioning units and ductwork were installed and the system connected by Palestine Air and Refrigeration of Palestine, Texas. A new overhead door was installed by Athens Steel Building Corporation of Athens, Texas. The work was performed under NASA contract NAS5-29800.
1994	Equipment Maintenance Bay Enclosure/HVAC/Insulation	The bay was enclosed, an overhead door was added, and the ceiling was insulated. Tiles and grid work were installed in the shop area. CSBF furnished the tiles and insulation and CSBF personnel furnished labor, tools, and grid work. Cost of the work was \$4,140.00. This construction was done under NASA contract NAS5-31125. An HVAC unit including ductwork was installed in the middle bay by Palestine Air and Refrigeration of Palestine, Texas. The middle bay was insulated with 6-in vinyl-faced R19 insulation and an overhead door was installed by RPR Construction of Tyler, Texas.
2003	Air Conditioning	The air conditioning (AC) unit was replaced in the welding shop on 7 July 2003 by Palestine Air and Refrigeration of Palestine, Texas at a cost of \$7,130.00.



Figure 7 Facility Services/Equipment Maintenance (Building 3)

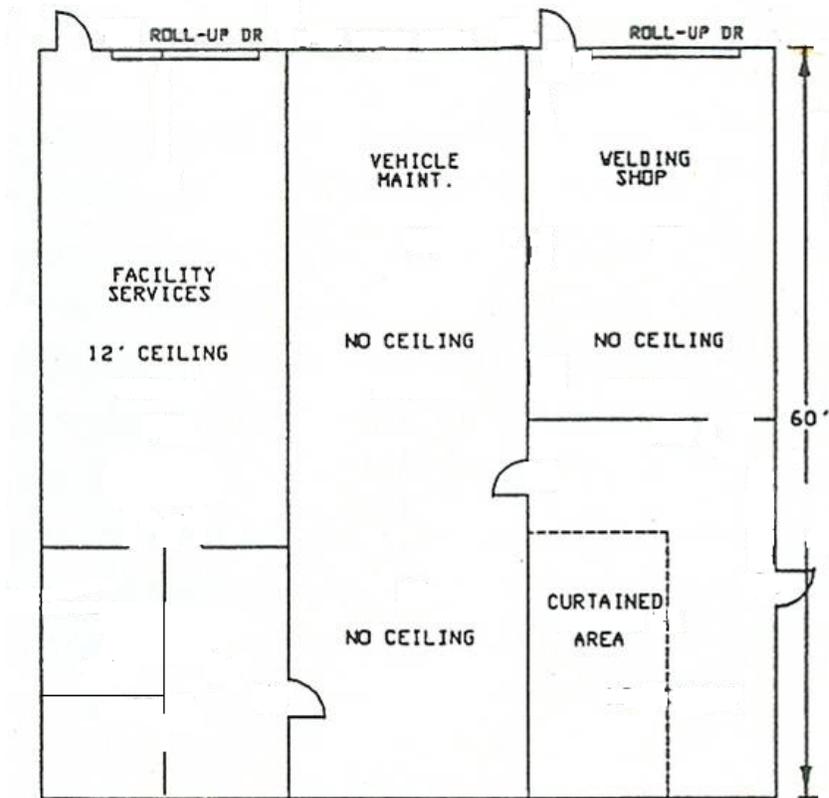


Figure 8 Facility Services/Equipment Maintenance (Building 3) Floor Plan

3.4 FLIGHT OPERATIONS – BUILDING 4

CONSTRUCTED: 1963
 SQUARE FEET: 5,584.5
 VALUE: \$149,534.54
 OWNERSHIP: NSF
 PROPERTY ID: N/A

1963	Original Construction	<p>This single-story 70 x 35-ft building was donated to the CSBF by Princeton University. The \$10/ft² cost of construction was estimated by considering fair market value and labor costs at the time of construction:</p> $70 \times 35\text{-ft} = 2,450\text{-ft}^2 \times \$10 = \$24,500$ <p>The dimensions of 70 x 35-ft were taken from the Floor Plan Rigging Building, page 69 of the Master Plan NCAR Scientific Balloon Facility, Palestine, Texas, dated July 1972.</p>
1978	Parachute Pull Tunnel	<p>A 74 x 15-ft covered concrete pad was added to the back of the building by CSBF personnel to facilitate stretching and rigging of parachutes. The material cost was estimated at \$5,000. Labor costs were estimated for approximately 400 hours at \$12.50/hr or \$5,000.00. Therefore, the value of \$10,203.00 appears reasonable and is one of the six values provided by NCAR on 27 September 1985.</p>
1989	Parachute Pull Tunnel Removal	<p>An addition to the mechanical rigging shop required the removal of the existing parachute pull tunnel and its foundation. The metal from this building was removed, stacked, and saved with plans to reconstruct the 74 x 15-ft building as an extension to this new addition.</p>
1989	Addition to Flight Operations	<p>A firm fixed-price subcontract for \$114,832.00 was awarded to Athens Steel Building Corporation of Athens, Texas on 25 July 1988 for construction of a 40 x 80-ft building addition under NASA contract NAS5-29800. The new dimensions of the building are 153 x 36.5-ft (5,584.5-ft²). The building has a monorail hoist and is air conditioned and heated. The new addition is connected to the existing building by an overhead door and a walk door. NASA improvements to the building owned by NSF were an improvement to NSF Real Property. The increase in value of this building was reported to NSF on their Annual Report GSA Form 1166.</p>
1994	Roof	<p>A new roof of urethane foam with white reflective coating was installed on the front portion of the building and existing roof box vents were removed by Pal-Tex Urethane of Palestine, Texas. A Lennox 7.5-ton heat pump was installed by Palestine Air and Refrigeration of Palestine, Texas.</p>
1998	Overhead Door	<p>The south overhead door was replaced with an insulated door by Overhead Door Company of Tyler, Texas.</p>
2008	Bathroom Update	<p>The small restroom was removed and replaced with a modern style Bathroom with a shower stall, a urinal and two toilets. The work was handled by David Harden Construction. The cost was \$34,907.00.</p>
2009	42' x 42' slab	<p>One 42' x 42' slab was added to the back of this building to extend the area that was usable to ready parachutes for flight. Morris Construction was used for the project at a cost of \$8,138.</p>
2010	Cubical	<p>Cubical space was built by CSBF Facilities to allow separate computer work space estimated cost \$400.</p>
2012	Break/Training Room	<p>Break/training room was added. Construction was done by CSBF Facilities.</p>



Figure 9 Flight Operations (Building 4)

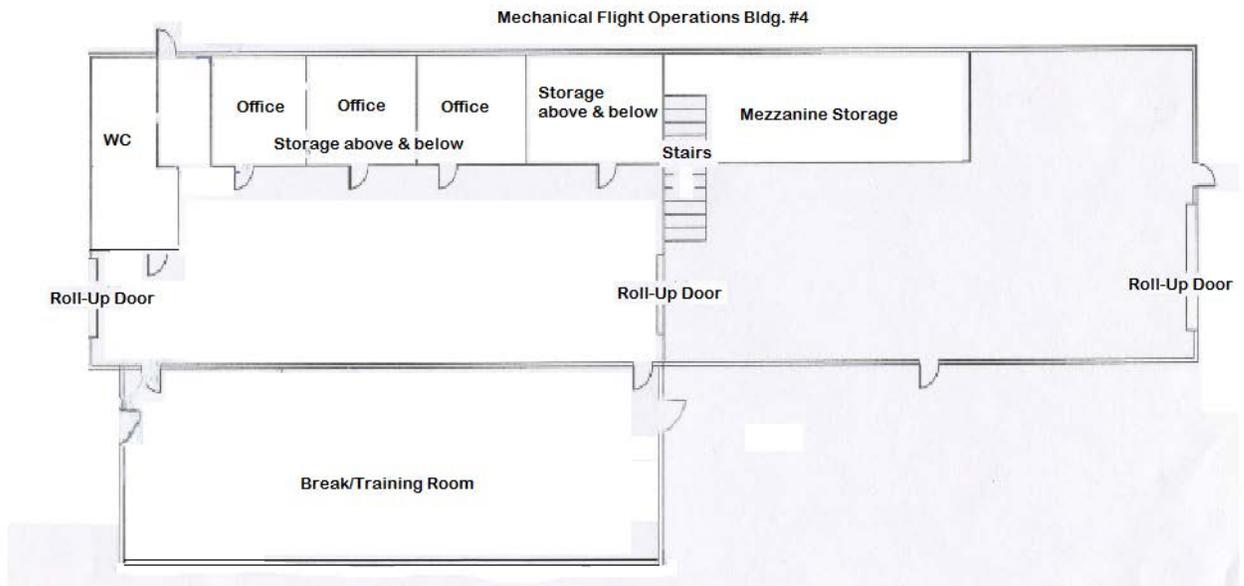


Figure 10 Flight Operations (Building 4) Floor Plan

3.5 STRATOPORT I – BUILDING 5

CONSTRUCTED:	1963
SQUARE FEET:	1,540
VALUE:	\$52,779.90
OWNERSHIP:	NSF
PROPERTY ID:	N/A

1963	Original Construction	<p>The main section of this building is hexagonal in shape, having an area of 1,020-ft². Two storage areas, each 13 x 20-ft, were connected adding 520-ft². Stratoport I was constructed by Princeton University and later donated to CSBF.</p> <p>NCAR identified all real property except for the cost of Stratoport I and the Coronaport. The two buildings are very similar in design and composition and were built relatively close to the same time (1963 and 1965); therefore, the cost allocation was based on square footage.</p>
1989	Asbestos Removal	<p>Stratoport I was completely stripped of all asbestos cement sandwich panels which included all walls and the roof. A new girt system was connected onto the existing structural members. New sandwich panels consisting of urethane core insulation and a light-gage metal liner were connected to the new girt system. The building also received a new roof system. The work was performed by Red Eagle Construction Company of Manvel, Texas under NASA contract NAS5-29800.</p>
1990	AC Installation	<p>A Sears 25,000-BTU window AC unit was installed by Palestine Air and Refrigeration of Palestine, Texas.</p>
2013	Asbestos Testing/ Removal	<p>Testing and assessment for the presence of asbestos was completed. Floor tiles were removed from the west and north rooms.</p>



Figure 11 Stratoport I (Building 5)

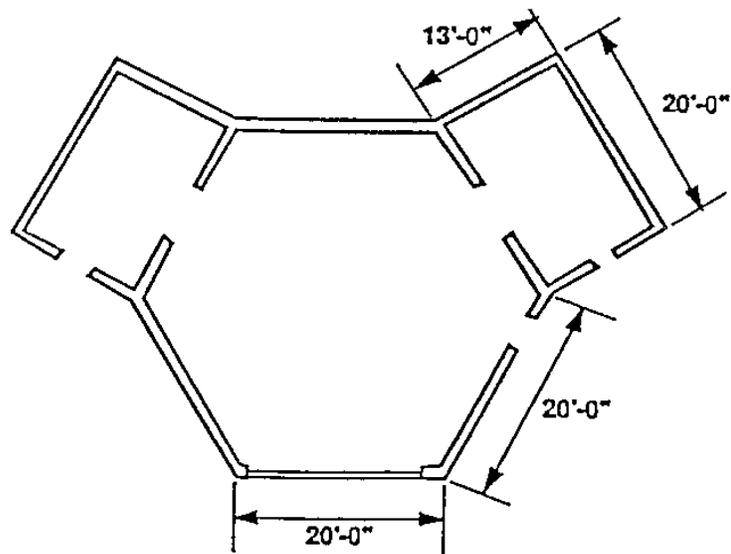


Figure 12 Stratoport I (Building 5) Floor Plan

3.6 FACILITIES STORAGE – BUILDING 6

CONSTRUCTED: 1963
 SQUARE FEET: 1,500
 VALUE: \$4,564.14
 OWNERSHIP: NSF
 PROPERTY ID: N/A

1963	Original Construction	The 30 x 50-ft building was constructed by Princeton University and later donated to the CSBF. Originally used as storage space, the building was converted to a test laboratory in 1979.
1985	Valve	A valve valued at \$4,564.14 was provided to CSBF by NCAR on 27 September 1985.
1988	Safety Exit Door	A safety exit door was installed in the building and a 10 x 10-ft office area was enclosed for the Quality Assurance (QA)/Lab Supervisor. The work was performed by CSBF personnel under NASA contract NAS5-29800.
1995	Roof	A 1-in urethane foam roof with white coating application was installed by Pal-Tex Urethane of Palestine, Texas.
1998	QA Lab Relocated	The QA Laboratory was relocated to Balloon Support (building 28) upon its completion. This building is now being used for Facilities and purchasing storage.



