

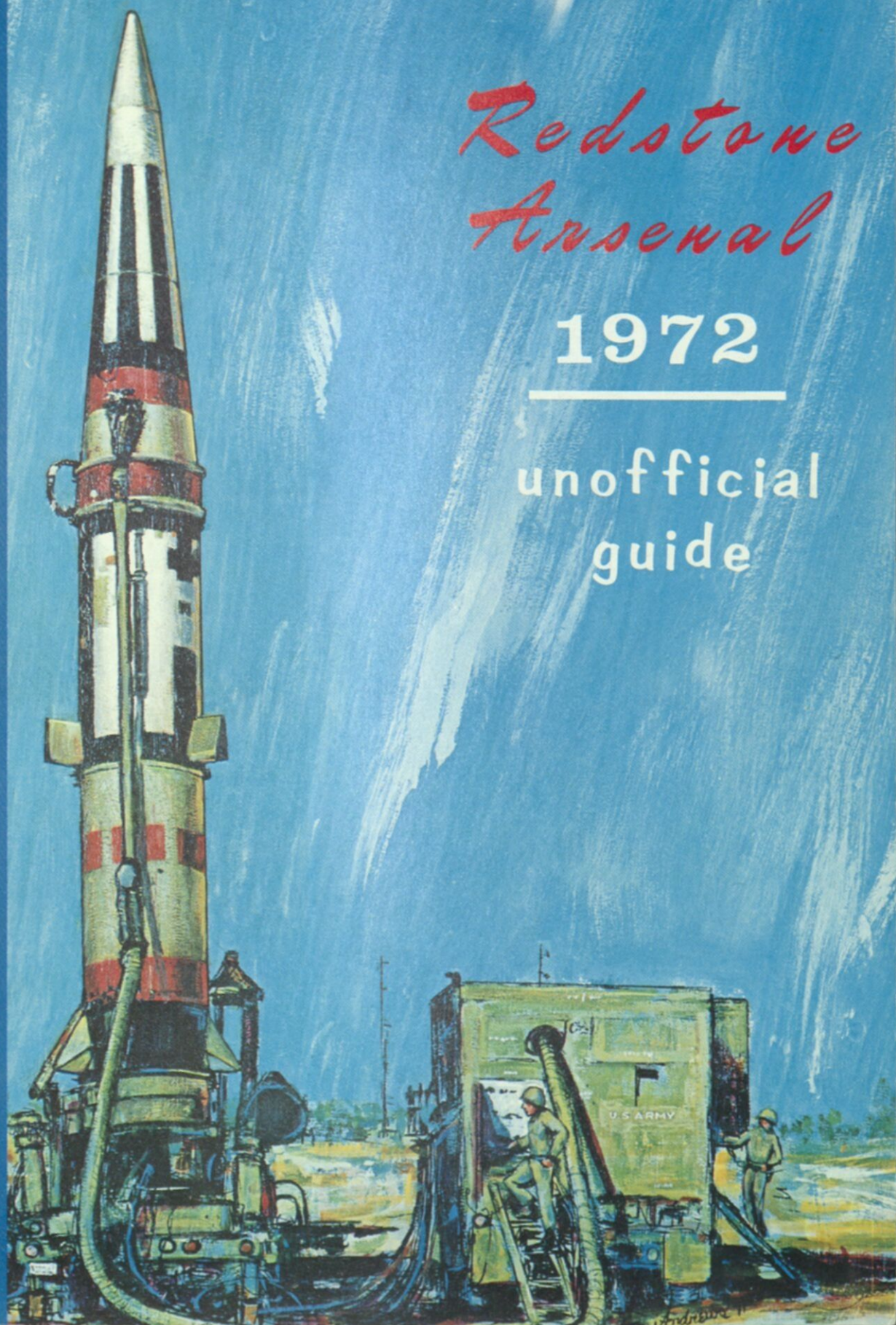
AN UNOFFICIAL PUBLICATION, PUBLISHED BY BOONE PUBLICATIONS, INC., a private firm, in no way connected with the Department of the Army. Opinions expressed by the publisher and writers herein are their own and are not to be considered an official expression by the Department of the Army. The appearance of advertisements in this publication does not constitute an endorsement by the Department of the Army of the firms, products or services advertised.

# *Redstone Arsenal*

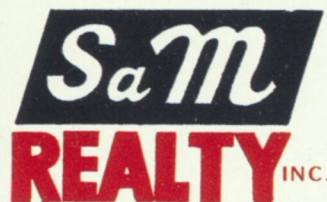
## 1972

---

unofficial  
guide







**For Professional  
Real Estate Service**



★ SALES    ★ RESIDENTIAL    ★ COMMERCIAL    ★ RENTALS

Our Office Is Staffed With Retired Military Who Know And Appreciate Your Housing Problems

**921 Willowbrook Dr., S.E.**

**Huntsville, Alabama 35802**

**Phone 881-1830**



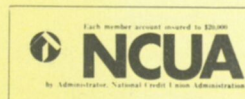
*Serving the Civilian and Military Personnel of  
Redstone Arsenal, NASA and Eligible Contractor Personnel*

**FIVE OFFICES AT YOUR SERVICE**

OFFICE	HOURS	PHONE	OFFICE	HOURS	PHONE
MAIN OFFICE 511 Sparkman Drive	9:00 A.M.—4:00 P.M. Monday — Friday	837-6110	HAYSLAND SQUARE BRANCH OFFICE Haysland Square Center South Memorial Pkwy.	Noon—8:00 P.M. Monday—Friday	881-6200
BRANCH OFFICE BUILDING 3649 Redstone Arsenal	9:00 A.M.—4:00 P.M. Monday — Friday	837-6815 881-0534			
BRANCH OFFICE BUILDING 4200 Marshall Space Flight Center	9:00 A.M.—4:00 P.M. Monday — Friday	881-7724 881-7725	THE MALL BRANCH OFFICE The Mall—Memorial Parkway & University Dr.	Noon—8:00 P.M. Monday—Friday	539-8865



**REDSTONE FEDERAL CREDIT UNION**  
*A Cooperative Savings and Loan Corporation*



**P. O. Box 5347,**

**511 Sparkman Drive Huntsville, Alabama 35805**



**BRADDOCK, DUNN AND McDONALD, INC.**

*Scientific and Engineering Analyses*

- OPERATIONS RESEARCH
- SYSTEM ANALYSIS
- WEAPON EFFECTS
- COMPUTER SCIENCES
- PROGRAMMING AND SOFTWARE
- DATA PROCESSING

Huntsville, Alabama (205) 539-0279  
6500 Convair Road, El Paso, Texas 79925 (915) 778-9531





## Table of Contents

Redstone Yesterday .....	2
Redstone Today .....	2
U.S. Army Missile Firsts .....	3
The Beginning .....	4
U.S. Army Missiles of the Past .....	4
U.S. Army Missile Systems .....	7
U.S. Army Missile Command .....	16
U.S. Army Missile and Munitions Center and School .....	20
U.S. Army Safeguard System Command .....	24
U.S. Army Engineer Division, Huntsville .....	26
U.S. Army Safeguard Logistics Command .....	28
U.S. Army Medical Department at Redstone Arsenal .....	28
Life at Redstone .....	29
Huntsville, Rocket City, U.S.A. ....	41
Points of Interest .....	46
Map of Huntsville .....	48
Decatur .....	49
Map of Redstone Arsenal .....	52

The material for this publication was prepared by the U.S. Army Missile Command. All questions, corrections and comments are welcome and should be addressed to: Commanding General, U.S. Army Missile Command, AMSMI-G, Redstone Arsenal, Alabama 35809.



# REDSTONE ARSENAL

## Yesterday

Redstone Arsenal, one of the chief bulwarks in the nation's defense program, is a combination of two U. S. Army arsenals that were established in 1941 for the production of artillery shells.

The Chemical Warfare Service began a \$70 million installation here in 1941 to manufacture and load chemical mortar and howitzer shells. It was called Huntsville Arsenal.

On October 6, 1941, the Ordnance Corps began a \$20 million construction program for the Redstone Ordnance Plant. This plant assembled explosives for the chemical shells and produced complete rounds. It was redesignated Redstone Arsenal on February 26, 1943. Approximately 20,000 people were employed by both arsenals at the peak of production during World War II.

Employment was sharply curtailed at the close of hostilities. From September 1945, until February 1947, the primary mission here was renovation of ammunition returned from overseas. In late February 1947, Redstone Arsenal was placed on standby as a reserve arsenal. Employment at the Chemical and Ordnance installations dropped to a skeleton force of about 250 caretakers, guards, and firemen. The Chemical Corps offered its arsenal for sale.

During the summer 1948, an extensive survey of all Ordnance installations was made to find suitable land and facilities to permit activation of a rocket center for the Army's expanding rocket and guided missile activities. The Chief of Ordnance designated Redstone Arsenal as the center of research and development activities for rockets and related items in October 1948. The Chemical Corps deactivated Huntsville Arsenal in January 1949, and its land and facilities were transferred to Redstone Arsenal.

Recruitment of technical and professional personnel began in January 1949, and a Research and Development Division was established the next month.

Redstone Arsenal was declared an active installation by the Department of the Army on June 1, 1949.

That same month the Alpha Division of Thiokol Chemical Corporation moved into buildings which formerly housed ammunition loading lines, and began work in solid propellant rocketry. Rohm and Haas Chemical Company personnel also arrived in June to begin basic rocket propellant research.

In April 1950, the Army's rocket experts who had been working at Ft. Bliss, Texas., were moved to Redstone. This was the 9330th TSU Ordnance Research and Development Sub-Office (Rocket) and contained the team of scientists and engineers headed by Dr. Wernher von Braun.

Redstone Arsenal soon became the nerve center for the Army's rocket and guided missile program. It was responsible for research, procurement, storage, and repair of the entire family of Army Ordnance missiles.

## Today

Redstone Arsenal today is the nerve center of the U. S. Army's missile and rocket programs. There are five major Army elements now located on Redstone and in neighboring Huntsville.

On the Arsenal are the U. S. Army Missile Command and the U. S. Army Missile and Munitions Center and School. Also located within its boundaries are the George C. Marshall Space Flight Center of the National Aeronautics and Space Administration, and a Government-owned, contractor-operated facility engaged in rocket propellant research and manufacture—the Huntsville Division of Thiokol Chemical Corporation.

Off post are the U. S. Army Safeguard System Command, the U. S. Army Safeguard Logistics Command and the U. S. Army Engineer Division, Huntsville.

The Arsenal is a city within a city. Its 38,881 acres include three minor mountain ranges. There are 94 miles of railroads, more than 330 miles of roads and more than 2,000 buildings on the post. There is a jet length airfield and modern cargo docks on the Tennessee River, the Arsenal's southern boundary. Army buildings and equipment at Redstone are valued at more than \$320 million.

On an average day some 20,000 vehicles pass through Redstone's gates. Contractors, vendors and other visitors form a daily stream. In an average month some 8,000 transient visitors are badged through the Arsenal's control facilities to do business or tour one or more of the Government agencies on the installation.

The Arsenal has a daily Government and contractor working population of about 25,000. Although no civilians live on the Arsenal, about 3,000 to 5,000 military dependents live in Government quarters. Approximately 1,500 children of military personnel residing on the Arsenal attend schools in Huntsville.

The Army employs more than 10,400 civilians at Redstone and in Huntsville and approximately 4,000 military personnel are assigned here having a combined annual payroll of approximately \$180 million. About 1,500 of the military personnel are students at the Army Missile and Munitions Center and School.