Figure 13 Facilities Storage (Building 6)

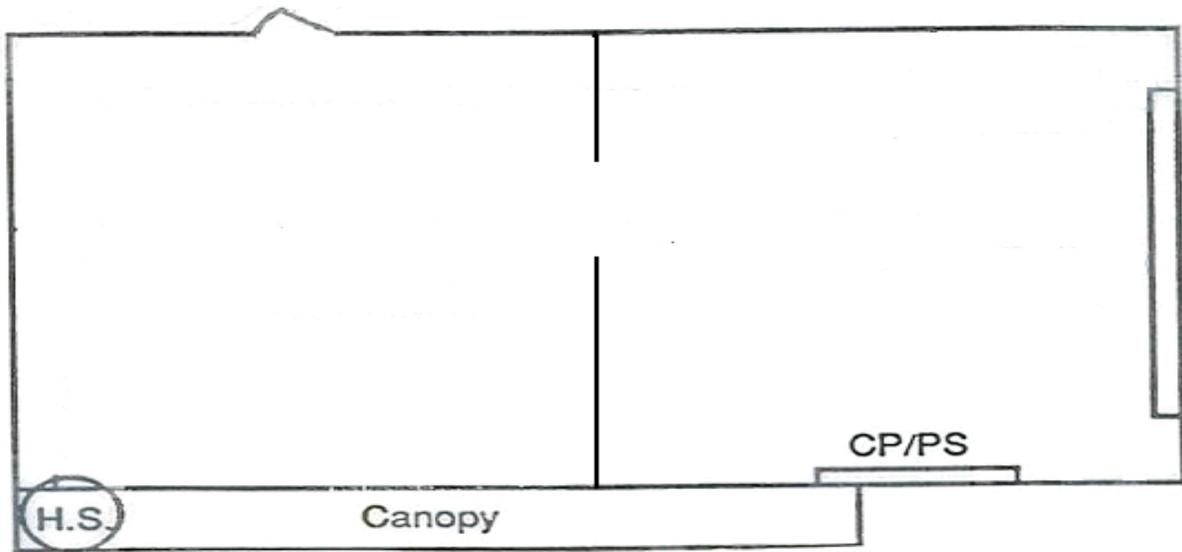


Figure 14 Facilities Storage (Building 6) Floor Plan

3.7 VEHICLE STORAGE I (OLD TIM SHED) – BUILDING 7

CONSTRUCTED:	1968
SQUARE FEET:	4,200
VALUE:	\$25,000
OWNERSHIP:	NSF
PROPERTY ID:	N/A

1968	Original Construction	This 60 x 70-ft building is an open storage shelter for launch vehicles. The value of this building has been estimated to be \$25,000.00. This is based upon a cost of \$5.95/ft ² . Since both the Electronic Shop and Vehicle Storage buildings were constructed at approximately the same time (1968), the cost for the 4,200-ft ² open shed appears reasonable.
1990	Floor Paving	The dirt floor of the shed was paved with asphalt by L & L Asphalt of Tyler, Texas under NASA contract NAS5-29800.



Figure 15 Vehicle Storage I (Building 7)

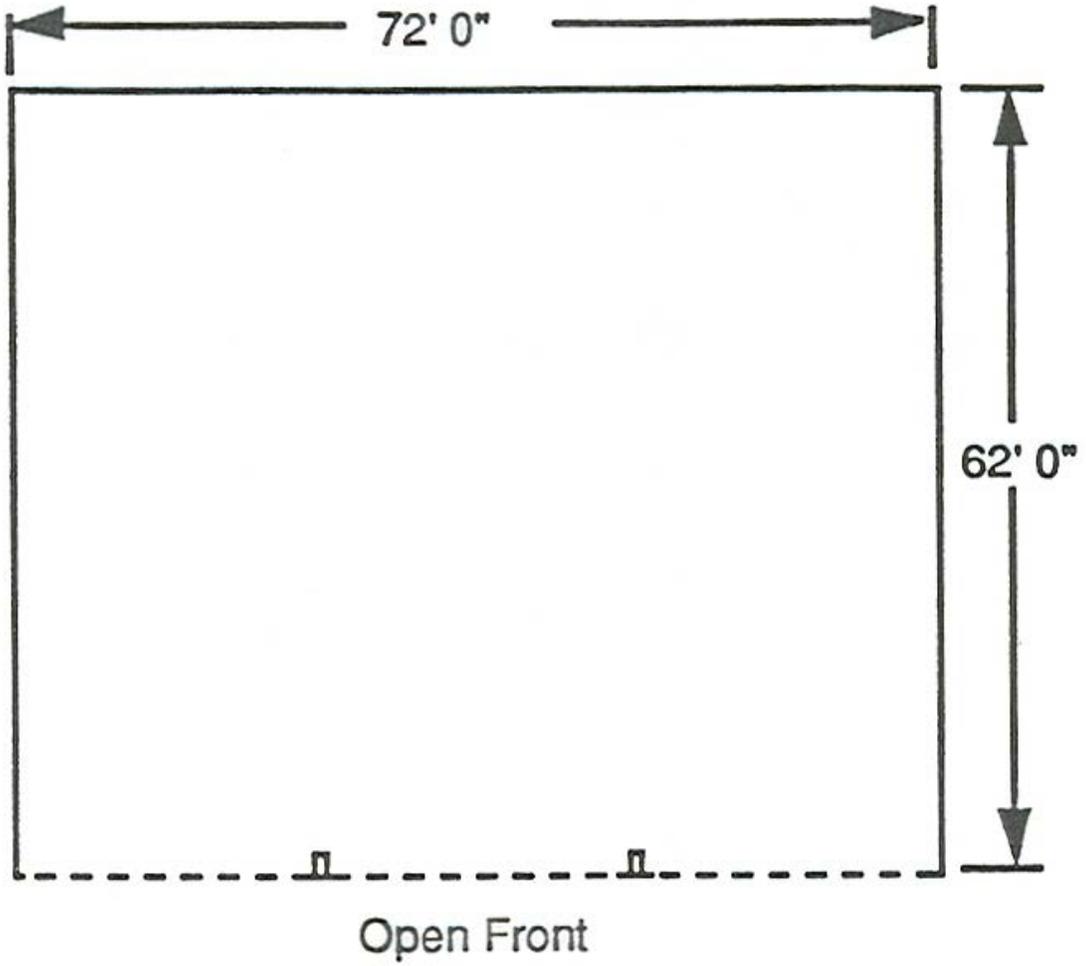


Figure 16 Vehicle Storage I (Building 7) Floor Plan

3.8 MONUMENTS – STRUCTURE 8

CONSTRUCTED:	2004
SQUARE FEET:	N/A
VALUE:	N/A
OWNERSHIP:	NASA
PROPERTY ID:	N/A

1995

Three monuments (boundary/position markers) were placed on the facility during a mapping survey. The first is between building 1 and the fuel storage tank (structure 27). The second is between the old Coronaport site and the fence. The third is between the tractor shed (building 17) and the A-frame (structure 19).



Figure 17 Monument (Structure 8)

3.10 VISITOR CENTER – BUILDING 10

CONSTRUCTED: 2009
 SQUARE FEET: 12,000
 VALUE: \$63,580
 OWNERSHIP: NASA
 NASA CONTRACT: NAS5-03003
 PROPERTY ID: 3065

1991	Original Construction	The new modular Visitor Center replaced the old prefabricated Guard House at the CSBF entrance. This 14 x 20-ft standard modular office unit was purchased from Atlantic Trailer of Baltimore, Maryland and delivered to the CSBF in May 1991. CSBF personnel provided the electrical and water services. Palestine Air and Refrigeration of Palestine, Texas installed a heater, one of CSBF's air conditioning units (NASA Tag 2758), provided the ductwork, and connected the system. In order to comply with government regulations, a new septic system was installed for the building by Septic King Co. of Palestine, Texas.
1995	Carpet	Carpet was replaced by Sherwin Williams of Palestine, Texas.
2003	AC Replacement	The heating and AC unit were replaced by Palestine Air and Refrigeration of Palestine, Texas.
2004	Canopy	An aluminum canopy was installed over the entrance by Glenwood Blind and Awning of Tyler, Texas.
2009	Building Replaced	This building was replaced again by a 30 x 40 Metal structure. This larger building was required to accommodate conference facilities conduct lager meeting and facility tours. The building was purchased from Athens Steel Buildings with all interior work being accomplished by CSBF personnel. The cost of the building was \$63,580. The old 14 x 20 building was then moved to Winslow AZ in 2010 for CSBF and Science use as a downrange facility.



Figure 18 Visitor Center (Building 10)

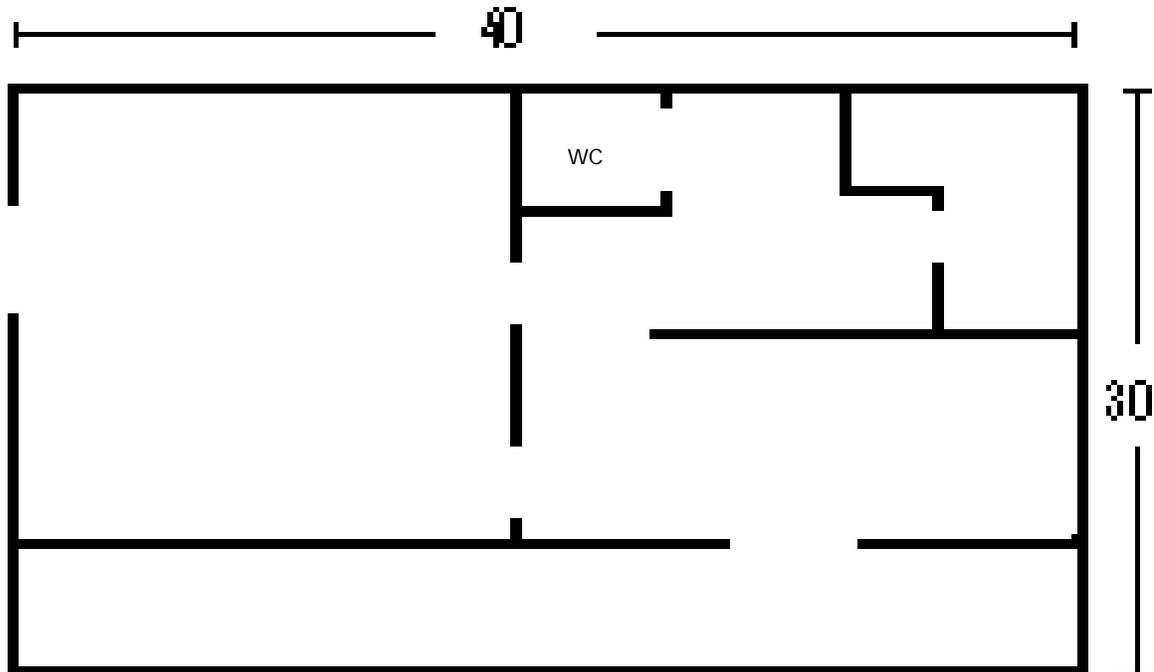


Figure 19 Visitor Center (Building 10) Floor Plan

3.11 STAGING – BUILDING 11

CONSTRUCTED:	1977
SQUARE FEET:	7,080
VALUE:	\$459,302.00
OWNERSHIP:	NSF
PROPERTY ID:	N/A

- 1977 Original Construction This building was constructed by Howard U. Freeman Inc., contractor. A firm fixed price of \$459,302.00 was quoted in a copy of a letter dated 10 June 1985 to Dr. Georgio Tessi, Project Officer for NCAR, Division of Atmospheric Sciences, NSF.

Square footage, as stated by the head of the Facility Services Department in 1985, is as follows:

LOCATION	DIMENSIONS (FT)	SQUARE FOOTAGE (FT ²)
<i>Entrance</i>	30 x 20	600
<i>East Bay</i>	60 x 30	1,800
<i>West Bay</i>	60 x 30	1,800
<i>2nd Floor</i>	30 x 32	960
<i>3rd Floor</i>	30 x 32	960
<i>4th Floor</i>	30 x 32	960
TOTAL		7,080

- 1989 Windows Two windows, one on the second floor and one on the third floor, were installed by CSBF personnel under NASA contract NAS5-29800.
- 1990 Pavement Resurfacing The parking lot and access road were resurfaced by L & L Asphalt of Tyler, Texas under NASA contract NAS5-29800.
- 1993 Building Rehabilitation An access road was constructed on the north side of the building. A wall was installed on the west side of the first floor room. Exterior stairs and metal walls were cleaned and painted. Interior concrete masonry walls were re-grouted and painted. Wooden walkways were removed and new roof overlay, gutters, and down spouts were installed on bay area roofs. Staging bay personnel doors were replaced. The existing auxiliary power generator was enclosed and roof mounted air conditioning units from the high bay roofs were removed and new air conditioning units were placed on the ground, north of the building. New air handling units and modified air supply ducts were installed. The existing uninterruptible power supply was replaced and flood lights were provided for the high bay areas. Rehabilitation of the building was completed at a cost of \$275,000.00 by RPR Construction of Tyler, Texas under NASA contract NAS5-29800 and awarded under NAS5-31125.
- 1996 Air Conditioning An air conditioner was added to the UPS battery room by CSBF personnel.
- 2011 Break room A break room/kitchen was built in existing space in foyer area.