The Army at Redstone and in Huntsville will spend nearly \$2 billion during Fiscal Year 1971 with about 85 percent of the amount going to American industry, principally through contracts to companies for missile system research, development and production.





# ARMY MISSILE FIRSTS

- March 22, 1946—First flight beyond the earth's atmosphere.
- May 22, 1947—First firing of a guided ballistic missile.
- February 24, 1949—First penetration of outer space.
- July 24, 1950—First missile launched from Cape Kennedy.
- November 27, 1951—First intercept and "kill" of an aircraft by a ground-to-air guided missile.
- August 20, 1953—First American launch of an inertially guided ballistic missile.
- December, 1953—First deployment of a ground-to-air missile defense system in America.
- November, 1954—First U. S. Operational Ballistic missile unit.
- February, 1955—First overseas deployment of an operational surface-to-surface missile unit.
- May 31, 1957—First successful flight of an intermediate range ballistic missile.
- August 8, 1957—First successful recovery of a nose cone from space.
- January 31, 1958—First American scientific earth satellite.
- May 1958—First intercept and "kill" of a low altitude, high speed aircraft by a ground-to-air missile.
- April 15, 1958—First field artillery missile battalion.
- July 31, 1958—First missile flight of a live nuclear device.
- September 20, 1958—First missile flight to ICBM range.
- March 3, 1959—First successful American lunar probe.
- May 28, 1959—First space flight and successful recovery of primates.
- December 3, 1959—First firing of an air-to-ground guided missile from a helicopter.
- January, 1960—First intercept and "kill" of a rocket by a ground-to-air guided missile.
- June 3, 1960—First intercept and "kill" of a ballistic missile by a ground-to-air guided missile.
- July 19, 1962—First intercept of an intercontinental ballistic missile by a ground-to-air guided missile.
- May, 1963—First intercept of a satellite with a ground-to-air guided missile.



Launch of Explorer I — January 31, 1958.



# THE BEGINNING

Today's modern rocket is viewed by many as the symbol of a new, exciting age, yet it had its beginnings many centuries ago in China. In 1232 A.D., rockets were reportedly used by the Chinese in the battle of Kai-Feng-Fu.

The French used rockets against the English at the battle of Orleans in 1429. Rockets were used during the Thirty Years' War (1618-1648); at the battle of Panipat, India, in 1799, and during the siege of Copenhagen in 1807.

Francis Scott Key mentions the "rocket's red glare" in the "Star Spangled Banner," which was written while Fort McHenry was bombarded by British rockets in 1812. In 1815, the English used rockets against the forces of Napoleon at Waterloo.

Early pioneers in rocket warfare, William Congreve, an Englishman, and William Hale, an American, made significant contributions to rocket development.

With the advent of rifled barrels and accurate artillery, interest in rockets declined. By 1870, only rockets carrying lifelines to distressed ships were in common use.

In 1916, Professor Robert H. Goddard, the father of modern American rocketry, launched the first liquid-fueled rocket, and laid the foundation for rocket technology which would

eventually take man to the moon and beyond.

Although rockets saw extensive use during both world wars, the rocket-powered guided missile did not materialize as an effective war weapon until the final days of the Second World War.

At their Peenemunde research facility, the Germans developed a ballistic missile, the V-2 (V stood for Vergeltungswaffe or vengeance weapon). The V-2 was directed against England, France and Belgium, and there was no defense against the missile.

Fortunately the war ended before the V-2 attacks could reach their total potential for destruction, and some of the Peenemunde research team and their missiles were transferred by the Army to Fort Bliss, Texas, under the code name "Operation Paperclip."

At Fort Bliss, swords were literally beaten into plowshares as the rockets which were once weapons of war became the tools that enabled scientists to explore the upper atmosphere.

In April, 1950, the Army moved its rocket research from Fort Bliss to Redstone Arsenal near Huntsville, Alabama. Although missile work was started in earnest during World War II by the Army, concentrating missile activities at Redstone marked the beginning of the Army's modern rocket and guided missile program.

CONGREVE WAR ROCKET  
Stabilized by: Glide-Stick

LENGTH: 26"



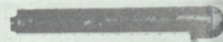
POINTED NOSE



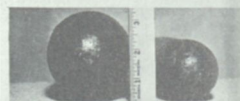
ROUND NOSE

HALE'S WAR ROCKET  
Stabilized by: Spin

LENGTH: Approximately 14"



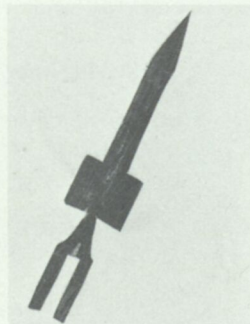
SIDE VIEW



FRONT VIEW

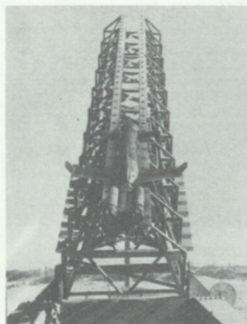
14" ROCKET

## Army Missiles of the Past



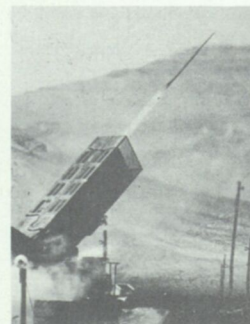
### Private A

Private A was the Army's first rocket to research the feasibility of high altitude ballistic missiles. Designed in 1943 by the California Institute of Technology, the Private A first flew in 1944 and achieved an average range of ten miles. The missile was eight feet long and had a gross weight of 500 pounds which included a 60-pound payload.



### Private F

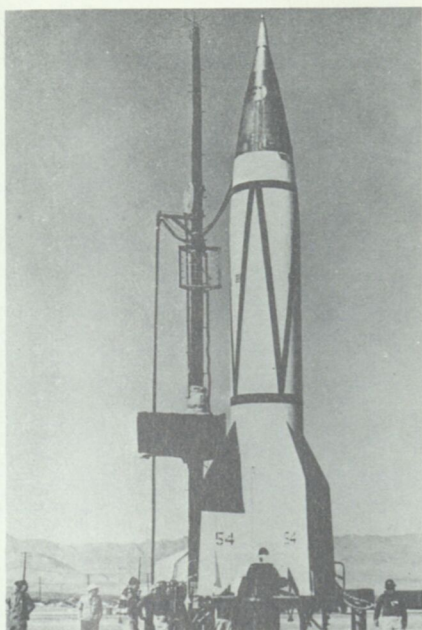
The Private F was the second Army rocket built to explore missile design. The missile differed from the Private A since it had a vertical fin and two horizontal lifting surfaces in place of four stabilizing fins. First flown in the spring of 1945, the Private F was powered by solid fuel propellants.



### Loki

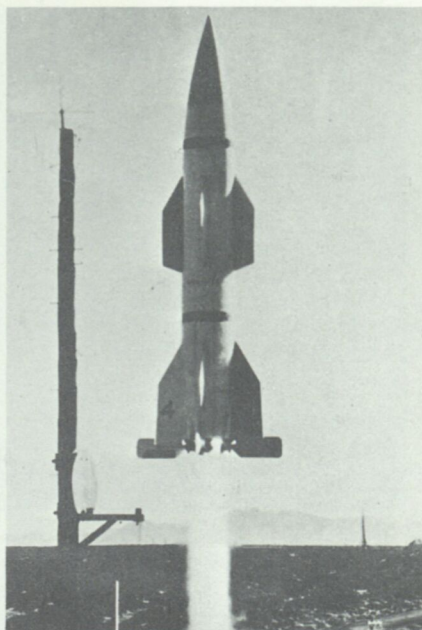
The Loki was a solid fuel, free-flight, anti-aircraft rocket. The Loki project was a continuation of the development of the Taifun, a German rocket developed at Peenemunde during World War II. The rocket system was named after the Norse God of Trouble and Mischief. The Loki was discontinued with the advent of a feasible anti-aircraft guided missile system.





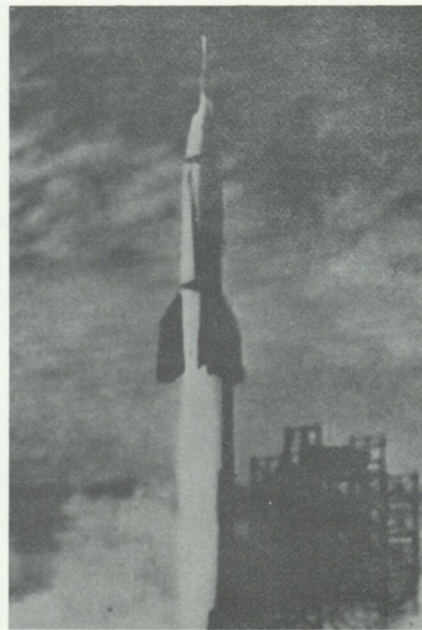
### V-2

The V-2 is probably the best known of the early missiles. The 46-foot rocket utilized alcohol and liquid oxygen as fuel and could carry a 1,650 lb. warhead 225 miles. After World War II, more than 100 V-2 missiles were launched at White Sands, New Mexico, where they provided invaluable data in the beginning of America's missile program.



### Hermes A-3

The Hermes A-3 was designed as part of a research and development project begun by the Army in 1945. It was intended to carry a heavy nuclear warhead to a range of 90 nautical miles. Thirteen test vehicles were fired before the program was terminated in 1954, when it became obvious that the Redstone missile would prove successful.



### Bumper WAC

The Bumper WAC was the first vehicle to penetrate space. On February 24, 1949, a WAC (Without Attitude Control) Corporal rocket boosted by a V-2 obtained a peak altitude 250 miles above the earth 6½ minutes after take off. In addition to entering space, the Bumper WAC was the first rocket to achieve high velocity, high altitude staging.



### Dart

The Dart was the Army's first wire guided missile and the forerunner of the Dragon, Shillelagh and TOW. Like its descendants, Dart was designed as an assault, anti-tank missile. Dart was powered by a solid fuel rocket motor and had a range in excess of one mile. The missile system was phased out in 1958.



### Lacrosse

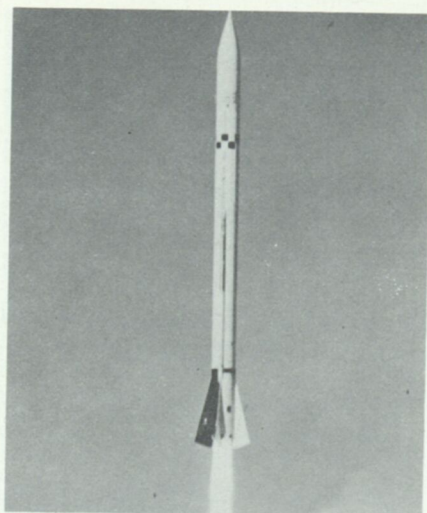
The Lacrosse guided missile was a surface-to-surface weapon of great accuracy and mobility. Lacrosse was used in close tactical support of ground troops. It was an all weather missile capable of carrying nuclear and high explosive warheads which could destroy hard point targets. The Lacrosse was retired in the early sixties.