Figure 20 Staging (Building 11)

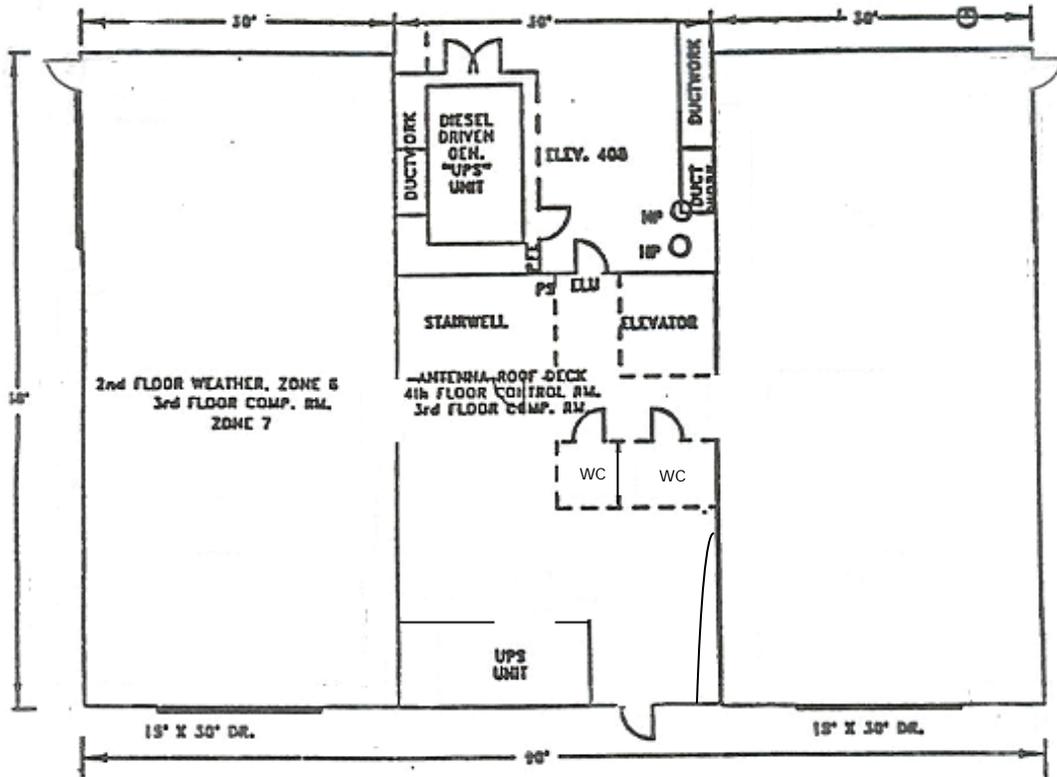


Figure 21 Staging (Building 11) Floor Plan

3.12 OPERATIONAL CONTROL CENTER (OCC) – BUILDING 12

CONSTRUCTED:	2004
SQUARE FEET:	2,000
VALUE:	\$48,687.00
OWNERSHIP:	NASA
NASA CONTRACT:	NAS5-03003
PROPERTY ID:	4341

2004	Original Construction	<p>This single-story 40 x 50-ft steel building with a total of 2,000-ft² was constructed by Athens Steel Building Corporation of Athens, Texas and the interior finish-out was completed by CSBF personnel.</p> <p>This building houses the operational control center (OCC) for long-duration ballooning (LDB) and ultra-long-duration ballooning (ULDB) flights launched from Sweden, Antarctica, Australia, and other locations around the world.</p>
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Figure 22 Operational Control Center (Building 12)

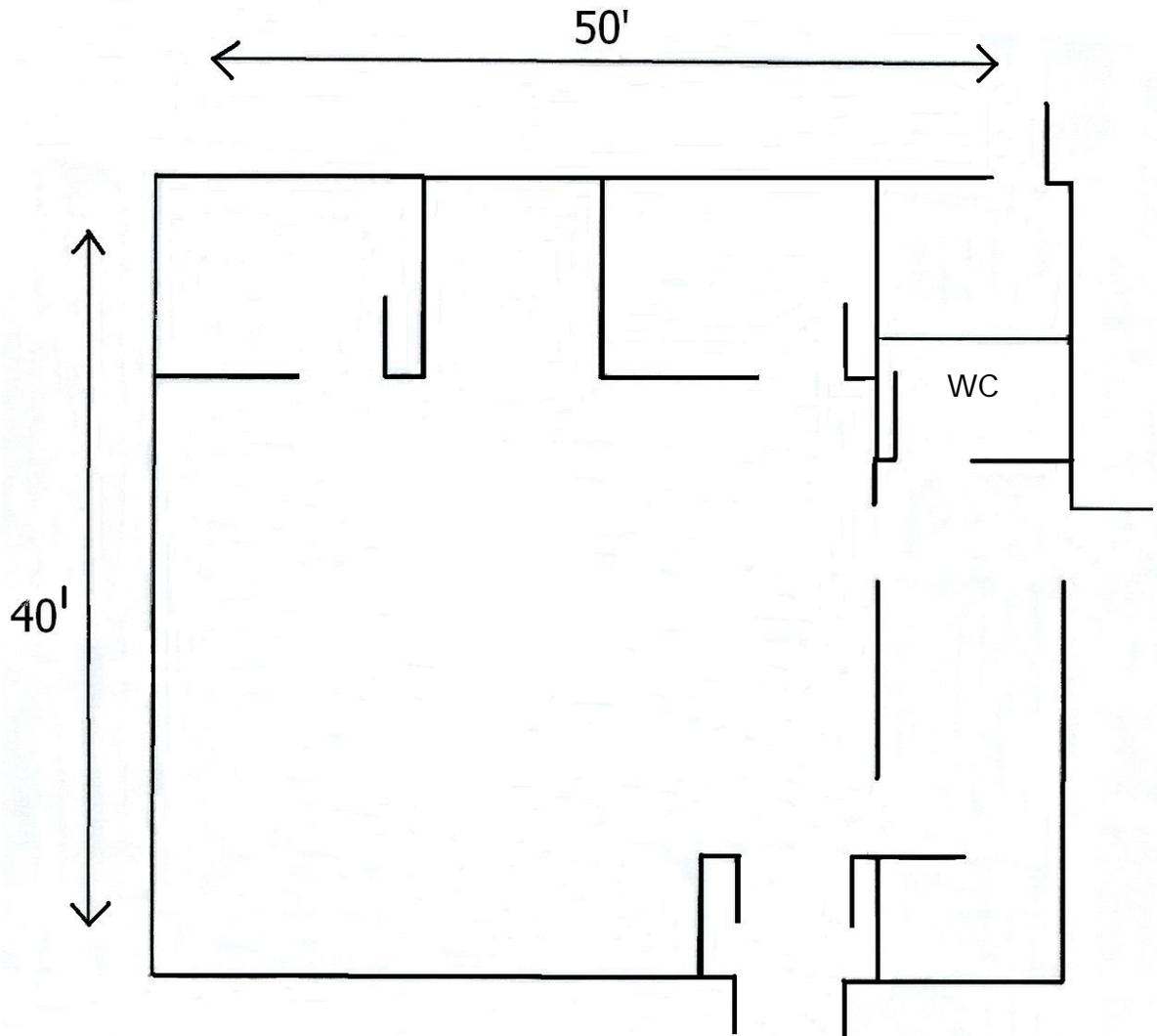


Figure 23 Operational Control Center (Building 12) Floor Plan

3.13 VEHICLE STORAGE II (NEW TIM SHED) – BUILDING 13

CONSTRUCTED: 2004
SQUARE FEET: 4,800
VALUE: \$334,025.00
OWNERSHIP: NASA
NASA CONTRACT: NAS5-03003
PROPERTY ID: 4387

2004 Original Construction This building replaced an NSF building that was deleted from NSF Real Property Records due to its size restraints and age. The replacement was due to a need for more storage for the large equipment used at CSBF. The value of this equipment precluded storing these items exposed to weather. The new Tim Shed was constructed by Hughes Building Services of Dallas, Texas.

The new building's close proximity to Science personnel and Electronics staff provides additional advantages.



Figure 24 Vehicle Storage II (Building 13)

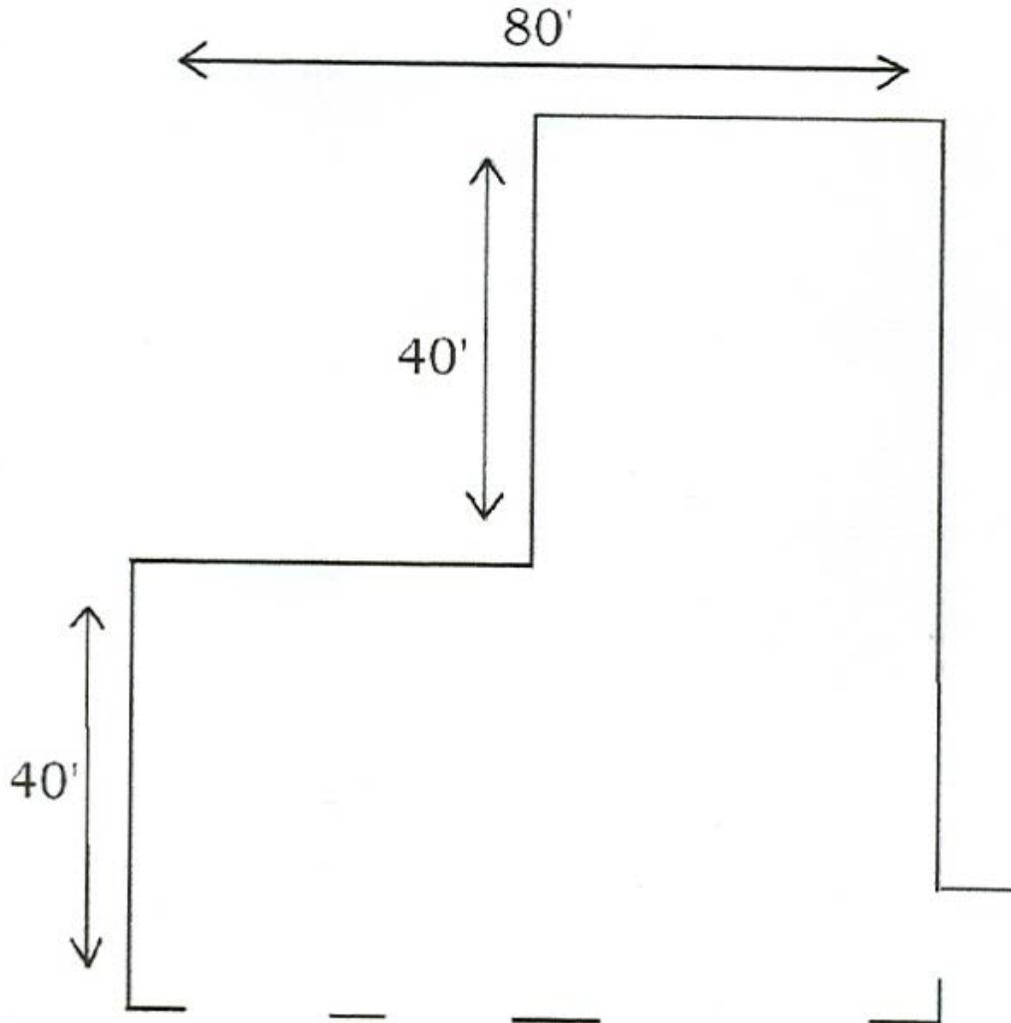


Figure 25 Vehicle Storage II (Building 13) Floor Plan

3.14 BALLOON STORAGE – BUILDING 14

CONSTRUCTED:	1979
SQUARE FEET:	4,000
VALUE:	\$42,070.00
OWNERSHIP:	NSF
PROPERTY ID:	N/A

1979	Original Construction	This single-story 100 x 40-ft building was constructed at an approximate cost of \$9.64/ft ² . This is an air conditioned storage building. The asphalt paving, approximately 1,400-ft ² around the building, was completed in 1979.
1990	Asphalt resurfacing	The asphalt paving was resurfaced by L & L Asphalt of Tyler, Texas.
1991	Overhead Door Replacement	The overhead door was replaced with a larger door by Overhead Door Company of Tyler, Texas under NASA contract NAS5-29800.



Figure 26 Balloon Storage (Building 14)

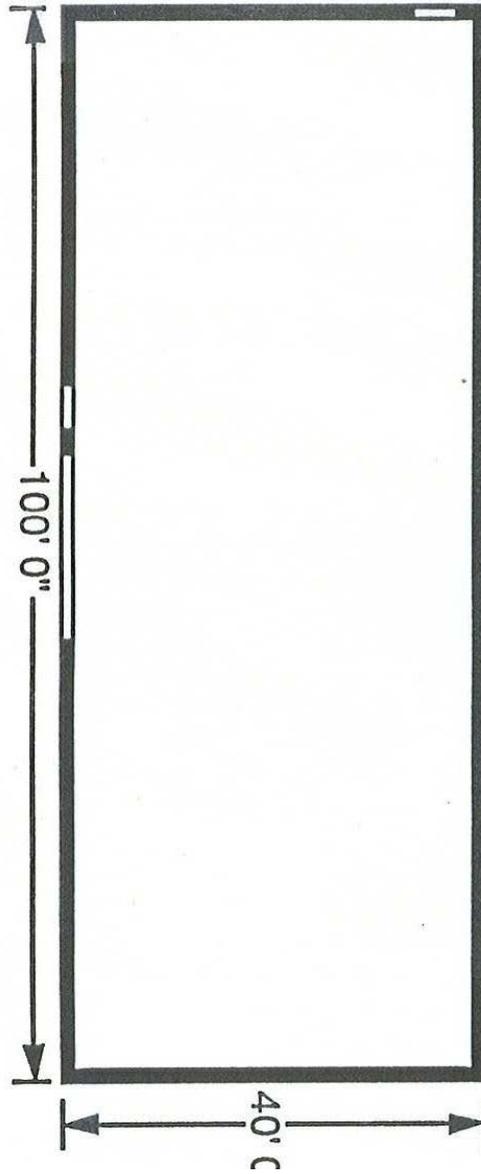


Figure 27 Balloon Storage (Building 14) Floor Plan

3.15 WAREHOUSE I – BUILDING 15

CONSTRUCTED: 1982
SQUARE FEET: 3,200
VALUE: \$25,385.00
OWNERSHIP: NSF
PROPERTY ID: N/A

1982	Original Construction	<p>This single-story 40 x 80-ft building was constructed at an approximate cost of \$6.67/ft². Located behind Balloon Storage (building 14), this is an unloaded building used for storage.</p> <p>The warehouse was built on an existing concrete slab previously furnished by NASA at a cost of \$4,046.00.</p>
2003	Air Conditioning	<p>An AC unit was added to the building by Palestine Air and Refrigeration of Palestine, Texas.</p>



Figure 28 Warehouse I (Building 15)