### Littlejohn

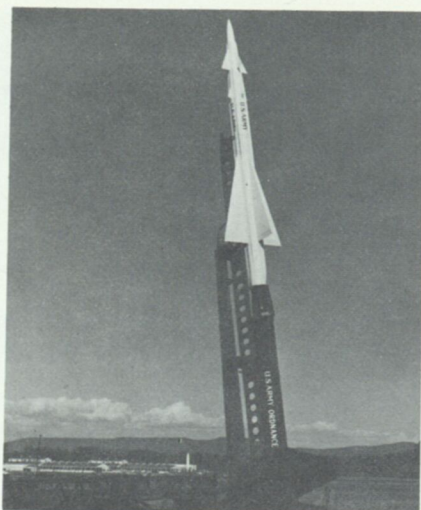
The 318mm Littlejohn missile was a free-flight artillery rocket designed to deliver the explosive power of heavy artillery. The Littlejohn could carry either nuclear or conventional warheads. In contrast to guided missiles, the Littlejohn is a free-flight rocket without electrical controls. The Littlejohn is no longer in service.





### Corporal

The Corporal was the Army's first surface-to-surface ballistic missile to achieve operational status with Army forces overseas. Powered by a liquid propellant rocket motor, the Corporal could deliver either a nuclear or high explosive warhead to a range of 75 miles. Corporal was controlled from the ground using a command guidance system. The Corporal was replaced by the Sergeant.



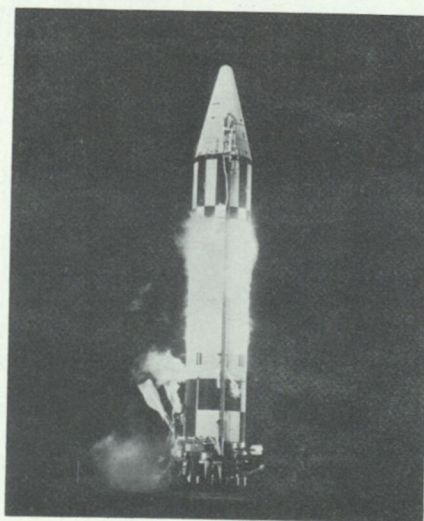
### Nike-Ajax

The Nike-Ajax was the first United States operational anti-aircraft guided missile system. The Ajax had a range of more than 25 miles and a ceiling of more than 50,000 feet. Guided by radar on the ground, the missile carried a conventional warhead and was powered by a solid propellant booster and a liquid propellant sustainer engine.



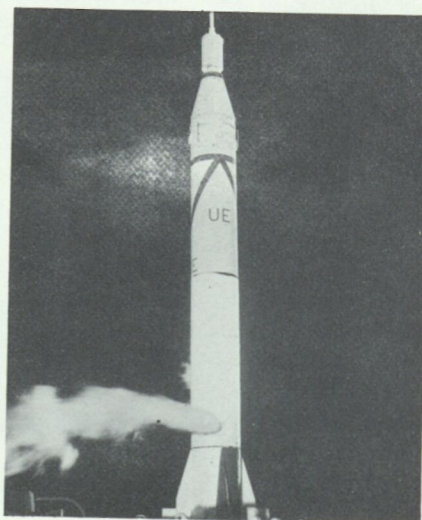
### Redstone

The Redstone ballistic missile was a high accuracy, liquid propelled, surface-to-surface missile capable of transporting nuclear or conventional high explosive warheads against targets at ranges up to 200 miles. The Redstone was the forerunner of the Jupiter missile and was also used as the first stages in the launch vehicle used by the Army to orbit the Free World's first artificial satellite.



### Jupiter

The Jupiter was a 1,500-mile range ballistic missile developed by the Army for the Air Force. The Jupiter was the first U.S. IRBM missile to be launched successfully. The missile was 60 feet high and 105 inches in diameter. It had an inertial guidance system and carried a nuclear warhead.



### Jupiter-C

The Jupiter-C was a modification of the Redstone missile. It boosted the first U.S. satellite, Explorer I, into orbit on January 31, 1958. The Jupiter-C had four stages which utilized both liquid and solid propellants. The Explorer I satellite and the final three stages of the rocket were packaged in a spin stabilized cluster.



### Juno II

The Juno II was also a modification of the reliable Jupiter ballistic missile. Juno II was similar to the Jupiter-C in that it carried a spin stabilized upper stage cluster. The missile was used to launch scientific space payloads including earth satellite and deep space probes. Juno II launched the Pioneer IV space probe on March 3, 1959, America's first lunar mission.



# U.S. Army Missile Systems







# DRAGON

Dragon is a medium anti-tank/assault weapon system developed for the Army infantryman. It is the Army's first assault missile system light enough to be carried and shoulder fired by one man yet having a warhead big enough to destroy most armor and other reinforced battlefield targets.

Dragon employs a command-to-line-of-sight guidance system and consists of three main items: a tracker, a recoilless launcher and a missile.

The tracker includes a telescope for the gunner to sight the target, a sensor device and an electronics package. The tracker is reusable and is attached to the launcher and a missile.

The launcher is a smooth bore lightweight tube with support bracket and protective end caps. The aft end is enlarged to accommodate a propellant container and breech. After the missile is fired, the launcher is discarded.

The Dragon missile, pre-packaged in the launcher, contains several pairs of small rocket motors which are mounted in rows around the missile body. These small motors provide the propulsion and the directional control for the missile.

In operation, the gunner sights the target through the telescopic sight and then launches the missile. While he holds his sight on the target, the tracker senses the missile position relative to the gunner's line of sight and sends command signals over wire to the missile. This causes the small rocket motors, or side thrusters to fire, providing forward thrust and flight corrections which will direct the Dragon to the gunner's point of aim.



## LAND COMBAT MISSILE SYSTEMS



# LANCE

Lance, one of the most versatile missiles ever developed for the Army, includes a warhead section, a guidance package, fuel tanks and an engine.

The sophisticated engine provides maximum performance from launch through supersonic flight to target. The missile's big punch is packed in its ability to carry a nuclear or non-nuclear warhead and quickly place accurate and devastating fire on enemy troop concentrations, supply depots and transportation routes.

Built to withstand rough handling and severe climates, Lance is the first Army missile to incorporate an engine with dual thrust chambers, to use pre-packaged storable liquid propellants and to have a simplified inertial guidance and control system.

The missile can be placed in action quickly by a team of only six men. Highly mobile, it can be truck-towed on a lightweight launcher, transported on a self-propelled amphibious launcher, airlifted, delivered by helicopter or dropped by parachute.

The self-propelled launcher is the primary firing mode equipped with its own launch fixture. A natural for rough terrain, it is capable of land travel at speeds up to 40 miles per hour and it can swim lakes, rivers and inland waterways.

For air mobility the launch fixture and missile can be removed from the vehicle and converted to a lightweight wheeled launcher.



# SHILLELAGH



Shillelagh is a lightweight, surface-to-surface guided missile system designed as main armament for armored combat vehicles.

A direct fire missile which is launched from a combination gun-launcher, Shillelagh is effective against tanks, troops and field fortifications. Its 152mm gun-launcher can fire either missiles or conventional ammunition, and provides high accuracy against moving or stationary targets.

The missile is guided to its target by a command system mounted on the launching vehicle and is capable of maneuvering in flight to attack a moving target.

Shillelagh is capable of being mounted on a wide variety of combat vehicles. The first application of the weapon was on the General Sheridan, a lightweight, armored reconnaissance airborne assault vehicle. The General Sheridan has a high degree of cross country mobility and a maximum cruising range to permit operations at extended distances.

The Shillelagh has been selected as the primary armament system for the Main Battle Tank now under development by the United States.

## LAND COMBAT MISSILE SYSTEMS

# TOW

TOW is the Army's new heavy assault wire-guided missile developed to provide a major increase in fire power for infantry units. It is a "point fire" weapon intended for use against tanks, concrete fortifications, bunkers and other hardened targets.

TOW is a Tube-launched, Optically-tracked, Wire-guided missile. In operation, the gunner holds the cross-hair of his sight on the target and presses a trigger to launch the missile.

As the missile speeds to the target, it unreels two fine wires through which it receives steering signals. All the gunner has to do is hold the target in his sight. The missile will automatically follow the gunner's line of sight, impacting on the spot on which the crosshair is sighted.

TOW can be employed from a variety of vehicles, including jeeps, mechanical "Mules" and armored personnel carriers. The weapon may be fired from the vehicles or it may be dismounted, set up on its tripod launcher and fired. It may also be used with a night sight.

The adaptability of the TOW missile to an attack helicopter makes possible a formidable weapon system that combines the accuracy and firepower of TOW with the high speed and tactical flexibility of a helicopter firing platform.

Design simplicity of the TOW weapon system lends itself well to the harsh environment of the battlefield and gives the weapon tactical flexibility and reliability. Automatic guidance makes TOW simple to use, and very little training is required for firing the missile.





# 1 PERSHING 1-A

Pershing is a two-stage, solid propellant ballistic missile with selective range capability. Carrying a nuclear warhead, Pershing extends the Army's "Sunday punch" to ranges of 400 miles under almost any weather or terrain conditions.

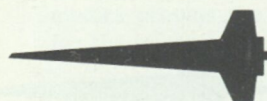
The Pershing erector-launcher is designed for rapid movement from one firing position to the next and is capable of fast erection and firing, thereby providing a commander with quick reaction fire support capability.

Topping the Pershing missile is its needle-nosed re-entry vehicle. The warhead section travels on a ballistic course and reenters the atmosphere at a high velocity. The warhead section is covered with an ablative material to allow it to withstand extreme reentry heating.

In the field, a Pershing battery consists of the missile, its erector-launcher, a programmer-test station, a battery control central and radio terminal set—all transported by the M-656, the Army's most modern truck.



The erector-launcher can raise its missile to the firing position in seconds. The programmer-test station provides the means for rapid missile checkout and count-down. The battery control central serves as a communications center and as a "block-house" on wheels. The radio terminal set is a portable transmitter which provides the battery with voice and teletype networks.



## LAND COMBAT MISSILE SYSTEMS

# 1 HONEST JOHN

The Army's Honest John is a simple, free-flight rocket. It is highly mobile and retains the accuracy of standard artillery weapons. Designed to fire like conventional artillery in battlefield areas, Honest John is now the oldest rocket propelled weapon still fielded by the Department of Defense.

Since deployment of the missile system, Honest John has undergone substantial improvement which has reduced the system's weight, shortened its length and increased its range.

The Honest John is a simple rocket with a highly mobile self-propelled launcher. The rocket is comprised of a forward compartment which houses the warhead, an aft compartment which houses the rocket motor and a fin assembly at the rear.

The Honest John has no guidance system, since it is a free-flight rocket. It is simple in design and simple to operate, having no electrical controls. Its range is equivalent to that of medium to long-range artillery.

The weapon has considerably more battlefield mobility than conventional artillery, and one nuclear round can deliver on the target the demolition effect of hundreds of artillery shells.

# 1 SERGEANT

The Sergeant is a field artillery ballistic missile system that is reliable, rugged, accurate and mobile.

As a second generation missile, the Sergeant possesses several outstanding advantages. It utilizes an inertial guidance system and solid propellant motor, giving it immunity to known electronic countermeasures.

The missile is composed of four major sections. These are the warhead, guidance, motor and control surfaces. These sections are assembled just before firing and are transported to the firing position in special concealed containers. The Sergeant is completely ground-mobile and air transportable.

The Sergeant is directed to its target by a highly precise inertial guidance system, which is completely self-contained, requires no external control, is invulnerable to enemy jamming, and emits no signals which might lead to enemy detection.

The Sergeant uses a high-energy solid-propellant rocket which has far greater mobility and can be brought more quickly into action than a comparable liquid fueled motor.

A highly mobile weapon, the Sergeant can be quickly emplaced and fired by a six-man crew under all conditions of weather and terrain. The use of solid propellant and an inertial guidance system have minimized system maintenance requirements and correspondingly simplified ground handling procedures and equipment.



# NIKE-HERCULES

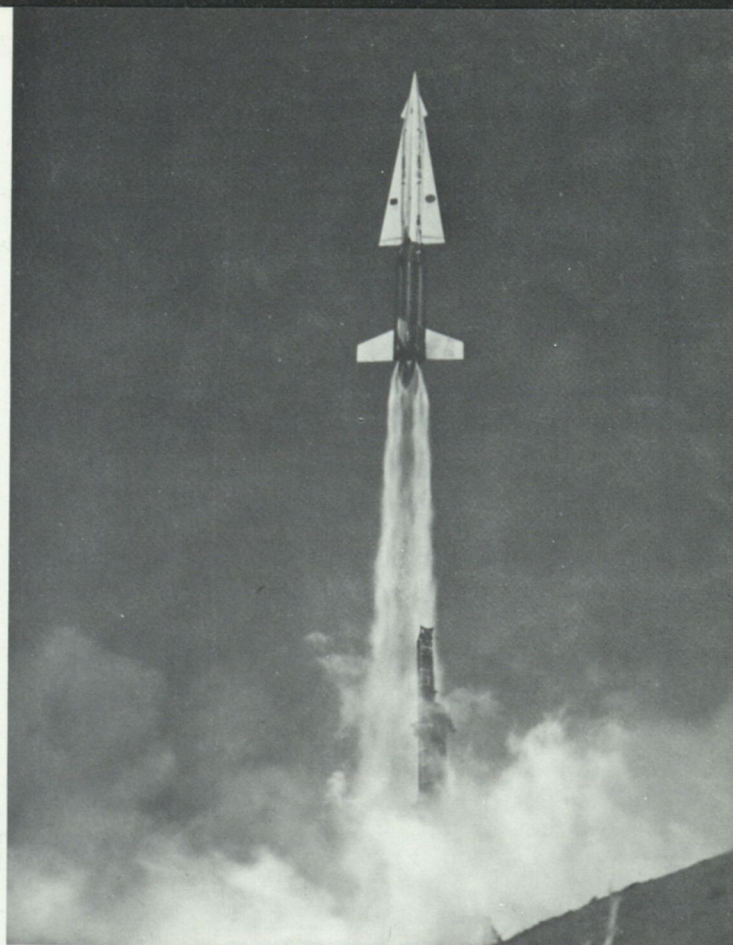
The Nike Hercules is the United States' primary high altitude air defense weapon in operational status. The weapon has proven successful against high performance aircraft at a variety of altitudes. It has also successfully intercepted short range ballistic missiles and other Nike Hercules missiles in tests.

The Hercules, a second generation missile, possesses greater destructive capability and performance than its predecessor the Nike Ajax. Its ground equipment includes a low power acquisition radar, a high power acquisition radar, a target tracking radar, a missile tracking radar, electronic and data processing equipment, and remote controlled launchers. The system is being continually modified to meet new threats and to incorporate advances in the state of the art.

The acquisition radars search the sky in a 360-degree sweep and when a target is detected its location is transferred to the target tracking radar which pinpoints it for intercept purposes. The missile track radar issues guidance and burst orders to the missile.

The system operators are located in a battery control trailer, a tracking radar control trailer and a launcher control trailer. The Hercules is capable of operating in an electronic countermeasures environment such as presence of electronic jamming. Each Hercules battery can operate as a part of a defense network or as an autonomous unit, capable of detecting, tracking and engaging targets.

The missile system is now deployed around key areas in both the United States and overseas. Each battery can



make multiple launches during an engagement. The Army began training Hercules personnel in 1957 and the first system became operational in 1958.

## AIR DEFENSE MISSILE SYSTEMS

# REDEYE

The Redeye missile is a portable, shoulder-fired guided missile which provides combat troops in the forward battle area with the capability of destroying low flying aircraft. The weapon is effective at ranges and altitudes typical to an assault by enemy aircraft.

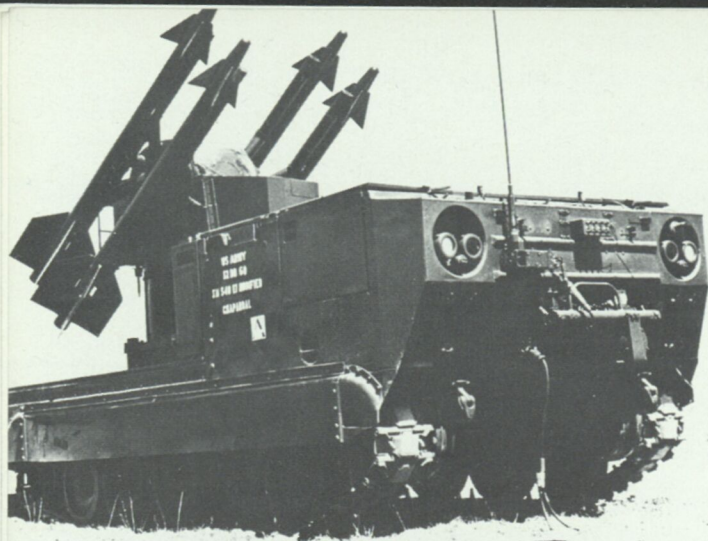
The missile mounts an infrared sensing device in its nose which resulted in the name "Redeye." The sensing device is used by the guidance system of the missile as a means of homing on the heat of an aircraft engine.

The missile, ready for use in the battle area, comes encased in a fiberglass launcher that also serves as a carrying case. In combat, the launcher is discarded as soon as the missile is fired.

Initial target detection and tracking are accomplished visually by the gunner. When the aircraft is within range of the missile and its infrared homing device has "locked on" target, the gunner squeezes a trigger to fire the missile. Redeye, no longer dependent on external guidance or control, pursues and destroys the target aircraft.







## ↑ **CHAPARRAL**

Chaparral is an infrared heat seeking missile system mounted on a tracked vehicle. It was produced to meet

Army requirements for a forward area air defense weapon.

The system includes a missile launcher and its mount. The missile is carried and handled as an assembled single round of ammunition. Missiles are fired from one of four launch rails mounted on the launcher turret.

The missile is aimed by the gunner in the turret mount who keeps the optical sight aligned with the target. The gunner initiates the launch by depressing the trigger on the control handle. The missile locks onto the target's heat source and follows it automatically after launch.

When the missile approaches within lethal range, the fuze detonates the warhead and destroys the target. The Chaparral missile is basically a Navy developed Sidewinder IC air-to-air missile which has been modified for ground-to-air launch.

The highly mobile Chaparral Missile System incorporates an M-730 self-propelled tracked vehicle which is amphibious and can travel 40 miles per hour carrying a five man crew.



## AIR DEFENSE MISSILE SYSTEMS

## ↑ **HAWK**

HAWK (Homing-All-the-Way-Killer) can search out and destroy attacking aircraft. The system complements aerial defense by other missile systems where its ability to operate at extremely low altitudes is required.

The HAWK air defense system is transportable and capable of maintaining a high rate of fire. The missile and its ground equipment can be air-lifted by helicopter and medium-sized aircraft.

HAWK ground support equipment in a HAWK battery includes a Pulse Acquisition Radar, a Continuous Wave Acquisition Radar, a Range Only Radar, two Illuminator Radars, six three-missile launchers, a Tracked Missile Loader-Transporter, and the Battery Control Center, which is the operations nerve center.

Production is underway to field Improved HAWK as a more reliable and capable air defense system. The missile's outward configuration will not change as a result of the improvement program. However, a new guidance package, larger warhead and improved motor propellant are being installed in the missile. A "certified round" concept for Improved HAWK, obtained by use of solid state components, will eliminate the need for maintenance and adjustments to the missile in the field. Ground electronics equipment also is being improved.

In operation, the Acquisition Radars sweep the HAWK battery's area of defense and, when a target is detected, its position is relayed to the Illuminator Radars. The Illuminator Radars illuminate the target with electro-

magnetic energy which is reflected back to the missile's radar guidance system. HAWK tracks the target by following the reflected electromagnetic energy.

HAWK is in operation with Army and Marine Corps troops overseas, and also is poised on launchers around the United States. It is deployed by U.S. forces in Korea, West Germany, the Panama Canal Zone and Okinawa, and is also widely used by Allied Nations. The first Army HAWK missile battalion was activated in August 1960.







SAM-D (Surface-to-Air-Missile-Development) will be an air defense system for both battlefield and continental air defense use against high performance aircraft.

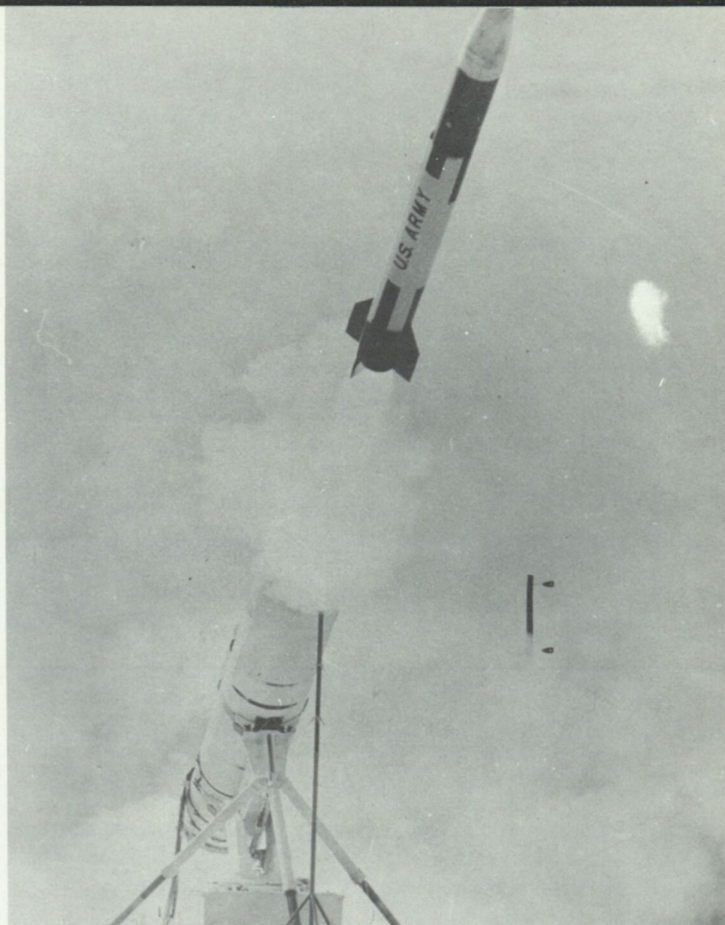
A SAM-D battery in the field will be mounted on approximately twelve vehicles and will include four main elements: fire control, launchers, battery control and communications groups.

A phased array radar will perform the functions of several radars, and it will detect targets, track them, and issue guidance commands to the missile in flight.

The launcher will carry several of the single-stage, solid propellant missiles in launching shipping containers. The missile is cradled within the container supported by teflon coated launch rails.

At launch, the motor blast shatters the rear plastic cover and the missile breaks through the forward plastic cover. The system is capable of firing missiles from their canisters either singly or in close-sequence salvos at selectable azimuths and elevations.