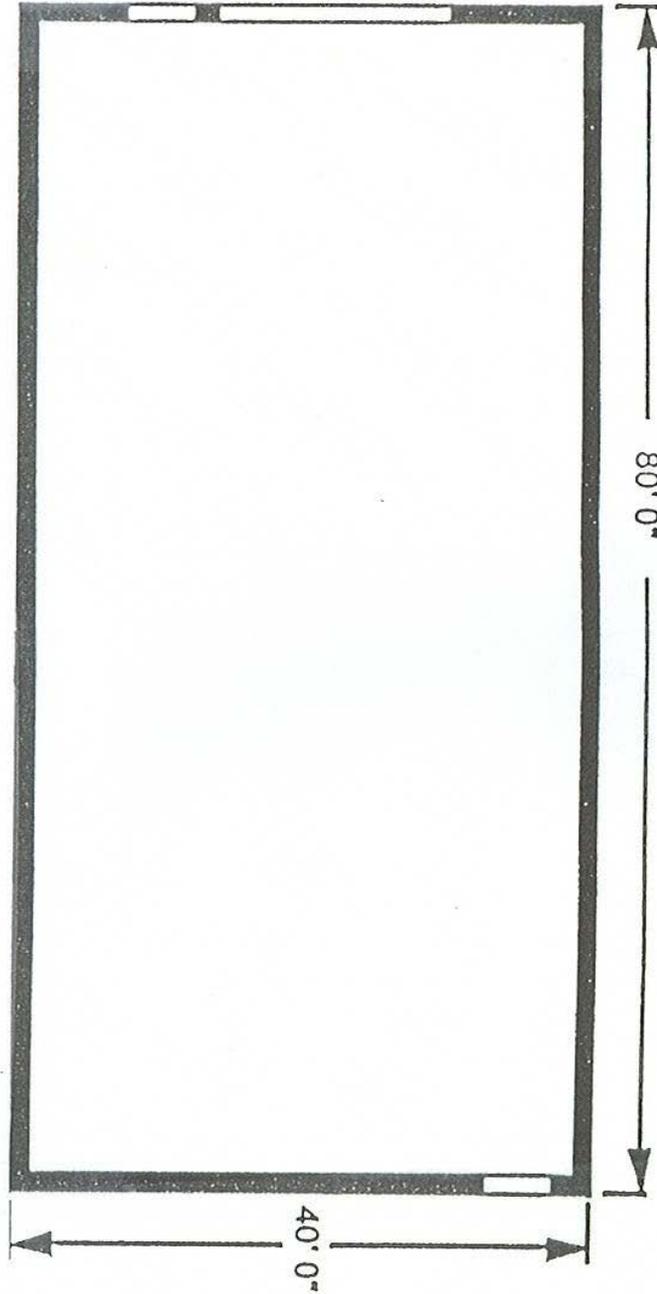


Figure 29 Warehouse I (Building 15) Floor Plan

3.16 VERIZON CELLULAR SITE – STRUCTURE 16

CONSTRUCTED:	2004
SQUARE FEET:	N/A
VALUE:	N/A
OWNERSHIP:	VERIZON
PROPERTY ID:	N/A

2004	Original Construction	In an effort to improve the quality of CSBF cellular services, Alltel agreed to place an antenna on the NASA water tower. In conjunction with the antenna, Alltel was given permission to place a small building enclosed by fence at the base of the water tower to house the transmitter and receiver. January 9 th 2009 Verizon wireless purchased Alltel and took possession of these sites.
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Figure 30 Verizon Antenna (Structure 16)



Figure 31 Verizon Cellular Site (Structure 16)

3.17 TRACTOR SHED – BUILDING 17

CONSTRUCTED: 1979
 SQUARE FEET: 1,200
 VALUE: \$7,257.00
 OWNERSHIP: NSF
 PROPERTY ID: N/A

1979 Original Construction This building is a 20 x 60-ft open shed with a storage room on one end. Used lithium batteries are placed in the storage room prior to being shipped for disposal. The shed was built by CSBF personnel in approximately 48 hours.



Figure 32 Tractor Shed (Building 17)

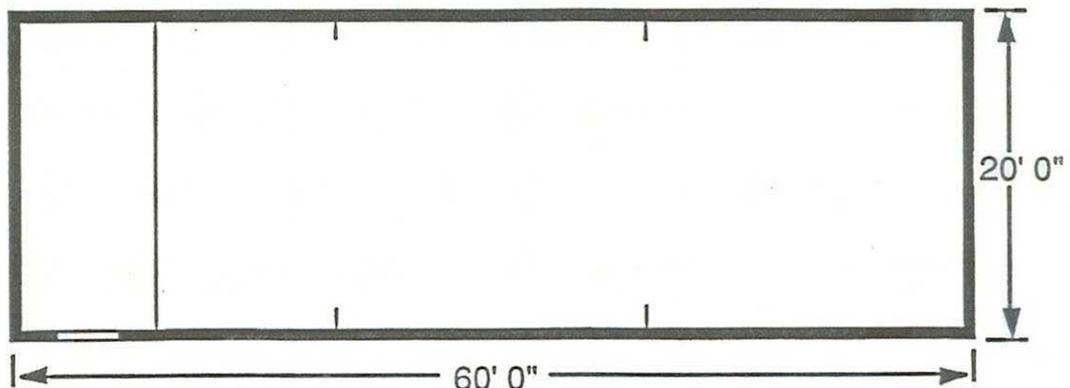


Figure 33 Tractor Shed (Building 17) Floor Plan

3.18 WAREHOUSE II – BUILDING 18

CONSTRUCTED: 1985
 SQUARE FEET: 6,000
 VALUE: \$151,363.17
 OWNERSHIP: NASA
 NASA CONTRACT: Original: NAS5-28218
 Added: NAS5-31125
 PROPERTY ID: 2579

- 1985 Original Construction This single-story 150 x 40-ft air conditioned building was originally constructed at a cost of \$129,840.60. Additional finishing work was completed by CSBF personnel. As of 30 September 1985 the CSBF Project Status Report listed \$14,032.60 in finishing costs. Additional costs of construction in 1985 increased the value of the building to \$144,860.61.
- 1994 Mezzanine Addition A 392-ft² mezzanine with a 4-ft wide stairway was added to the building by CSBF personnel. Capacity 125 lbs per square foot.



Figure 34 Warehouse II (Building 18)

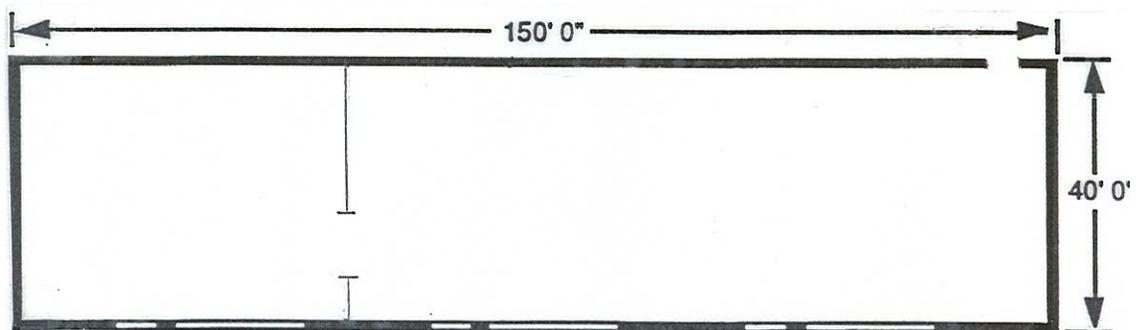


Figure 35 Warehouse II (Building 18) Floor Plan

3.19 NONMAGNETIC A-FRAME – STRUCTURE 19

CONSTRUCTED:	1991
SQUARE FEET:	N/A
VALUE:	UNKNOWN
OWNERSHIP:	N/A
PROPERTY ID:	N/A

1991	Original Construction	The A-Frame was erected to enable scientific groups to suspend their gondolas in a nonmagnetic environment. The concrete slab was poured without steel reinforcement, the poles are wood, and the I-beam is aluminum. The structure is behind Staging (building 11).
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Figure 36 Nonmagnetic A-Frame (Structure 19)

3.20 NOAA WIND PROFILING SITE – STRUCTURE 20

CONSTRUCTED:	1989-1991
SQUARE FEET:	N/A
VALUE:	N/A
OWNERSHIP:	NOAA
PROPERTY ID:	N/A

1989 to 1991	Original Construction	<p>Through an agreement between NOAA and NASA, NOAA installed a 404-MHz wind profiler behind Warehouse I. Wind profilers are specifically designed to measure vertical profiles of horizontal wind speed and direction from near the surface to above the tropopause. The NOAA Profiler Network (NPN), consisting of 35 unmanned Doppler Radar sites located in 18 central US states and Alaska, provides hourly vertical wind profile data. The data produced by this network are distributed to the National Weather Service (NWS), environmental research groups, and Universities.</p> <p>The equipment shelter houses the radar's transmitter, receiver, data processing, and antenna beam control electronics. The antenna subsystem is formed from two coaxial colinear arrays arranged orthogonal to each other to form a Vertical, a North, and an East beam. The North and Vertical beams share the same physical antenna array. The two arrays occupy an area 40 x 40-ft. Each array is formed from 20 rows of coaxial colinear array subassemblies fed by series of radio frequency (RF) power dividers.</p>
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Figure 37 NOAA Wind Profiler – Front View (Structure 20)



Figure 38 NOAA Wind Profiler – Rear View (Structure 20)

3.22 BASE SIGN – STRUCTURE 22

CONSTRUCTED:	2003
SQUARE FEET:	N/A
VALUE:	\$3,900.00
OWNERSHIP:	NASA
NASA CONTRACT:	NAS5-03003
PROPERTY ID:	N/A

Original Construction This concrete and metal sign was erected at the entrance to the CSBF. Signage design and landscaping were done by CSBF employees. The concrete was placed by Doug Manis Construction of Palestine, Texas.



Figure 39 Base Sign (Structure 22)

3.23 ENGINEERING SUPPORT – BUILDING 23

CONSTRUCTED: 1990
 SQUARE FEET: 4,000
 VALUE: \$259,463.00
 OWNERSHIP: NASA
 NASA CONTRACT: NAS5-29800
 PROPERTY ID: 2974

1990	Original Construction	This single-story 40 x 100-ft pre-engineered metal building has a 12-ft eave height. The building currently houses the Site Manager's office, the managers of the Engineering and Operations departments, and other engineering and support personnel. The building has a 28 x 20-ft conference room capable of comfortably seating 30 people. The building was constructed by Athens Steel Building Corporation of Athens, Texas.
2005	HVAC Replacements	The south-end heat pump and air handler and the north-end compressor were replaced by Palestine Air and Refrigeration of Palestine, Texas.
2007	Enlarge Offices	Two small offices were enlarged by adding a 15' extension.
2010	Addition	A 15' x 20' room was added to be used as a kitchen area. Construction was done by LEC Homes Inc. at a cost of \$19,977.00.

3.24 WATER TOWER – STRUCTURE 24

CONSTRUCTED:	1992
SQUARE FEET:	N/A
GALLONS:	75,000
HEIGHT:	135.5 FT
VALUE:	\$432,995.00
OWNERSHIP:	NASA
NASA CONTRACT:	NAS5-29800
PROPERTY ID:	3051

1992	Original Construction	<p>This structure is a 75,000-gal spheroidal single-pedestal elevated tank including foundation and control system. The project included modification of the water distribution system at the CSBF which involved installing ~5,388-lin ft of 6-, 8-, and 12-in water mains including valves, fire hydrants, service connections, boring and jacking, pavement repairs, and a water supply control pit.</p> <p>Contracted to A. E. Shull and Company of Tyler, Texas, the original contract amount was \$425,000.00; change order 1 added \$6,995.00 for additional water lines; change order 4 added \$1,000.00 to install 2-in PVC pipe for a total of \$432,995.00.</p>
1996	Inspection, Washout, and Disinfection	A tank inspection was conducted and included field evaluation, coating evaluation, and washout and disinfection. The inspection was performed by Tank Industry Consultants of Indianapolis, Indiana.
2002	Rehabilitation	A rehabilitation was performed on the water tower including sandblasting and repainting, welding of anchor bolts, ladder upgrade, and posting of confined space and fall protection signs. The work was performed by TMI Coatings, Inc. of St. Paul, Minnesota at a cost of \$72,300.00.