The missile, controlled by four aerodynamic tail surfaces powered by control actuators, can carry either a high explosive or nuclear warhead. The missile is segmented into nose, guidance, warhead, motor and control sections, and it has built-in self-test circuits which will automatically pin-point trouble areas.



## MISSILES OF THE SAFEGUARD SYSTEM COMMAND

### SPARTAN

The Spartan is a long-range, more powerful version of the Zeus missile, which was fired successfully many times, and, in its system test phase, made several successful interceptions of ICBMs fired from the West Coast in 1962 and 1963. Spartan is part of the U.S. Army Safeguard System.

The Zeus also successfully demonstrated a satellite intercept capability. The first Spartan was fired on March 30, 1968, from Kwajalein Island in the Pacific Ocean. On August 28, 1970, a Spartan intercepted an intercontinental ballistic missile nosecone launched 4,200 miles away.

The 55-foot-long, three-stage, solid propellant missile is launched from an underground silo. After the first stage completes burning, it separates and the second stage ignites. The missile is guided to its target by the missile site radar (MSR) and system computers.

The third stage, which is normally used outside the atmosphere, is ignited on command from the ground. Spartan will carry a nuclear warhead in the megaton range. Development of the warhead is being carried out by the Atomic Energy Commission.

### SPRINT

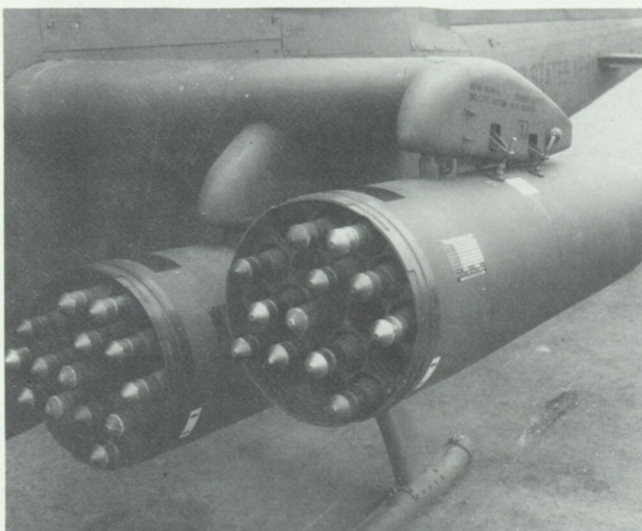
SPRINT is a 27-foot-long, two-stage, solid propellant missile designed to make intercepts at a close range. It has extremely high acceleration and is able to reach intercept altitude within seconds after launch.

It is also guided to its target by the MSR and system computers. The SPRINT is ejected from an underground silo by a gas propelled piston and its booster ignites once the missile is in the air.

The SPRINT will have a nuclear warhead in the kiloton range. It was first test fired on November 15, 1965, and has undergone a large number of launches. SPRINT is part of the U.S. Army Safeguard System.



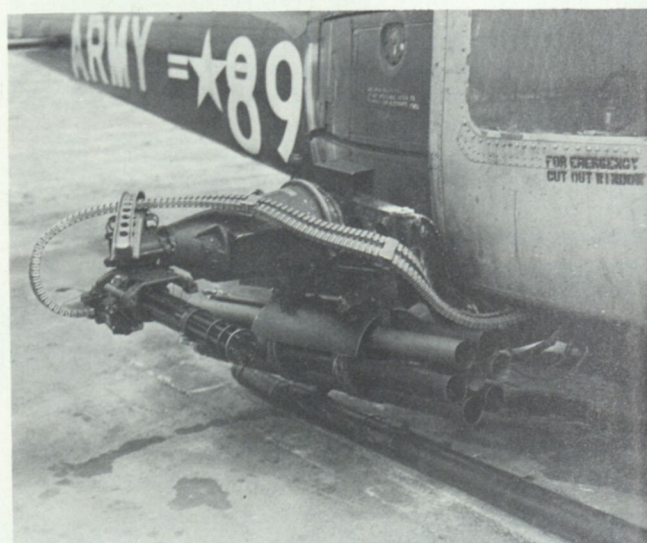
## Airborne Missile Systems



**M200A1**—A reusable, repairable, 2.75-inch rocket launcher that carries and fires 19 rockets. This launcher is used on the UH-1C and AH-1G helicopters.



**M22**—A subsystem consisting of a boom assembly on each side of the helicopter which mounts three SS-11 missile launchers on each boom. The system is effective against armored vehicles and other hostile targets.



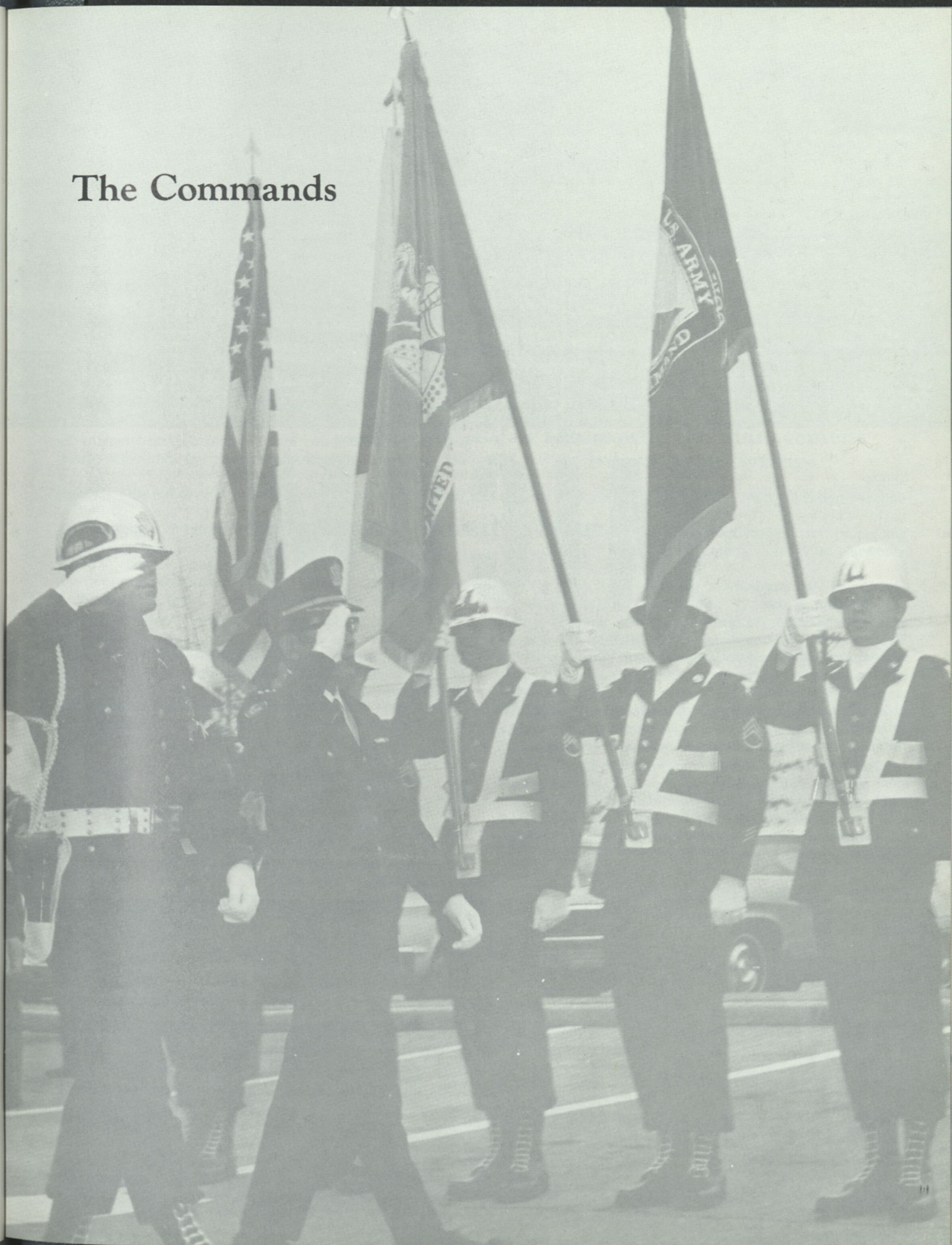
**M158A1**—A light weight rocket launcher which fires 2.75 inch rockets. The seven tube reusable, repairable launcher is used on the UH-1B, UH-1C and AH-1G helicopters.



**TOW-CHEYENNE**—This is the TOW sub-system mounted on the Cheyenne helicopter, a heavily armed weapons ship, capable of speeds faster than 200 miles an hour and carrying such armaments as rockets, machine guns and grenade launcher, in addition to the TOW anti-tank missiles



## The Commands







Headquarters U.S. Army Missile Command.

# MICOM

## U.S. Army Missile Command

Largest single resident of Redstone Arsenal is the U.S. Army Missile Command, called MICOM. It is one of several major commodity commands of the Army Materiel Command headquartered in Washington.

MICOM's commodity is missiles and rockets, offspring of a new era in technology. Its mission: Make sure the American soldier has the best that technology can devise, ready to fire, when he needs it and where he needs it.

The Missile Command is many things: Men and women, soldiers and civilians; complex facilities and equipment, money and the military hardware it buys. In sum, it is know-how, the kind of know-how required to manage the most complicated weapons systems; to call the signals for a massive government-industry team, one with proven capability to deliver the goods, quality hardware, on time, at the most economical cost.



From its headquarters at Redstone Arsenal, MICOM directs world-wide activities. It works closely with its "customer," the American soldier. It works just as closely with its partners, American industry and business and educational institutions.

MICOM does not manufacture missiles. Traditionally, it has turned to American industry for this task, just as it may delegate certain research tasks to the university or college near your home.

Although the Command maintains small liaison offices at missile facilities and industrial locations throughout the country and overseas, the majority of its work is carried on from Redstone Arsenal.

Almost every section of the country is represented among the Command's major system prime contractors. They include:

- The Michigan Division of LTV Aerospace Corporation, Vought Missile and Space Company.
- Warren, Michigan
- Aerospace Division, Martin-Marietta Corp.
- Orlando, Florida
- Hughes Aircraft Co.
- Burbank, California
- The Raytheon Co.
- Lexington, Massachusetts
- Aeronutronic Division, Philco-Ford Corp.
- Newport Beach, California
- Western Electric Co.
- Burlington, North Carolina
- General Dynamics/Pomona
- Pomona, California
- McDonnell-Douglas Corp.
- Titusville, Florida



## Major MICOM Elements

The primary objective of the Army Missile Command is to get a good missile in the hands of the American soldier today and a better missile in his hands tomorrow.

The military and civilian personnel of MICOM perform a number of diversified activities, which, when combined together, give the U.S. Army a firm foundation in missile research, engineering, quality assurance, maintenance and logistics.

## Research, Development and Engineering Directorate

The Directorate for Research, Development, Engineering and Missile Systems Laboratory is the Missile Command's window into tomorrow. Its experts are at work on the ideas, components and techniques required for future Army missile weapons systems.

The "in-house" research and development facilities at Redstone Arsenal provide the Army with a broad base of competence to better evaluate complex technical proposals submitted by industrial contractors. Similarly, the knowledge of the Army RD&E experts is applied in partnership with industry in solving problems that may occur during the weapon system development and in evaluating the feasibility of future missile systems.

The technical competence and scientific know-how of MICOM scientists and engineers is clearly demonstrated by pioneer developments and advanced technology in the field of solid fuel rocket propulsion and self-contained inertial guidance systems.