Figure 42 Water Tower (Structure 24)

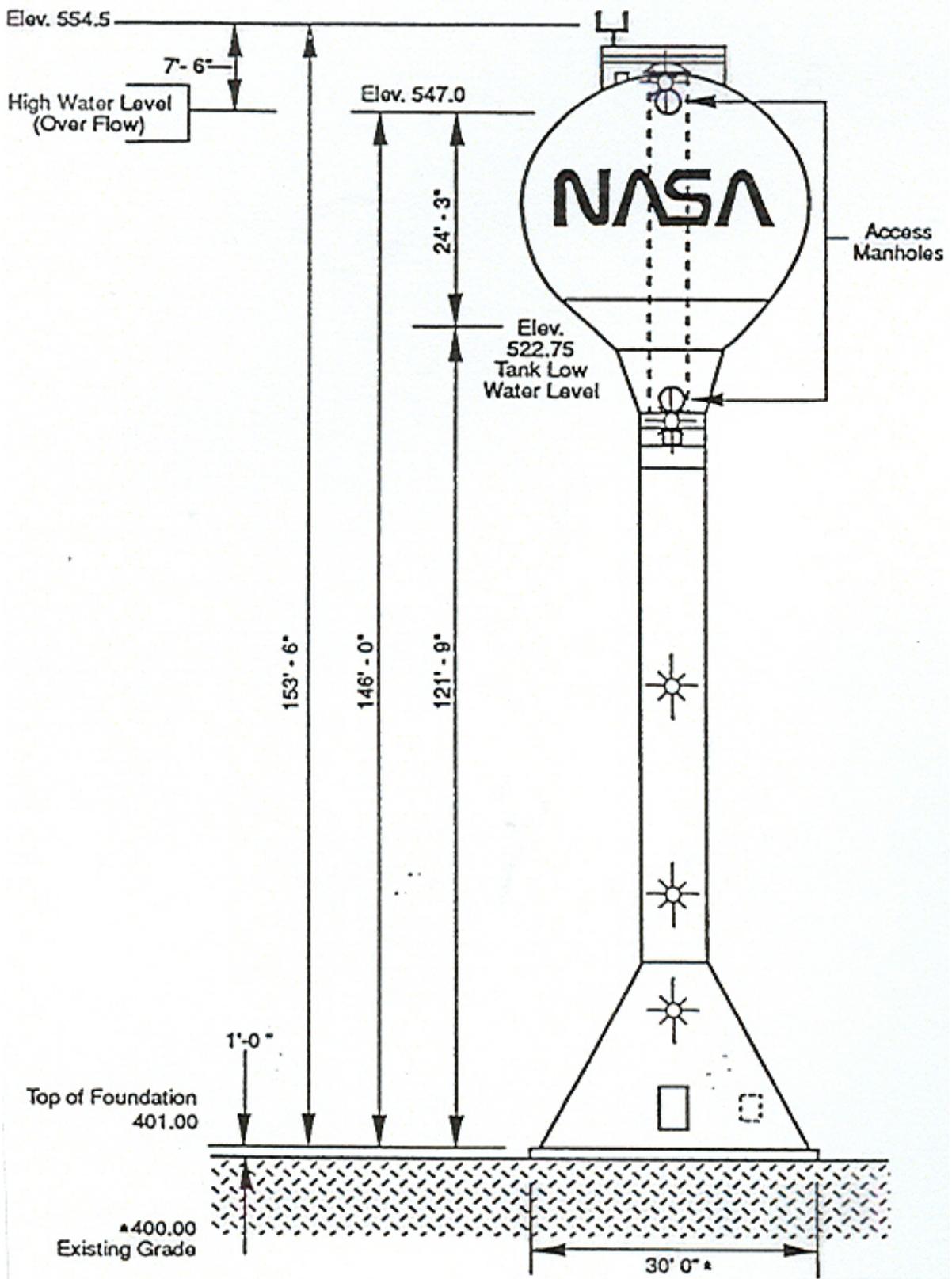


Figure 43 Water Tower (Structure 24) Floor Plan

3.25 TEST AND EVALUATION (T&E) – BUILDING 25

CONSTRUCTED:	1993	
SQUARE FEET:	4,200	
VALUE:	\$459,061.00	
OWNERSHIP:	NASA	
NASA CONTRACT:	Initiated: NAS5-2980	
	Awarded: NAS5-31125	
PROPERTY ID:	3319	
1993	Original Construction	This two-story 50 x 60 x 32-ft pre-engineered building contains a staging bay, testing laboratory, control center, offices, antenna deck, and enclosed exterior stairway. It houses payload integration, test, and evaluation services for the long-duration ballooning (LDB) program. At least two large scientific gondolas can undergo simultaneous integration and testing in this building. The contractor for construction was Watkins Development Corporation of Corsicana, Texas.
1996	Bemco Chamber Added	The Bemco environmental chamber was relocated to Test and Evaluation (building 25).
2004	HVAC	The second-floor heat pump and first-floor AC unit were replaced by Palestine Air and Refrigeration of Palestine, Texas.
2009	Cubical	Second floor was remodeled to add five work areas to allow space for computer work and personal storage. Est cost \$1,000. Work was completed by CSBF Facilities.



Figure 44 Test and Evaluation (Building 25)

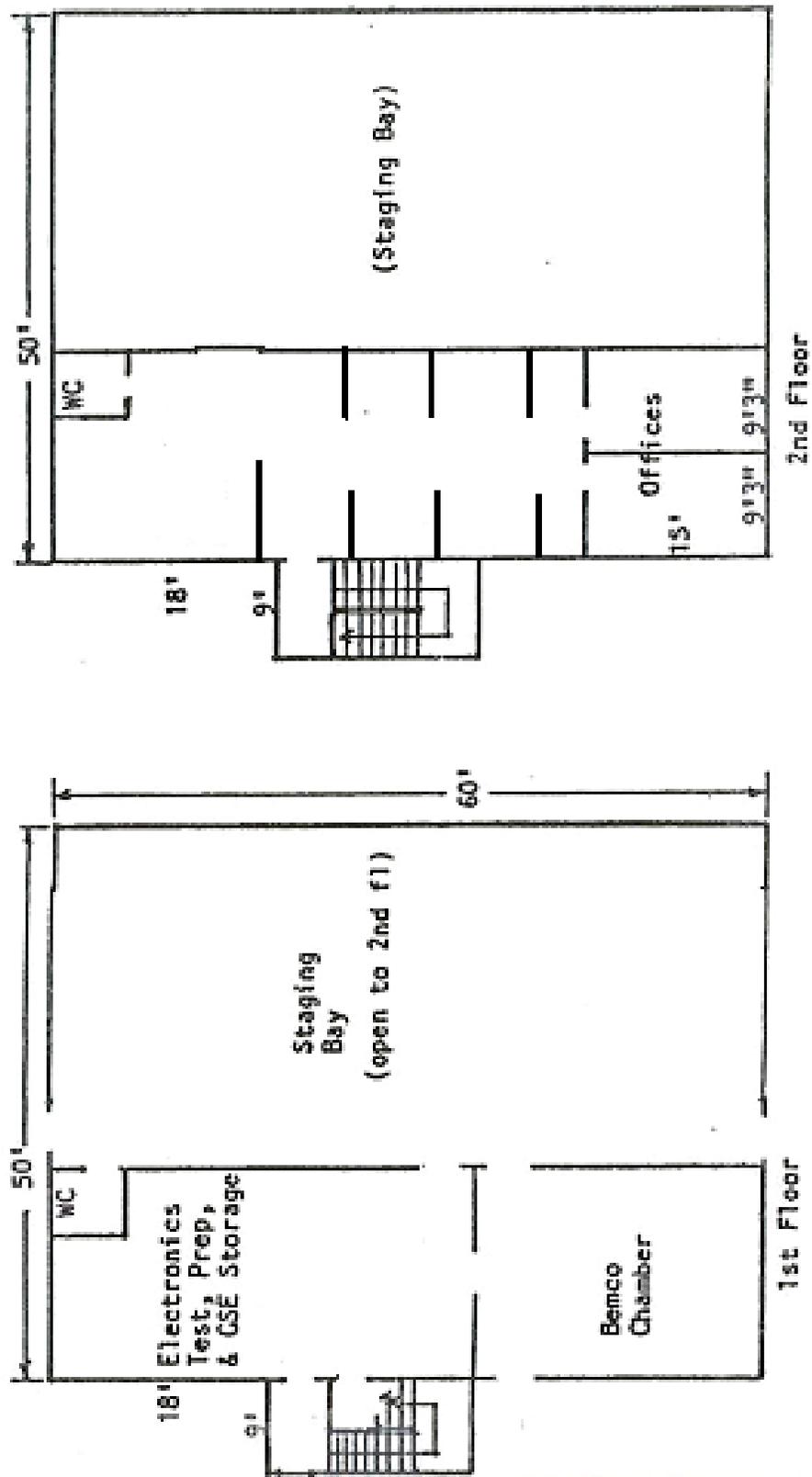


Figure 45 Test and Evaluation (Building 25) Floor Plan

3.26 LOADING DOCK – STRUCTURE 26

CONSTRUCTED:	1995
SQUARE FEET:	900
VALUE:	\$20,200.00
OWNERSHIP:	NASA
NASA CONTRACT:	NAS5-31125
PROPERTY ID:	3494

1995	Original Construction	A 30 x 30-ft loading dock was built to conform to NASA safety standards. A 15 x 30-ft slab was poured in front of the loading dock and the asphalt was cut out and the ground leveled to allow trucks to back up to the dock and remain level. The contractor was Benco Builders of Kennard, Texas.
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Figure 46 Loading Dock (Structure 26)

3.27 ECONO VAULT FUEL STORAGE – STRUCTURE 27

CONSTRUCTED:	1992
SQUARE FEET:	N/A
VALUE:	\$34,662.00
OWNERSHIP:	NASA
NASA CONTRACT:	NAS5-29800
PROPERTY ID:	3133

1992	Original Construction	<p>Two underground fuel storage tanks were excavated and removed to meet requirements of the Texas Clean Water Act. The removal was performed by Eagle Construction and Environmental Inc. of Eastland, Texas.</p> <p>A concrete foundation and retaining wall were built to accommodate new concrete vaulted fuel tanks. Two 500-gal above-ground tanks encased in concrete were installed. The work was performed by Lacon Construction of Houston, Texas.</p>
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Figure 47 Econo Vault Fuel Storage (Structure 27)

3.28 BALLOON SUPPORT – BUILDING 28

CONSTRUCTED: 1998
SQUARE FEET: 8,640
VALUE: \$698,999.00
OWNERSHIP: NASA
NASA: NAS5-31125
CONTRACT:
PROPERTY ID: 3649

- 1998Original Construction This building houses the Electronics, QA Laboratory, and Machine Shops. It was built by Timberline Constructors of Lufkin, Texas. After construction a lean-to was added to store metal materials.
- 1999AC Installed A 3-ton Lennox air conditioner was installed in the Weber Chamber room by Palestine Air and Refrigeration of Palestine, Texas.
- 2008Office Space Additional office space and work area was created for Electronics by taking in about half of the original space that was being use by the QA Lab. One wall and one door were added to create the work area. Est. cost is \$300.



Figure 48 Balloon Support (Building 28)

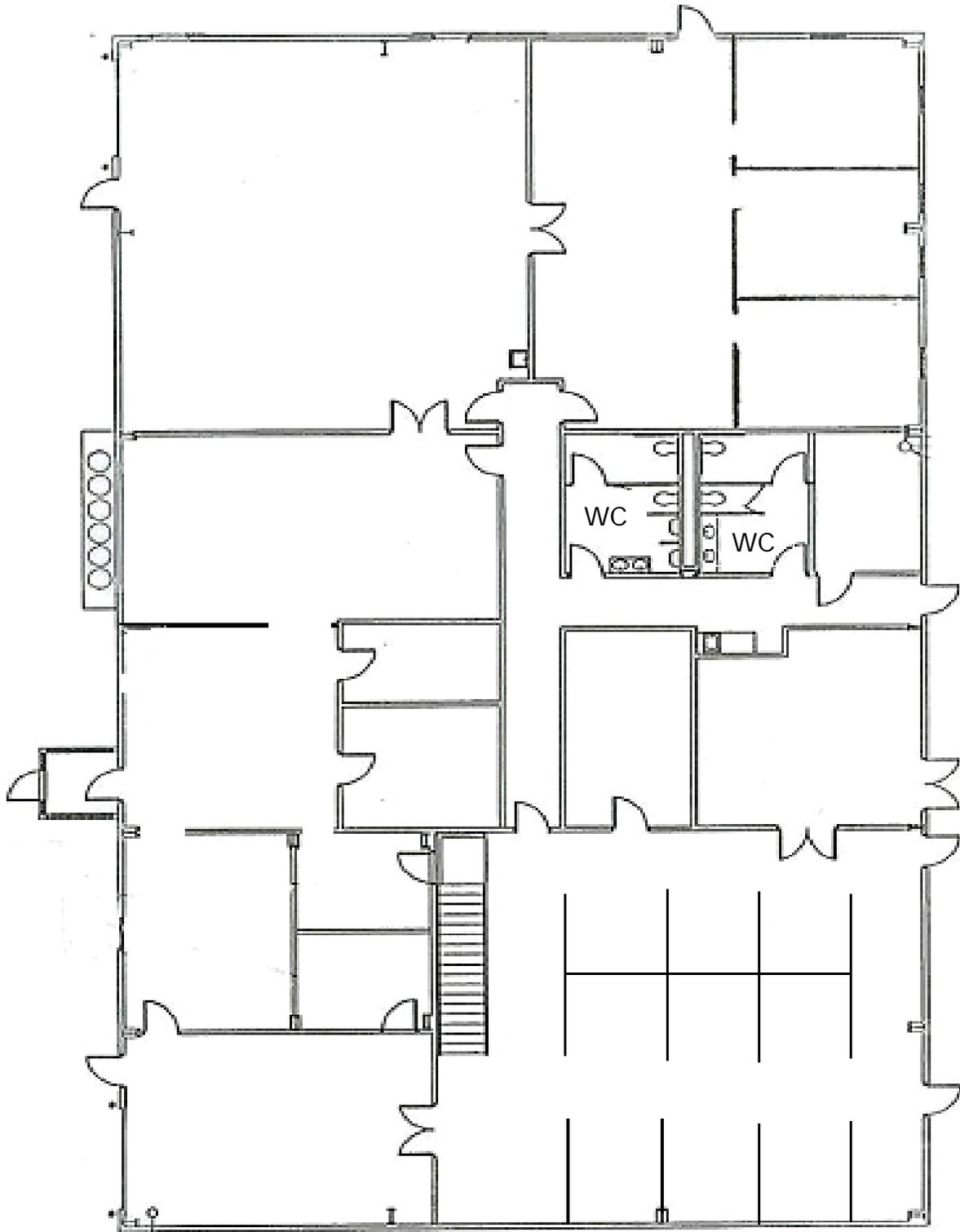


Figure 49 Balloon Support (Building 28) Floor Plan

3.29 EAST PAVILION – STRUCTURE 29

CONSTRUCTED: 2002
SQUARE FEET: 540
VALUE: \$5,400.00
OWNERSHIP: NASA
NASA CONTRACT: NAS5-98008
PROPERTY ID: N/A

2002 Original Construction This 18 x 30-ft pavilion was erected alongside Engineering Support (building 23) by CSBF personnel.



Figure 50 East Pavilion (Building 29)

3.30 WEST PAVILION – STRUCTURE 30

CONSTRUCTED: 2002
SQUARE FEET: 540
VALUE: \$5,4000.00
OWNERSHIP: NASA
NASA CONTRACT: NAS5-98008
PROPERTY ID: N/A

2002	Original Construction	This 18' x 30' pavilion was erected adjacent to the Operational Control Center (building 12) by CSBF personnel.
2011	Upgraded	The Pavilion cover was upgraded to steel with hip roof and enlarged to 20' x 30'. Upgrade was performed by CSBF Facilities at a cost of \$4,000



Figure 51 West Pavilion (Building 30)

3.31 NOAA CLIMATE REFERENCE NETWORK— STRUCTURE 31

CONSTRUCTED:	2003
SQUARE FEET:	N/A
VALUE:	N/A
OWNERSHIP:	NOAA
PROPERTY ID:	N/A

2003	Original Construction	<p>A U.S. Climate Reference Network (USCRN) data collection center was installed by NOAA. Its purpose is to provide future long-term high-quality observations of surface air temperature and precipitation that can be coupled to past long-term observations for the detection and attribution of present and future climate change. USCRN measures the following:</p> <ul style="list-style-type: none">■ Air temperature■ Ground surface temperature■ Precipitation■ Relative humidity■ Soil moisture and temperature■ Solar radiation■ Wind speed
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Figure 52 NOAA Climate Network (Structure 31)

3.32 ENGINEERING SUPPORT STORAGE – BUILDING 32

CONSTRUCTED: 2003
SQUARE FEET: 288
VALUE: \$5,217.51
OWNERSHIP: NASA
NASA CONTRACT: NAS5-03003
PROPERTY ID: 4298

2003 Original Construction A 12 x 20-ft storage building was purchased and placed at the south end of the parking lot between Engineering Support (building 23) and Administration (building 1) to expand available storage space for Engineering Support. The structure was built off-site and delivered to CSBF by Apollo Building Systems of Bullsull, Texas. A wall heating and air conditioning unit was placed in the building.



Figure 53 Engineering Support Storage (Building 32)

4 OTHER INFRASTRUCTURE

4.1 EAST LAUNCH PAD

CONSTRUCTED:	1963
SURFACE:	500,000 FT ²
SIX RADIALS	96,000 FT ²
VALUE:	N/A
OWNERSHIP:	LEASED
PROPERTY ID:	N/A

1963	Original Construction	The original east launch pad is part of the 165.97 acres leased from the City of Palestine. This launch pad was used for all flight operations until 1974. It is currently used for special flight operations requiring minimal launch area.
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Figure 54 East Launch Pad

4.2 WEST LAUNCH PAD

CONSTRUCTED:	1974
SURFACE:	785,000 FT ²
TWELVE RADIALS:	48,000 FT ²
PERIMETER ROAD:	125,000 FT ²
DIAMETER:	1,000 FT
RADIUS:	500 FT
VALUE:	\$1,103,252.73
OWNERSHIP:	NSF
PROPERTY ID:	N/A

1974	Original Construction	The 19-acre, 1,000-ft diameter launch pad is surrounded by a 500-ft grass apron and encircled by a paved 20-ft wide perimeter road. Ten paved radials, used for flight train layout and maneuvering the spool vehicle, extend from the perimeter road toward the launch pad. The radials are spaced approximately 22.5° apart around the perimeter road. Construction costs included the access road from Farm to Market Road 3224 to the launch pad. The pad was constructed under NSF contract by E. W. Hable and Sons, Contractors.
	Seal Coat	A coating was put on the new launch pad to seal the surface from water penetration and reduce the surface temperature.
1978	Resurfacing	The pad was resurfaced under an NSF contract at a cost of \$73,490.00.
1985	New Radial	An eleventh paved radial extending from the perimeter road towards the launch pad was constructed under NASA contract NAS5-28218.
1989	Subsurface Drain System and Repairs	A subsurface drainage system was installed. Repairs to specified deteriorated pavement areas were made and the entire launch pad was slurry sealed by U.S. Seal Coating of Houston, Texas under NASA contract NAS5-29800.
1990	New Radial and Resurfacing	A twelfth paved radial was constructed and the pad resurfaced by Wagner and Sons Paving Company of San Antonio, Texas under NASA contract NAS5-29800.
1991	Survey Completed and Guy Anchor Installed, Pad Striped	A survey of the launch pad area was completed by Ives Technical Services of Palestine, Texas. The guy anchor and protective cover was installed in the center of the launch pad by Duane G. Smith Engineering of Bakersfield, California under NASA contract NAS5-29800. Electric Lights Company of Fort Worth, Texas striped the launch pad with a 4-in solid white stripe and applied glass beads.

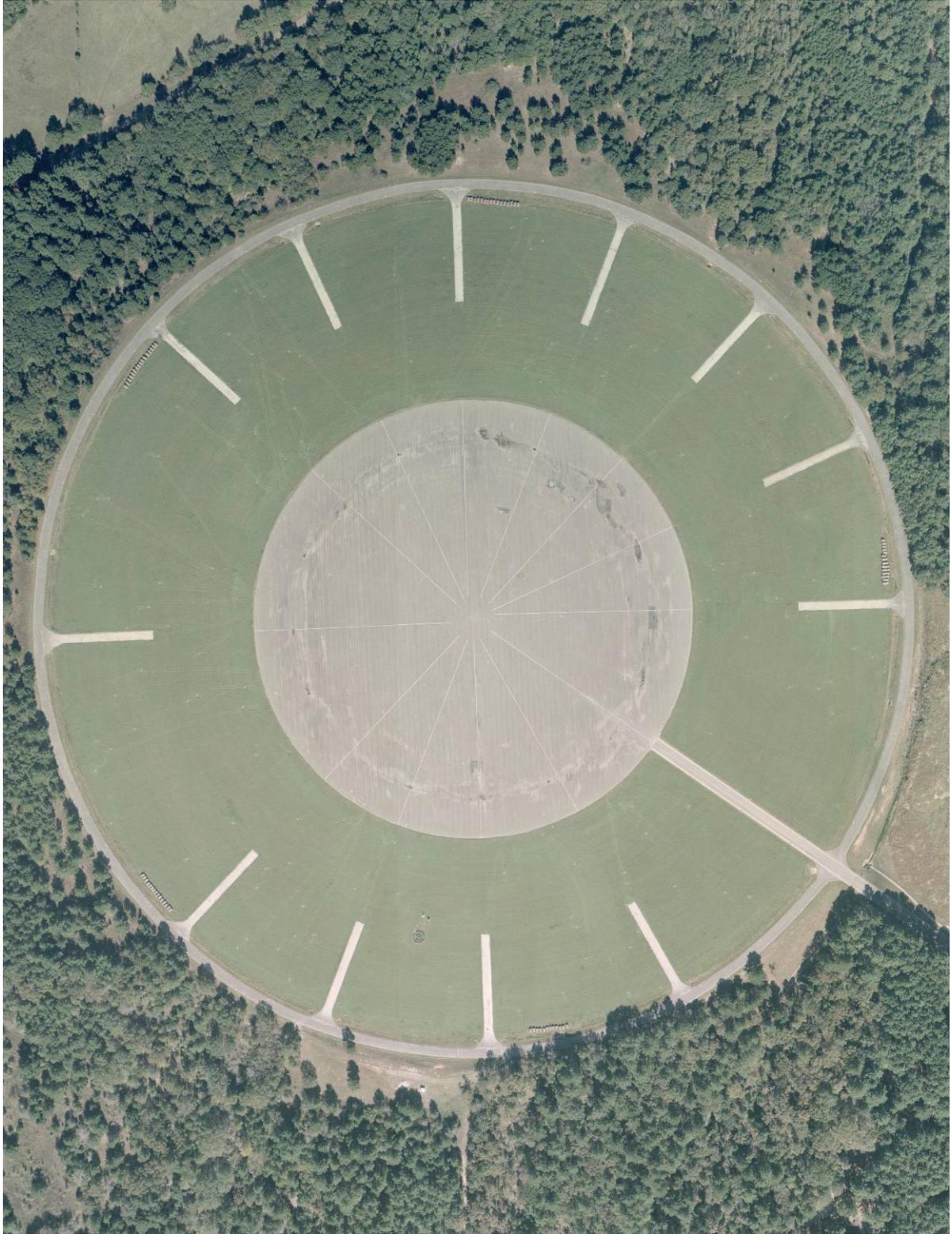


Figure 55 West Launch Pad

4.3 ROADS, WALKS, AND PARKING LOTS

CONSTRUCTED:	1974
SQUARE FEET:	N/A
VALUE:	\$169,000.00
OWNERSHIP:	NSF
PROPERTY ID:	N/A

1974	Original Construction	Facility roads, walks, and parking lots were built.
1990	Improvements	Improvements included resurfacing all original roads and parking lots with asphalt by L & L Asphalt of Tyler, Texas.

4.4 FIRE PROTECTION SPRINKLER SYSTEM

CONSTRUCTED: 1993
SYSTEM TYPE: WET AND DRY PIPE
VALUE: \$521,473.33
OWNERSHIP: NASA
NASA CONTRACT: NAS5-31125
PROPERTY ID: 3365

1993 Original Construction This project included the installation of wet- and dry-pipe fire protection systems in twelve buildings; outside fire hose stations (with covers) to protect nine additional facilities; underground water supply lines; risers, equipment, and fire alarm devices including both audiovisual and control communications equipment; and insulation of sprinkler pipe in attics for buildings 2, 3, and 6 including electrical heat taps. The Fire Alarm Reporting Computer System is in the Visitor Center. The contractor was Beckman Construction Co. of Fort Worth, Texas.

5 FORT SUMNER FLIGHT FACILITY

5.1 STAGING – REMOTE BUILDING R1

CONSTRUCTED:	1991
SQUARE FEET:	8,800
VALUE:	\$1,232,338.83
OWNERSHIP:	NASA
NASA CONTRACT:	Phase I: NAS5-29800 Phase II: NAS5-31125
PROPERTY ID:	3048

1991	Original Construction	<p>An 80 x 80-ft pre-engineered metal building was erected at the Municipal Airport in Ft. Sumner, New Mexico by ESA Construction, Inc. of El Paso, Texas. Phase I of construction was completed in 1991.</p> <p>This facility is used as a remote launch site.</p>
1992	NASA Land Purchase	<p>A certified Corrected Warranty Deed for 8.1499 acres of land was signed by NASA's Donald Satz on 11 June 1992. The tract is located within Section 16, Township 3 North, Range 26 East, New Mexico Prime Meridian (N.M.P.M.), DeBaca County, New Mexico. The check in the amount of \$8,150.00 was transmitted by letter dated 30 June 1992. The deed was recorded in the DeBaca County, New Mexico Courthouse on 17 June 1992.</p>
1994	Additions and Improvements	<p>The addition included adding second and third stories to the structure and installing a 30-ton heat pump. Concrete pavement was added around the building with an asphalt parking lot. A 20 x 20-ft antenna deck was installed on top of the building. An air compressor room and air compressor was also added. NASA Facilities Engineering accepted the project at \$736,104.96 complete from Jim Sena Construction of Santa Rosa, New Mexico under NASA contract NAS5-31125.</p> <p>One A-frame structure was built. Launch pad improvements included removal of all loose debris and concrete foundations. All trees were removed in the launch pad area. This portion of the work was performed by the Village of Fort Sumner.</p> <p>Four inches of base material was spread over the area by K. Barnett and Sons, Inc. of Clovis, New Mexico.</p>
1995	HVAC Repair	<p>Two compressors were replaced and thermostats were installed in the HVAC units by Claiborne Refrigeration Co. of Clovis, New Mexico.</p>
1996	Security System Installation	<p>A security system consisting of a Commander 2000 17-zone CPU, eight door and window sensors, two motion sensors, remote key pad, and siren was installed by ENMR of Clovis, New Mexico.</p>
1997	Remote Controls Installed	<p>The controls of the building were put on remote connection using an ACS US Robotics Sportster Modem by ACS of Albuquerque, New Mexico.</p>
1998	Roof Coating and Air Conditioning Installation	<p>The roof of the building was covered with an Astec ceramic coating by Ceramic Coatings Inc. of Conroe, Texas.</p> <p>A 3-ton air conditioner was installed in the battery storage area to keep batteries in a climate controlled area year-round by Blakely Electric Co.</p>

of Fort Sumner, New Mexico.

1999	AC and Ethernet Installation	An 8-ton air conditioner was installed for the third floor as a backup for the Electronics tower. A fast Ethernet system was installed to replace the old thin-net system. A fiber optic cable was installed from the staging building to the hanger. All work was done by Facilities personnel.
2003	Launch Area Expansion	The size of the launch area was increased by Jactel of Las Cruces, New Mexico.
2004	Telephone System Updated	The outdated telephone system was replaced with an updated system providing more extensions throughout the facility including a facility-wide paging system. The main unit is housed in the first floor of the building. The equipment was manufactured by Telecom with a value of \$7,652.16. The work was performed by CSBF personnel under NASA contract NAS5-03003.
2012	Fire Protection	A fire protection alarms were installed.