The RDE&MSL Directorate operates The Army Inertial Guidance and Management Technology Center, the Army Rocket Propulsion Technology and Management Center, and the Redstone Scientific Information Center, a major repository of technical knowledge on missiles and rockets.

Its Laboratory Complex includes areas of specialization in:

- Advanced Sensors
- Aeroballistics
- Ground Equipment and Materials
- Guidance and Control
- Physical Sciences

- Propulsion
- Test and Evaluation

The Francis J. McMorrow Missile Laboratories research facility is the hub of RDE&MSL activity at Redstone Arsenal. The Directorate occupies some 160 buildings and operates facilities at other widely scattered locations on the Arsenal, including the free flight test ranges for small missiles and rockets which comprise almost half the land area of the installation and captive test facilities for large missile and rocket motors near the southern boundary of the Arsenal.

## Directorate for Product Assurance

The Directorate for Product Assurance plans, develops and manages the product assurance program for all MICOM missile systems. By reviewing programs of product assurance, testing and calibration, the Directorate keeps close check on the quality control and life cycle estimations of U.S. Army missiles, launchers and ground support equipment.

## Directorate for Management Information Systems

One of the principal new elements of the Missile Command formed in its major reorganization accomplished late in 1970, this directorate consolidates many functions primarily involving automatic data processing techniques and equipment formerly carried on elsewhere within the Command.

The step was taken as a necessary preliminary to adopting standard information systems throughout the Army Materiel Command. As does any modern large management organization, the Missile Command relies heavily on electronic computers and computer technology. Computers play an increasingly major role in how the Missile Command and the Army transact daily business and maintain records. They are a vital aid in the management of the logistics system supporting Army missiles throughout the world and of equal significance as a tool in missile research and development.

## Directorate for Maintenance

The Directorate of Maintenance is charged with the design and implementation of maintenance programs for U.S. Army missiles on duty with American and Allied Armed Forces throughout the Free World. Among the





**Francis J. McMorrow Missile Laboratories is a major research and development facility of the missile command.**

Directorate's responsibilities are establishing new equipment training programs, preparing technical manuals and planning logistics guidelines for maintenance support.

The Maintenance Directorate enters a missile system program in the design phase and works hand-in-hand with all other elements of the Command to provide a reliable missile maintenance program.

### **Directorate for Materiel Management**

The Directorate for Materiel Management plans and directs a worldwide logistics program to insure that repair parts are available for U.S. Army missile systems on duty throughout the Free World.

Directorate responsibilities include logistics inventory management, emergency and mobilization planning, resources management and delivery coordination of repair parts. It is also responsible for the packaging and worldwide shipping of inventory items.

### **Directorate for Procurement and Production**

Men and women of the Directorate for Procurement and Production could be generally described as the Command's buyers. They provide the channel and the means whereby the Command deals with its industrial partners, more than 30 prime contractors, subcontractors numbered in the hundreds, and suppliers that comprise a list exceeding 50,000 business firms spread across the length and breadth of the United States.

One of the Directorate's many tasks is maintaining records to evaluate and appraise the performance of defense contractors. Still another is to find ways to make a given item less expensive, or to see that cost savings are designed into an item that the Army may procure.

A major task is negotiating, executing, and administering government contracts, making sure that industry gets a fair chance to bid on items the Command intends to buy; and making sure that the Army gets, in addition to the item purchased, the drawings and specifications essential in the competitive bidding process to insure that succeeding buys can be made from contractors who can provide the best goods, on time, at the lowest price.

### **Missile Intelligence Agency**

The Missile Intelligence Agency evaluates foreign missile and space trends, and produces finished intelligence and forecasts. It also maintains scientific and technical operational knowledge of foreign missile weapons systems.

It furnishes advice and assistance to Department of the Army agencies pertaining to missile intelligence information and coordinates the use of other Missile Command facilities and personnel that may be required in the performance of the intelligence mission.

The Directorate also supports the Army missile research and development activities of the Missile Command by relating them to the threat posed by potential enemies.

### **Army Metrology and Calibration Center**

This center consolidates functions for the Army that previously had been performed at several locations throughout the United States. These functions include a national maintenance point mission, a national inventory control, and procurement and engineering missions on the national and international levels. The Center has one of the nation's most completely equipped laboratories for precise calibration and measurement of equipment.


### **Redstone Arsenal Support Activity**

The Redstone Arsenal Support Activity runs the installation, providing the many support services found at any Army installation—such as transportation, communications, safety, security, building maintenance, finance and accounting, and civilian personnel management. It also operates the troop command, housing and recreational facilities for military personnel and a myriad of other tasks.

The Activity also performs special supporting tasks directly related to programs of the Missile Command.

Many of the services are also provided by the Activity to the Marshall Space Flight Center by special agreement.



A photograph of two intercontinental ballistic missiles (ICBMs) launching from a silo. The missiles are black with orange and white bands. They are ascending vertically, leaving large, billowing clouds of white smoke and fire at their base. The background is a clear, light blue sky. The overall tone is dramatic and powerful.

"The only way to maintain peace is to be prepared in the final extreme to fight for our country and mean it."

John F. Kennedy





Headquarters U.S. Army Missile and Munitions Center and School.

# MMCS

## U.S. Army Missile and Munitions Center and School



The Army Missile and Munitions Center and School rounds out the complex activities of Redstone Arsenal by training skilled technicians to keep the Army's missiles and its wide range of munitions in constant combat readiness.

Dubbed the "little Redstone school house" in 1952 when it began with a handful of students in a World War II ammunition building, MMCS has become a \$110 million global training center.

It currently trains about 4,200 each year. Its more than 67,000 graduates since 1952 have come from all branches of the U.S. Armed Forces and 35 foreign nations.

The faculty of military and civilian instructors teach courses covering everything from pistol bullets to nuclear-tipped Pershing missiles.

Practical exercises on actual equipment are an integral part of maintenance training at the Army Missile and Munitions Center and School. Here components of the HAWK air defense missile system, stationed throughout the free world, are individually checked out.



MMCS is a member of the nationwide school system of the U.S. Continental Army Command. Students fresh from basic training learn the individual skills of missile and munitions maintenance.

Their studies can take them through basic electronics and mathematics, elementary ballistics, skills of soldering circuits or handling high explosives. They may also progress through missile guidance and control, propulsion and testing of the Army's missiles.

Students in ammunition courses learn the latest and safest methods of handling, storing, renovating, shipping and accounting for the billions of dollars worth of munitions required by the Army.

Once they have become specialists in some facet of the field, the students may be assigned to a unit to learn to apply their varied skills as a team.

For that team training, activating, equipping and deploying maintenance units around the world, the Third U.S. Army's Unit Training Command based at MMCS takes over.

Hundreds of Ordnance officers, warrant officers and NCO's are trained annually by MMCS to supervise missile and ammunition support units worldwide. Career missile and munitions officers often regard MMCS as their "professional home."

Training facilities at their professional home are ultra-modern. Classrooms are equipped with the most advanced teaching aids, including closed circuit television, "black light" that makes slides glow in semi-darkness and vivid models and training aids.

Practical exercises on repair of complex missile systems are done in huge shops the size of football fields. Students must combine common sense with automatic test equipment to find malfunctions that could keep a missile on the ground.

Students in one missile system, for example, must be able to isolate a malfunction buried among as many as 250 thousand components.

Ammunition training is equally spectacular, with highly realistic explosive disposal exercises. On ranges in the woods, hills and valleys of Redstone Arsenal, almost every kind of explosive used by the Army is deliberately misplaced or mishandled to simulate the kind of emergency that requires an explosive ordnance disposal team to undertake its urgent mission of disarming and rendering safe.

Realism is heightened by three airplanes—a bomber, fighter and cargo craft—located in remote areas as though they had crashed. Overturned trucks loaded with chemical and other munitions; wrecked railway freight cars; flaming combat vehicles—all these are practical exercises for Ordnance students disarming everything from Civil War cannon balls to nuclear weapons.

The Nonresident Instruction Department has a global student body of officers, enlisted men and civilians. More than 6,200 students involved in missile and munitions maintenance are currently enrolled in NRI correspondence courses.

In addition to its own programs, MMCS monitors Army training in nuclear weapons given at Sandia Base, N.M., and the Navy's tri-service Explosive Ordnance Disposal school at Indianhead, Md.

Since 1952, MMCS has amassed a technical library that is a unique repository for missile and munitions technology.

One of the most vital missions of MMCS is carried out by the Office of Doctrine Development, Literature and Plans (ODDL&P). To insure that MMCS training remains responsive to the changing needs of the field,

**Supplying scores of classrooms with up-to-date graphic instructional material is the job of the Training Aids Department at the Missile and Munitions Center and School. This section is producing photo slides.**







The curriculum at the Army Missile and Munitions Center and School includes not only the maintenance of explosive and electronic weapons of all kinds but also special training for Explosive Disposal units who are on call around the clock throughout the U.S. to help clear away chemical, radiological, biological, conventional and nuclear materials that may be involved in mishaps or malfunctions. Here students scrub down after disposing of chemicals.



Highly individualized instruction in modern classrooms is a feature of the Army Missile and Munitions Center and School. These students are learning how to keep the powerful nuclear-capable Pershing ballistic missile in constant combat readiness.



## Knowledge For

ODDL&P conducts an active technical and educational review program, guided in great part by information received through administration of the MMCS feedback program.

In conjunction with this program, ODDL&P collects, reviews, develops and disseminates combat support doctrine and concepts pertinent to the missile and munitions field; and develops training literature and tests to support MMCS training.

ODDL&P monitors and evaluates significant new technological materiel and supporting maintenance concepts. Plans are also developed concurrently to insure the timely fielding of trained personnel to provide adequate maintenance support.

In addition, ODDL&P manages the Commandant's quality assurance program, designed to insure that the quality of resident and unit training provided by MMCS is the highest possible. In addition, the latest facets of training methodology are evaluated for application to training programs at MMCS.

Another mission of MMCS is to keep Army technical manuals updated to include modifications that are frequently made to weapons systems as the result of field experience.



Students from all branches of the U.S. Armed Forces and 32 foreign nations fill the roster at the Army Missile and Munitions Center and School. They work side by side on test equipment that automatically locates malfunctions that might keep weapons from firing when needed.



# Righteousness



Periodically, teams of missile and munitions experts visit most of the operational bases where MMCS-trained maintenance units are stationed throughout the world. They examine new problems of repair and upkeep that may develop under combat conditions and adjust training to meet new needs.

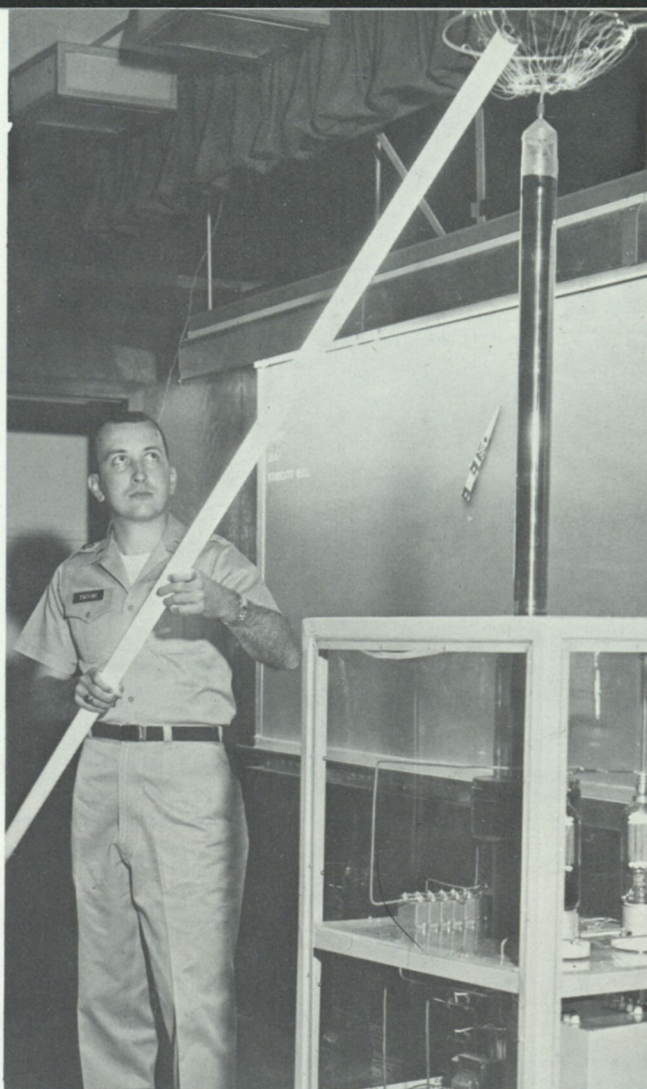
Important new maintenance techniques are currently being developed. With a new generation of missiles scheduled for production and deployment, MMCS is steadily progressing toward the goal of training a multi-purpose missile maintenance expert who can use computers and new test equipment to check the readiness of several missile systems.

Simultaneously, special attention is being given to the training of technicians to maintain the new and light "personal" missiles that have been created for the Infantry and Armor combat forces.

Serving as a threshold across which today's youth enters the age of technical and scientific revolution, MMCS offers an exciting curriculum that qualifies thousands of its graduates to begin fruitful new careers in the military and in American industry. Its Latin motto reflects the MMCS goal: **Scientia Ad Justitiam**—Knowledge for Righteousness.



As many as 56 practical exercises in missile repair are given students at the Army Missile and Munitions Center and School. They work in huge shops the size of a football field on missiles like the Nike-Hercules air defense system which guard strategic cities and centers throughout the U.S.



Vivid classroom demonstrations highlight teaching at the Army Missile and Munitions Center and School. Here an instructor demonstrates basic principles of missile electronics, illuminating a lamp with current passing through his own body.



Incoming students at the Army Missile and Munitions Center and School cross the threshold of the technical age in their first classes in basic electronics in the school's Missile Components Department.





Headquarters U.S. Army Safeguard System Command.

# SAFSCOM

## U.S. Army Safeguard System Command



Letters affixed to the front of a two-story brick building in Huntsville's Research Park, just north of the Arsenal, read, "U.S. Army Safeguard System Command." SAFSCOM, as it is called, is the Army's management organization for the nation's first operational ballistic missile defense system.

The Safeguard Ballistic Missile Defense System has the capability of being contracted, expanded, delayed, or accelerated, subject to later Presidential decisions, to match an increased or changing threat. Initially, only three operational site areas have been authorized for deployment of Safeguard radars and missiles. These sites will provide added protection for our Minuteman missile fields in North Dakota and Montana and will enable SAFSCOM to complete the engineering production, site construction, installation and test of two complete on-site systems.

MSR Computer Control Room.



While the name Safeguard is relatively new, the project is not. The idea of a missile defense system was born at Redstone more than a decade ago as an outgrowth of anti-aircraft missile weapons which were also developed at this Army missile center. First known as the Nike Zeus System, it later became the Nike-X System, and then the Sentinel System, before being designated the Safeguard System.

Work on Safeguard is done at contractor plants throughout the United States and at a SAFSCOM-operated test site in the mid-Pacific.

SAFSCOM itself employs approximately 1,200 people. What kind of work do these people do? The SAFSCOM team of military officers and civilian scientists and technicians directs and manages the far-flung activities and resources necessary to build the Safeguard System. This organization includes specialists in contracting, electronics, radars, propulsion, aerodynamics, testing, range operations, procurement and data processing. Basically, they oversee development and testing of the complex Safeguard System.

Major hardware items, called subsystems, are:

- the Perimeter Acquisition Radar (PAR) which will detect attacking missiles at very long ranges;

- the Missile Site Radar (MSR) which will track attacking missiles and launch interceptor missiles to destroy them in flight. The MSR will also guide the interceptors in flight;

- the Spartan missile, a three-stage interceptor missile more than 50 feet in length which will be able to engage enemy missiles even outside the earth's atmosphere;

- the Sprint missile, a two-stage interceptor faster than a bullet which can leap from its cell and destroy attacking missiles at short ranges; and

- computers which will do Safeguard's thinking at the rate of several million calculations per second!

The Safeguard System Command is the largest of three elements that report to Lt. Gen. Walter P. Leber, the Safeguard System Manager. Its sister elements are the Safeguard System Office (SAFSO), in Washington, D.C., and the Safeguard System Evaluation Agency (SAFSEA), at White Sands Missile Range, New Mexico.

SAFSCOM has another interesting aspect. The Commanding General of SAFSCOM commands the Kwajalein Missile Range, a national test facility located in the Marshall Islands some 2,000 miles west of Hawaii. This test site has a population of about 5,000 Americans. The U. S. Air Force, Navy, and other Department of Defense missile and space projects, as well as the Safeguard Command, use the test facility for research and development projects.

This is a quick summary of the Safeguard System Command, another element in Huntsville with a key role in developing the Nation's missiles.

**KWAJALEIN TEST RANGE**—Headquarters for the Kwajalein Missile Range is Kwajalein Island, located in the Marshall Islands, some 2,000 miles west of Hawaii. Operated by the Safeguard System Command, it is the principal test site for the Safeguard ballistic missile defense system. In the foreground is the island's community area where some 5,000 persons live. An airfield and missile radars dominate the technical area of the island.

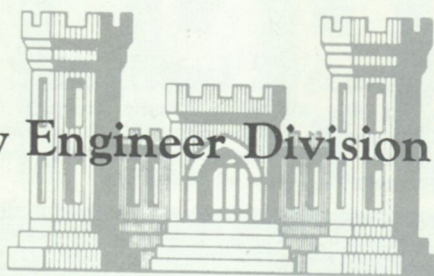






**THE MALMSTROM SAFEGUARD Missile Site Control Building (right) and its Power Plant (left) at the end of Phase I construction in March 1971.**

## U.S. Army Engineer Division Huntsville



The Huntsville Division is unique among organizations of the U.S. Army Corps of Engineers. Unlike other divisions and districts, it has no civil works mission and recognizes no water basin boundaries. It is totally dedicated to the military mission of designing and constructing facilities for the nation's SAFEGUARD ballistic missile defense system. Its area of responsibility is the United States of America.

Utilizing the services of any Corps of Engineers' district in which a SAFEGUARD complex may be or is being built, the Huntsville Division has the enviable position of being able to bring together the best Corps' talent in the country.

But the Huntsville Division has no real estate function. That part of the SAFEGUARD program is retained by the Office of the Chief of Engineers in Washington, D.C.

Organized on October 15, 1967, as a Class II activity of the Chief of Engineers, the Division was placed under operational control of a ballistic missile defense system manager. The first system manager was Lt. Gen. Alfred

D. Starbird, who was succeeded by Lt. Gen. Walter P. Leber in April, 1971.

Brigadier General Bates C. Burnell is the present Huntsville Division Engineer having succeeded Major General R. P. Young in December, 1970. General Young was assigned as the first Huntsville Division Engineer in October, 1967. BG Burnell, then a colonel, joined the Division in 1969 and served as Deputy.

The Division started with a small cadre of about 30 people in 1967 performing its workload as well as building a staff to meet the increasing needs of the next day and the day after that. Today the Division has over 400 employees. Construction is going on at the Grand Forks SAFEGUARD complex in northeastern North Dakota and at the Malmstrom complex in mid-northern Montana. The facilities of the Whiteman complex in Missouri and the Warren complex in Wyoming are also under the design and construction supervision of the Division.

The SAFEGUARD system got its first site construction start on March 31, 1970, when low bidder Morrison-Knudsen Company and Associates was awarded a



\$137,858,850 contract to construct the missile site radar and perimeter acquisition radar facilities near Langdon, North Dakota.

This was the largest single contract awarded by the U.S. Army Corps of Engineers in its 195-year history. The previous record was \$131,216,855 for the Dworshak Dam in Idaho in 1966.

Subsequent to the North Dakota start, a \$3,369,900 contract was awarded to Watson Construction Company on May 6, 1970, for preparatory work on the missile site radar building, power plant and related facilities about eight miles east of Conrad, Montana.

On May 19, 1970, the joint venture of H. C. Smith Construction Co. and Amelco Corp. was awarded a \$4,773,402 contract for the low bid made for advance construction work in the perimeter acquisition radar located about 35 miles northeast of Conrad near the Tiber Dam.

Basically, SAFEGUARD is composed of five major sub-systems: the Missile Site Radar (MSR); the Perimeter Acquisition Radar (PAR); the Spartan missile; the Sprint missile; and the Data Processor which involves high speed computers capable of performing several million calculations per second.

Four major structures and a missile field make up the usual SAFEGUARD complex. The Missile Site Control Building measures 232x232 at the base and rises 126 feet in height, most of it being underground.

The Perimeter Acquisition Radar building is 208x198 feet by 125 feet in height and is fully exposed above the ground.

The missile field contains a number of 73 feet deep, fully buried, rectangular, reinforced concrete cells each to house a Spartan missile. In the same field the Sprint cells are cylindrical, 9 feet in diameter, 31 feet in depth, and fully buried.

Some SAFEGUARD installations have additional missile fields which contain only the Sprint missile. These are called Remote Launch Sites and include a hardened, partially buried operations building 80x140 feet by 22 feet high. The Sprint cells are the same as in the normal missile field.

Facilities of austere design are required to provide routine support for the technical structures and the operations of the garrison. These can be divided into living, administrative, medical, religious, industrial, fire, security, athletic, and transportation areas.

Family housing will be located on those SAFEGUARD installations where the resources of the surrounding communities cannot meet requirements of the permanent garrison.

For SAFEGUARD to work, a lot of things must happen at once. It is necessary for the radar and data processor to track a great many objects, to decide which objects to intercept, plan the engagement, and guide the interceptors . . . all at the same time. To do this the data processor must be able to execute on the order of ten million instructions per second or more.

This highly complex system of defense weaponry could not be built except for the advances being made daily in technology. Even the main structures in some regards are the first of their kind ever to be built.

The Huntsville Division has applied its engineering

skills to the job of designing facilities that under the most adverse conditions of shock, dust and debris are capable of withstanding great pressures.

Electromagnetic pulse shielding, dampening the movement of fluids in piping, lateral and vertical shifting, constant electrical power supply, and complete freedom of contaminants in air and water are only a few of the many design requirements encountered.

Even the simple act of placing concrete becomes complicated when it is necessary to surround thousands of tubes and reinforcement bars in the 7 to 10 foot thick sloping radar face of the PAR building.

Keeping construction and maintenance costs down is another major effort of the Huntsville Division. To do this all SAFEGUARD technical structures are standardized as much as possible from site to site.

Estimates show that over \$100 million can be saved by standardization over a ten year life cycle on the currently authorized SAFEGUARD sites.

The SAFEGUARD ballistic missile defense system is being constructed in phases according to the recommendations of the President and the resulting actions of the Congress.