Figure 56 Fort Sumner Staging (Building R1)

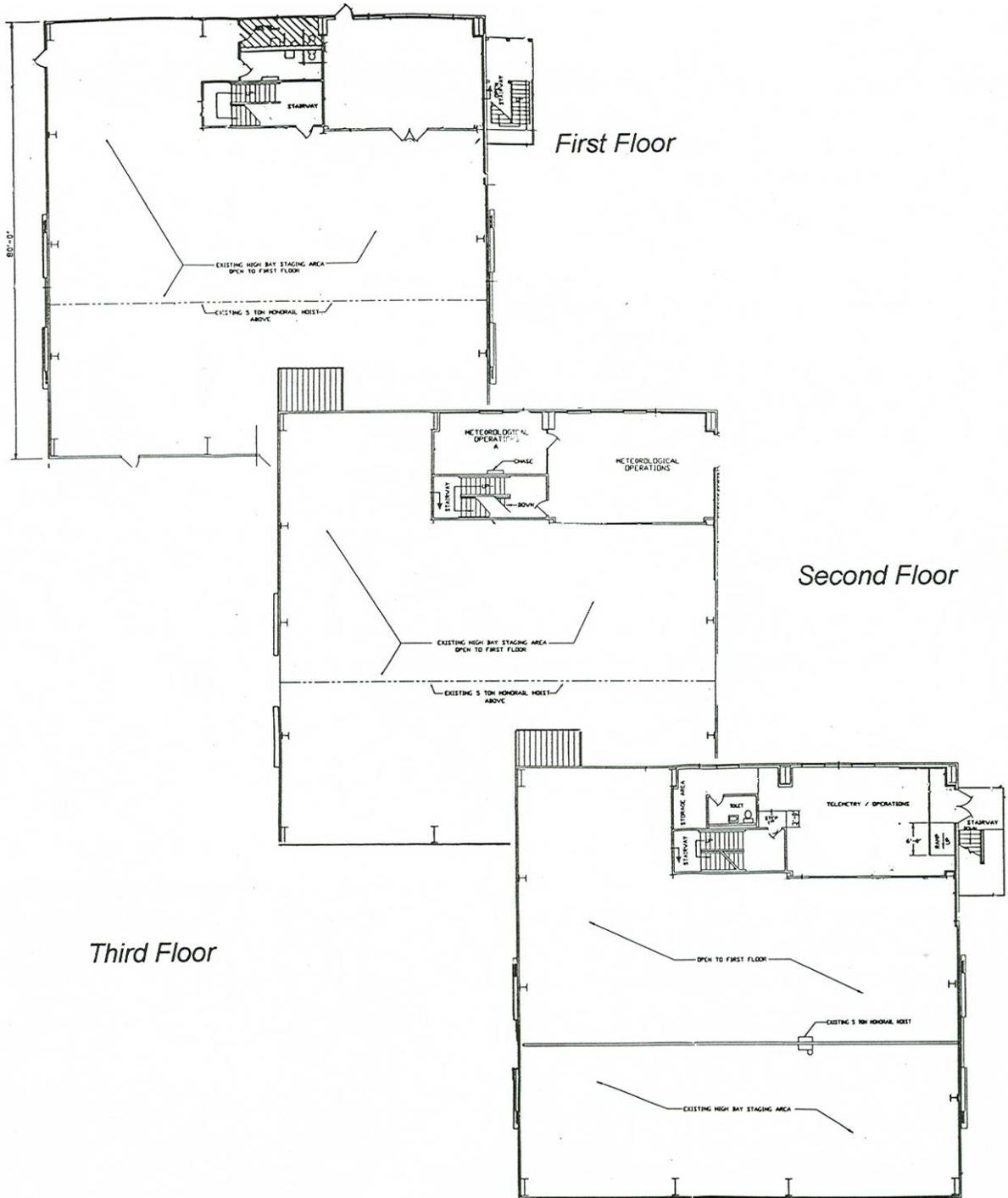


Figure 57 Fort Sumner Staging (Building R1) Floor Plan

5.2 LITHIUM BATTERY STORAGE – REMOTE BUILDING R3

CONSTRUCTED:	2004
SQUARE FEET:	574
VALUE:	\$7,606.66
OWNERSHIP:	NASA
NASA CONTRACT:	NAS5-03003
PROPERTY ID:	4443

2004 Original Construction This single-story 24 x 24-ft metal building was erected just behind the Electronics section of Staging (building R1) to store lithium batteries. A 3-ton AC is installed. The materials were purchased from Mueller Co. of Moriarty, New Mexico at a cost of \$7,606.66, and the work was performed by CSBF personnel. A 3200 BTU is installed.



Figure 58 Fort Sumner Lithium Battery Storage (Building R3)

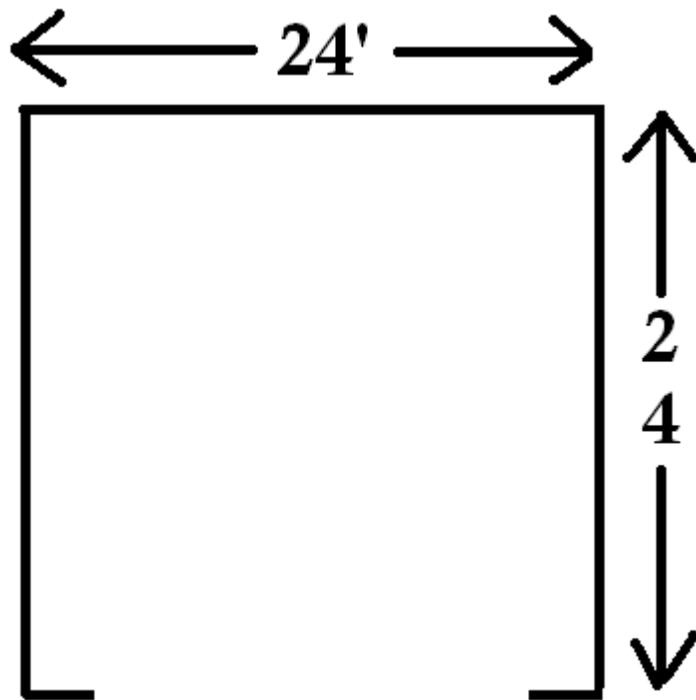


Figure 59 Fort Sumner Lithium Battery Storage (Building R3) Floor Plan

6 ALICE SPRINGS, AUSTRALIA

6.1 DEMOUNTABLE BUILDING – REMOTE BUILDING R2

CONSTRUCTED:	1988
SQUARE FEET:	400
VALUE:	\$11,210.94
OWNERSHIP:	NASA
NASA CONTRACT:	NAS5-29800
PROPERTY ID:	2815

1988	Original Construction	This single-story 10 x 40-ft building was purchased used from Central Australian Helicopter at Alice Springs Airport in Alice Springs, Australia and relocated to a site near the CSBF work area. The building houses CSBF electronic telemetry equipment during remote launch campaigns.
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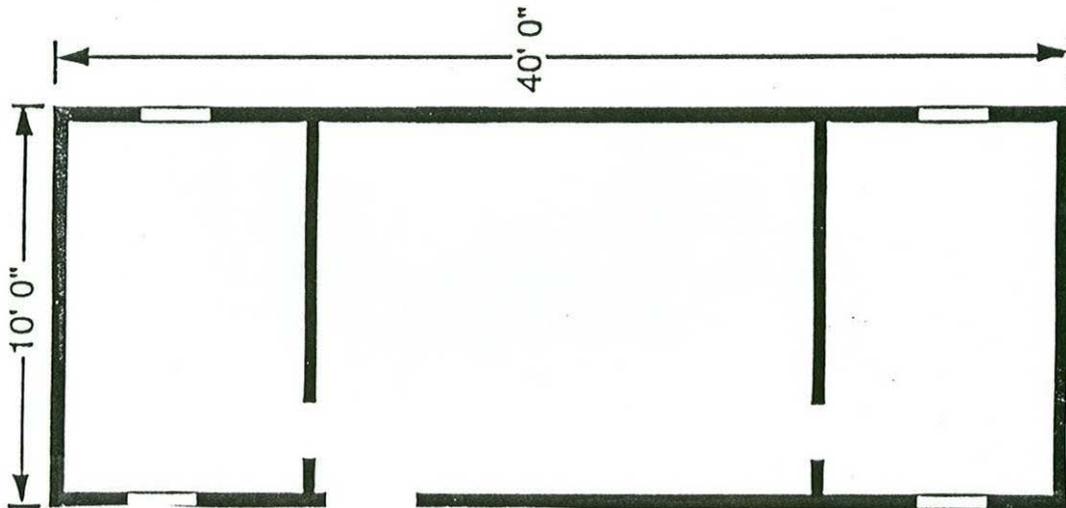


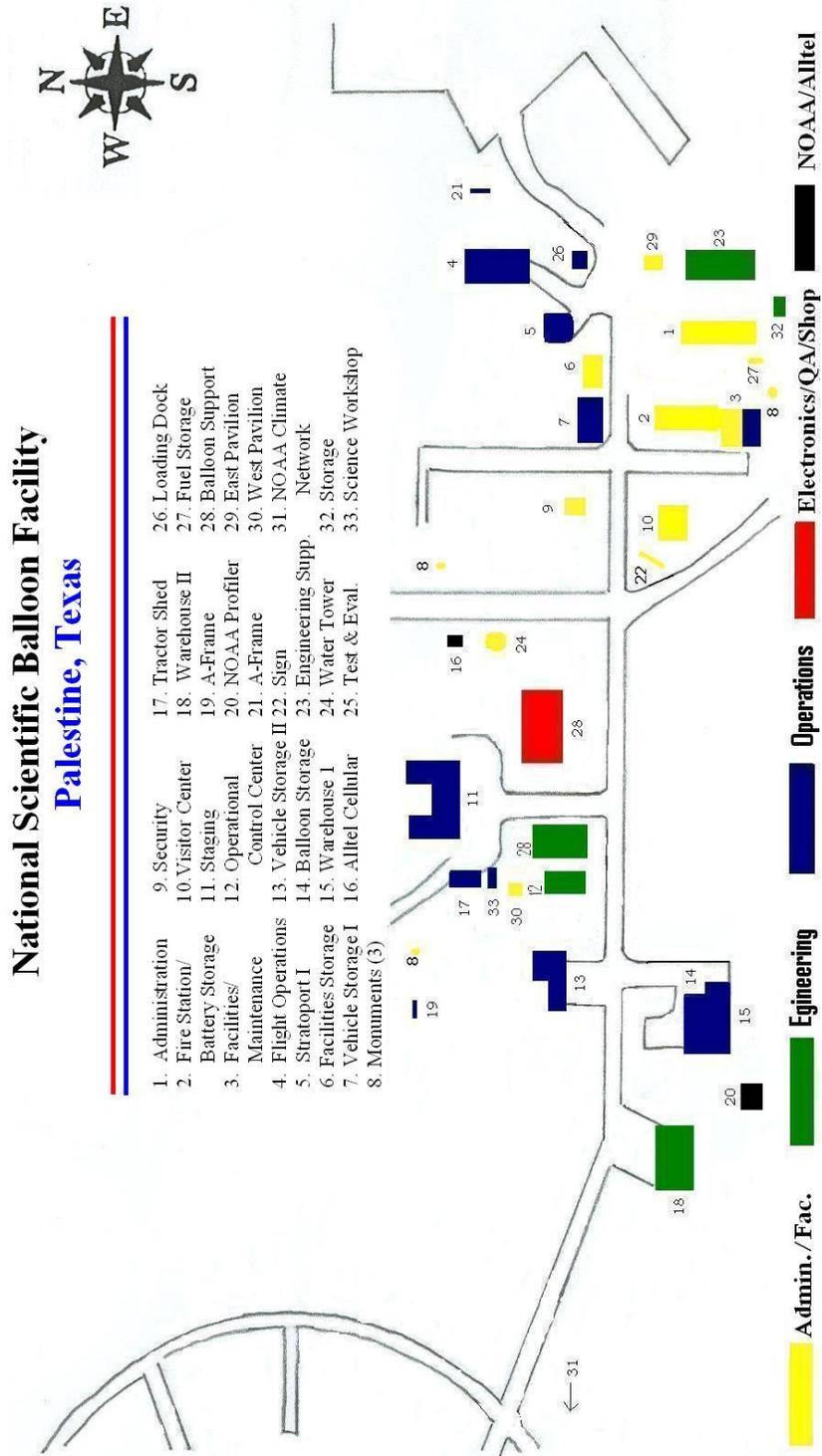
Figure 60 Alice Springs Demountable Building (Building R2) Floor Plan