**THE PERIMETER ACQUISITION RADAR (PAR), the long range eye of the SAFEGUARD Ballistic Missile Defense System, being constructed near Grand Forks, North Dakota, as it appeared in late July 1971. The PAR control building is front center, the 15,000 kw power plant directly behind, and the almost 4 million gallon capacity heat sink on top left. The facilities are being built under the supervision of the Grand Forks Area Engineer, Huntsville Division, US Army Corps of Engineers.**



# SAFLOG

## U.S. Army Safeguard Logistic Command

Located off Redstone Arsenal, the SAFEGUARD Logistics Command (SAFLOG) provides tactical logistics support for the SAFEGUARD anti-ballistic missile system.

Since a sophisticated missile attack, against which SAFEGUARD must defend, requires a reaction time approaching zero, SAFLOG must develop, test and implement logistics concepts which satisfy SAFEGUARD's stringent requirements.

With headquarters in the SAFEGUARD Building in Research Park, SAFLOG is under the command of the Army Materiel Command in Washington and operational control of the SAFEGUARD System Manager.

SAFLOG moved to Huntsville in August, 1968, after being activated in Washington in April, 1968.

Unlike other AMC subordinate commands, SAFLOG supports the SAFEGUARD system only. That support began when the SAFEGUARD system was established and will continue through the life cycle of the system.

Such tasks as research, development, system acquisition and installation are not included in SAFLOG missions. But the Command works closely with agencies performing those missions to insure that SAFLOG planning is flexible and responsive to SAFEGUARD system requirements.

Among SAFLOG missions are management of supply and maintenance activities, operation of SAFEGUARD Depot Activity located at Glasgow, Montana, and management of logistic supply transportation systems.



## U.S. Army Medical Department

The U.S. Army Medical Department at Redstone Arsenal is an element of the U.S. Continental Army Command. There are over 40,000 people who are eligible for medical aid at this Redstone facility. Those eligible encompass active military personnel, their dependents, and retired military personnel who live within a radius of one hundred miles from the installation.

Department of Army civilians and personnel of the Marshall Space Flight Center are eligible for some types of medical services such as emergency treatment. The veterinarian, the clinics and the occupational health services are all a part of the service of the Medical Department.

Department staff members include both Army and civilian doctors, Army and civilian nurses, Army medical corpsmen and civilian nursing assistants.

A continuing education program for both the medical and administrative staffs is operated to keep everyone aware of constantly changing methods and techniques as breakthroughs in technology are discovered.

The doctor workload is approximately 200 patients a day in the outpatient clinics alone. The clinics are divided into specialties so that the cross section of dependents and military personnel can be treated for specific medical problems after the general practitioners have pinpointed the nature of the ailment.

For mass flu immunizations of Department of Army civilians, the medical corpsmen set up stations in strategic locations for the convenience and treatment of the greatest number of people in the least possible time. The Dental Clinic and the Veterinarian handle their own patient workloads under the general administration of the department.





# Life at Redstone

## Clubs

### Noncommissioned Officers' Open Mess

The NCO Open Mess is a modern club facility on a mountainside overlooking a portion of Redstone Arsenal and Huntsville. Periodical announcements in the "Daily Bulletin" and THE REDSTONE ROCKET keep NCO's and their dependents informed of scheduled activities.

Mess facilities include Casual Bar and dining room opening at 1030 hours and the cocktail lounge at 1530. There are three party rooms including a ballroom with seating capacity of 900 persons.

There is usually dancing evenings Wednesday through Sunday to the music of a professional-type band. There is also a variety of activities slated monthly, such as Bingo every Tuesday night beginning at 2000, and every Sunday afternoon from 1300 to 1600.

Half-price nights, always announced, are a highlight as well as occasional buffets. Patrons have the choice of a variety of sandwiches and dinners offered by the dining room.

Any noncommissioned officer of grade E-4 and above or equivalent specialist rating is eligible to join. There is no initiation fee, but there are monthly membership dues of \$2 or \$20 per year. Any military member is entitled to attend all events and may use the package store.

Also eligible for membership are active and retired members of other Armed Services, including the non-commissioned officers of the Allied Forces assigned to the U.S. Army Missile & Munitions Center & School.

### Officers' Open Mess

The Officers' Open Mess is an attractive Club facility providing many services and entertainment for Redstone Arsenal Officers and their dependents.

Mess facilities include a large dining room, a snack bar and five private party rooms including a ballroom, which may be reserved by calling 837-5987. A Package Store is located in the Mess.

The dining room is open Monday through Friday for breakfast, lunch and dinner—Saturday for dinner—and Sunday for brunch and dinner. Weekday hours are: breakfast—0630 to 0800; lunch—1100 to 1300; dinner—1730 to 2030 Monday through Thursday—Friday 1730 to 2100; Saturday 1800 to 2100. On Sunday, brunch is served from 1000 to 1300; dinner from 1800 to 2000.

The Chez When Snack and Beverage Bar, popular for informal atmosphere and dress, is open Monday through Thursday—1000 to 2300; on Friday and Saturday from 1000 to 0100. Sunday the Chez When Bar is open from 1200 to 2300. The Chez When food service schedule of

operation is as follows: Monday through Friday—1030 to 1300 and 1700 to 2200; Saturday—1000 to 2200 and Sunday from 1200 to 2200.

Under the direction of the Mess Custodian, various activities are featured each month. Most Friday and Saturday nights, dancing is featured with well-known bands. Specialties of the Club include special activity nights and "Happy-Hour" nights. During "Happy-Hour" a member may purchase drinks at reduced prices.

The Officers' Open Mess is also the scene for many unit and Club functions. Unit parties and coffees and ladies' luncheons and Club meetings are but a few of the many social functions that take place at the Mess.

### Redstone Noncommissioned Officers' Wives' Club

The Noncommissioned Officers' Wives' Club is a private organization open to wives of active duty or retired personnel in the grades of E-4 through E-9. The club brings these women together through participation in many activities and projects.

The NCO Wives' Club has most of its meetings and social events in the NCO Open Mess. Business meetings are held the second Monday of each month. Club activities include charitable projects such as Christmas programs, ditty bags for Vietnam, flower arrangement and other social activities. Members participate in many community held programs through club-sponsored projects. The club also awards annually a college scholarship (\$500) and three merit awards (\$100 each) to deserving teenagers in the Army family.

### Redstone Officers' Wives' Club

The Redstone Officers' Wives' Club is an organization of women representing all sections of the United States and many foreign nations whose common bond is that of military life. The purpose of the club is to organize, develop and sponsor educational, charitable, and recreational activities; to foster and preserve the ideals of good fellowship; and to collect and disseminate information of interest and value to its members.

Major fund raising activities include the Harvest Ball, sale of cookbooks and sale of articles made by club members. A large percentage of funds raised is donated to local and military charity.

There are an average of 24 activities every year ranging from golf to interior decorating. The activities are held in various locations, but meetings and social affairs are held in the Redstone Officers' Open Mess.



## Military Housing

All family-type public quarters are utilized to the maximum. Department of the Army policy requires that military personnel accept public quarters, if available, or forfeit basic allowance for quarters. Public quarters are assigned by grade and date of arrival. Quarters considered adequate for members of the Armed Services with dependents are not assigned unless a member is accompanied by his dependents, or his dependents are en route to join him. All incoming personnel with dependents must check in at the housing office, Building 111.

Permanent furnishings in the New Capehart and Old Capehart quarters include a range, refrigerator and dishwasher. MCA quarters have a range, refrigerator and air conditioning units. Other furnishings that can be obtained for use in these quarters are dining tables, chairs, dressers, buffets, pivot tables, desk, mahogany single beds, chest of drawers, bookcases, kitchen tables, lounge furniture, end tables, easy chairs, and sofas, depending on availability. Furniture for quarters is handled by Quarters Furniture Section, Family Housing Branch. Phone 876-1713.

BOQ assignments are made in the following priority without regard to grade or date of rank: (1) Single Officers; (2) Married Officers not accompanied by dependents; (3) Officers on TDY. There are usually sufficient BOQ's to meet the requirements of the Command.

Upon arrival, military personnel who ship household goods, personal effects, or hold baggage should contact the Household Goods Section, Post Transportation Division, Building 3684, phone 876-3233. This office coordinates receipt, delivery and storage of household goods, personal effects and hold baggage. To assure that goods are properly handled the owner should contact the Household Goods Section immediately upon arrival and furnish pertinent information regarding delivery address, date quarters are available, requirement for storage, etc. This information prevents unnecessary delay and double handling of furniture. Furniture which is excess to needs of members occupying Government owned or controlled housing will be stored at no expense to the member. The entitlement to such storage expires upon termination of quarters assignment. Application for storage will be made with the Household Goods Section, Building 3684.



Typical Field Grade Officers Housing.



# Health Care Facilities

## U.S. ARMY HOSPITAL

The U.S. Army Hospital, Redstone Arsenal, provides medical support for all assigned personnel, their dependents, retired military personnel residing in the area, and their dependents.

This 50-bed hospital is staffed to meet the majority of all medical and surgical needs and has a capability in Radiology, General Surgery, Internal Medicine, OB-GYN, Pediatrics, Psychiatry, and Optometry.

The main hospital is housed in Building 112.

Due to the size of the staff and the limited capabilities, this facility relies upon other military hospitals and the Civilian Health and Medical Program of the Uniformed Services (CHAMPUS) for providing medical care beyond its capability to retired personnel, their dependents and the dependents of active duty military personnel. Personnel reaching age 65 must revert to the Social Security Medicare Program for medical care from a civilian source but retain their eligibility for medical care from a uniformed services facility. The CHAMPUS program as authorized in AR 40-121 supplements the staff and capabilities of this hospital and falls under the responsibility of the Registrar's Office of the hospital.

## EMERGENCY ROOM

The Emergency Room in the main hospital building is operated 24 hours a day 7 days a week to receive and treat emergency and accident cases. When illness occurs during non-duty hours, or becomes significantly worse, patients may come to the emergency room for diagnosis and treatment. It is requested that patients for routine diagnosis and treatment do not come to the emergency room but seek attention in the Hospital Clinic Services. The emergency room staff is necessarily limited and the duty for some of the personnel is in addition to that during normal duty hours. More prompt service is available, and less time will be lost waiting when patients make prior arrangements for appointments in the Hospital Clinic Services.

## AMBULANCE SERVICE

Emergency ambulance service is available for all on-post activities and personnel in family housing by calling 876-5110. Ambulance service at locations in the vicinity of the Arsenal are available from civilian resources.

## HOSPITAL CLINIC SERVICES

The clinic services are located in Building 112 (Main Hospital Building) and in Building 116—Outpatient Clinic. Adult patients desiring to see a physician may call the

central appointment desk 876-3143 to receive an appointment in a specialty clinic, or for general medical problems may be seen on a walk-in basis at the 24-hour walk-in clinic in Building 112. Physicians are on duty 24 hours a day, however, it is expected that the majority of routine illnesses can be taken care of during the day and evening hours.

The Pediatric Clinic operates by appointment only. Parents with ill children should call between 0800-0900 to receive a same-day appointment. Long term pediatric illnesses should be handled by routine pediatric appointments. All appointments are made through the central appointment desk, phone 876-3143. These include the following clinics:

Pediatric	Bldg. 116
Well-Baby	Bldg. 116
Surgical	Bldg. 116
Internal Medicine	Bldg. 116
Adult Walk-in	Bldg. 112
Post-Partum	Bldg. 112
Ob-Gyn	Bldg. 