APPENDICES

APPENDIX A – CSBF ORGANIZATION

Figure 61 CSBF Organization Chart

APPENDIX B – CSBF FACILITY MAP



APPENDIX C – MAP OF PALESTINE, TX

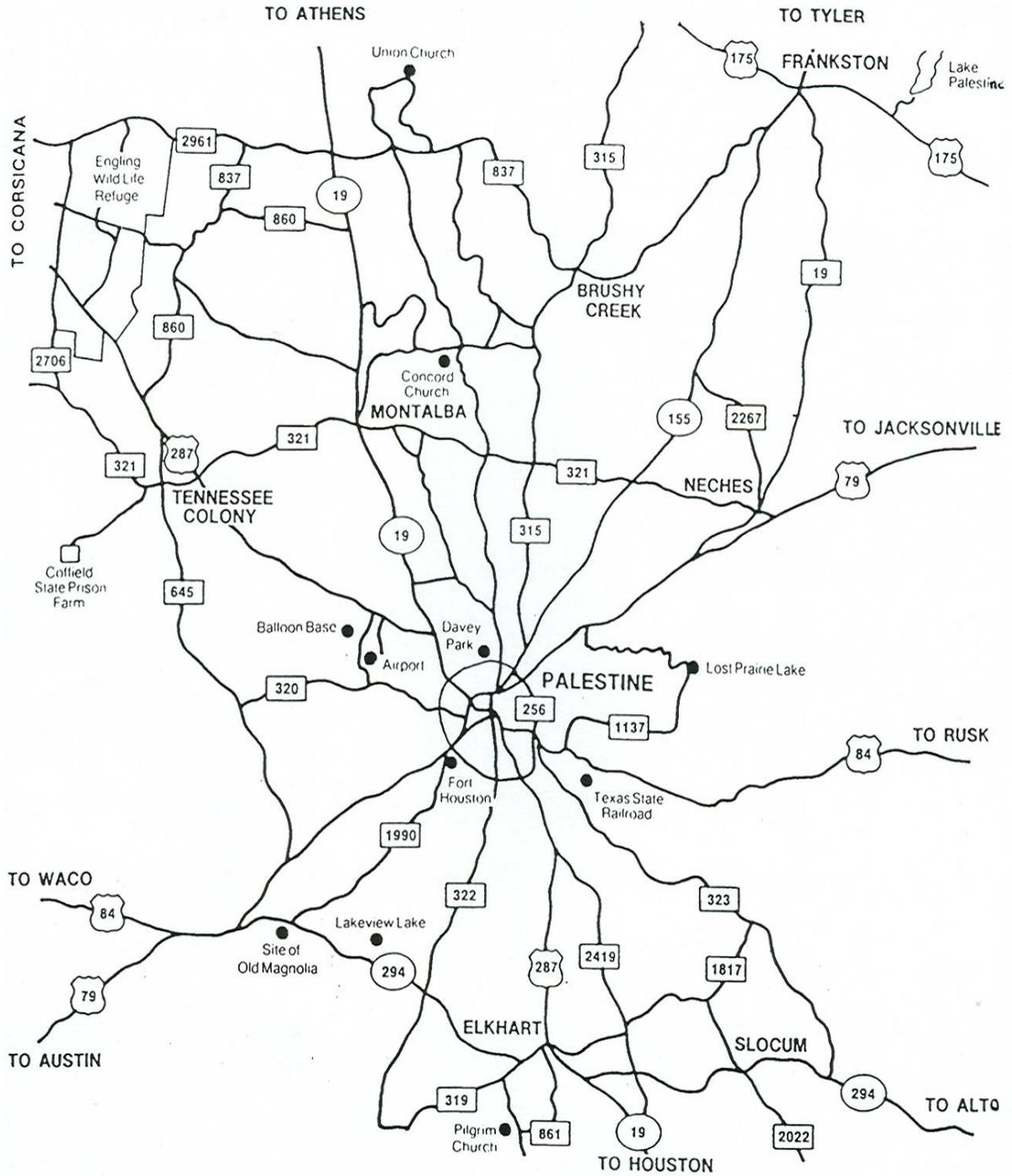


Figure 63 Map of Palestine, Texas

APPENDIX D – MAP OF FORT SUMNER, NM

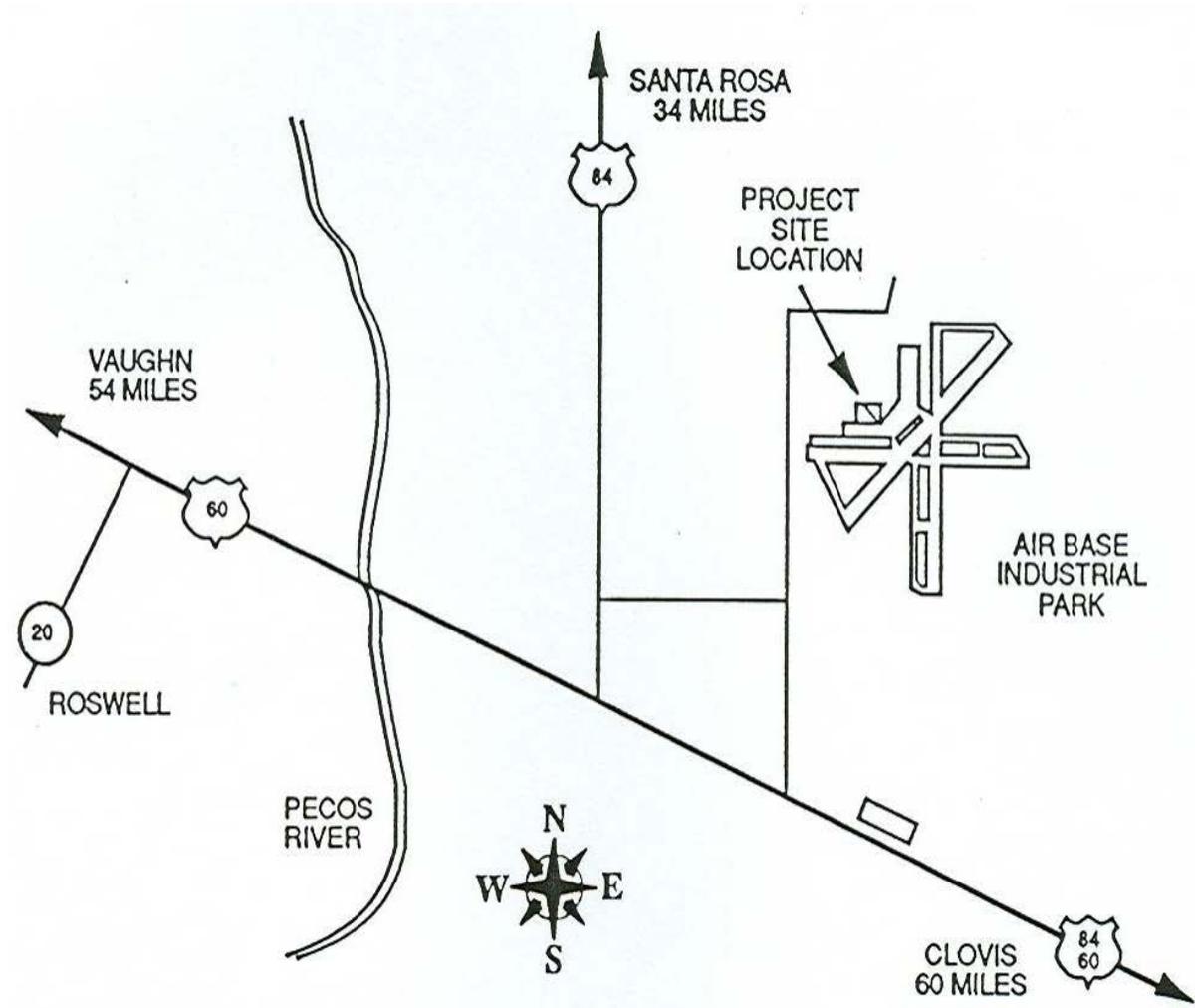


Figure 64 Map of Fort Sumner, NM

APPENDIX E – FORT SUMNER VICINITY MAP

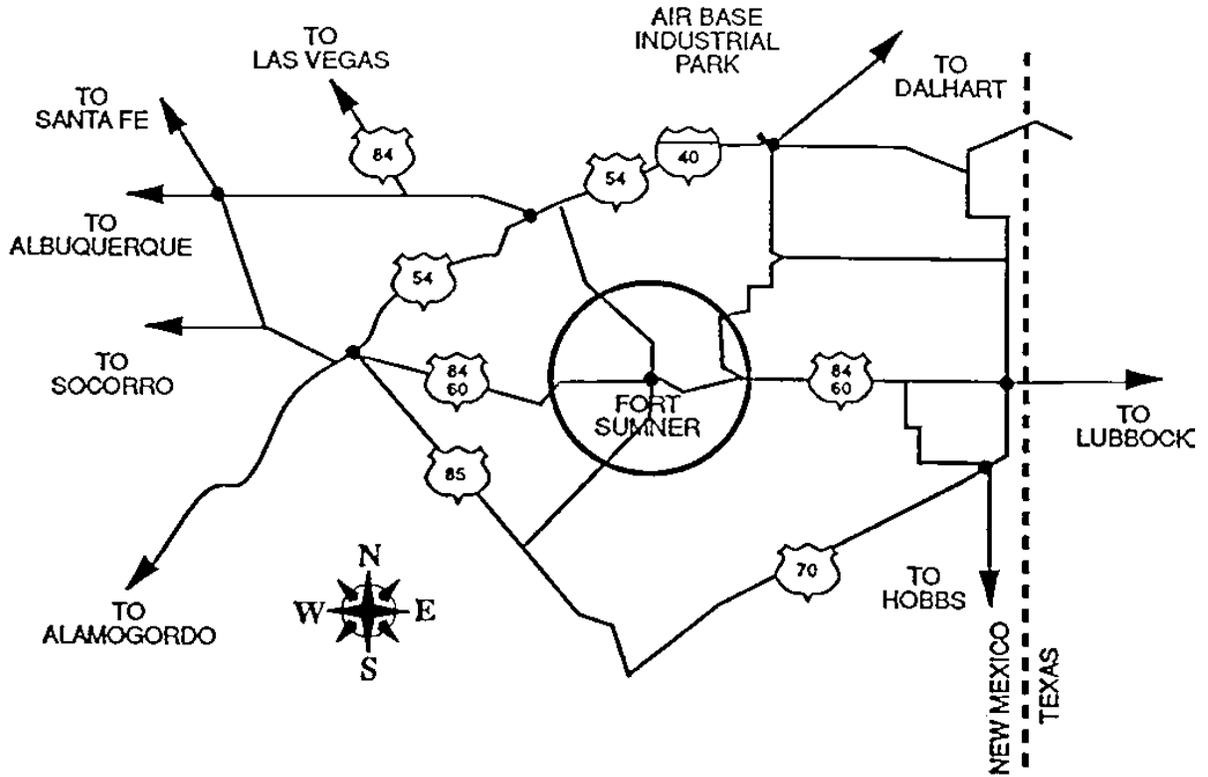
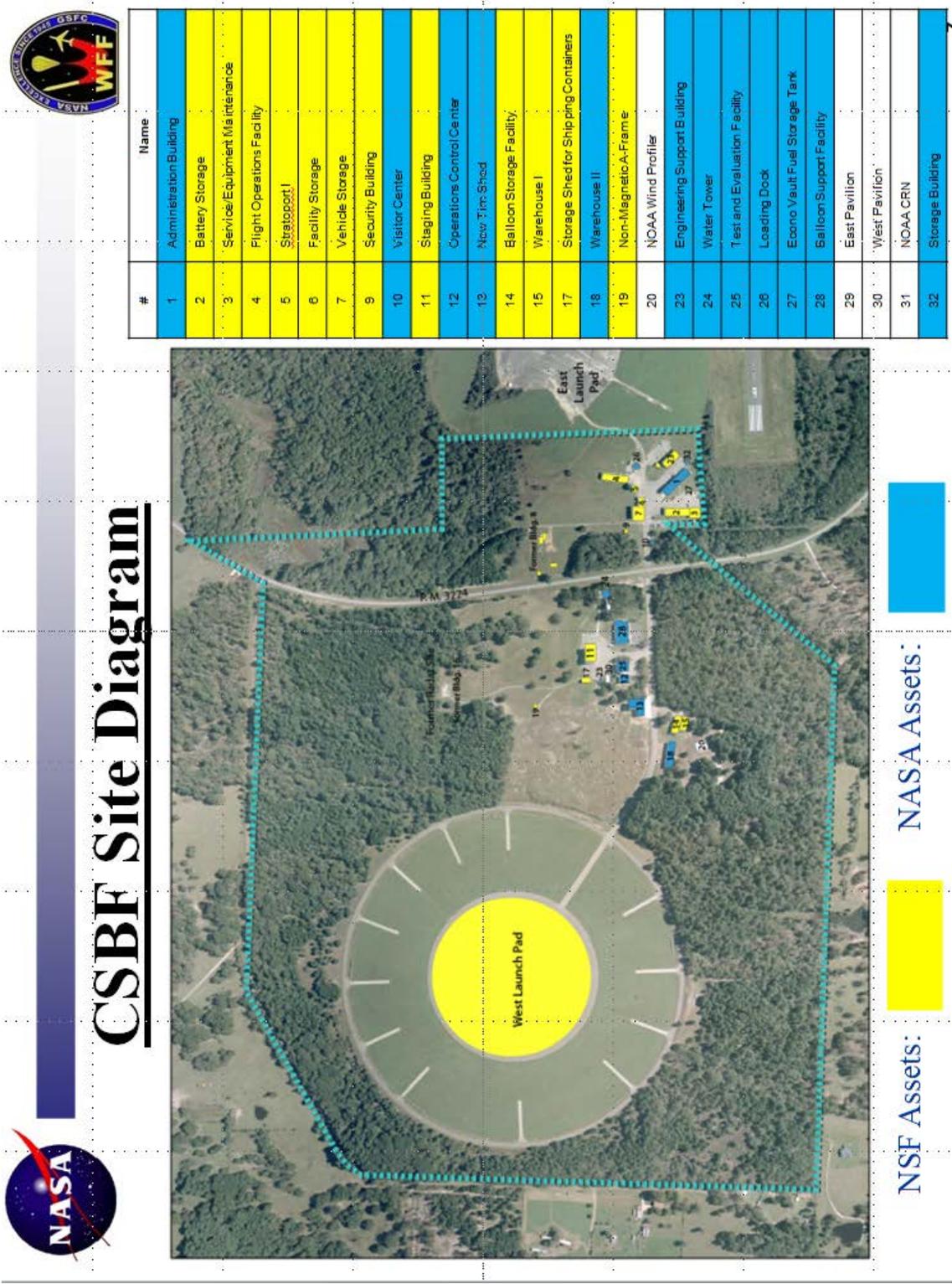


Figure 65 Fort Sumner Vicinity Map

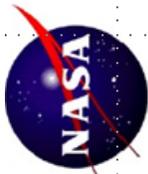
APPENDIX F – CSBF SITE DIAGRAM



APPENDIX G – CSBF NSF PROPERTY



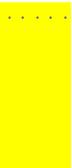
CSBF NSF Property (Building View)



#	Name
1	Administration Building
2	Battery Storage
3	Service/Equipment Maintenance
4	Flight Operations Facility
5	Stratopost I
6	Facility Storage
7	Vehicle Storage
9	Security Building
10	Visitor Center
11	Staging Building
12	Operations Control Center
13	New Tin Shed
14	Balloon Storage Facility
15	Warehouse I
17	Storage Shed for Shipping Containers
18	Warehouse II
19	Non-Magnetic A-Frame
20	NOAA Wind Profiler
23	Engineering Support Building
24	Water Tower
25	Test and Evaluation Facility
26	Loading Dock
27	Econo Vault Fuel Storage Tank
28	Balloon Support Facility
29	East Pavilion
30	West Pavilion
31	NOAA CRN
32	Storage Building



NASA Assets:



NSF Assets: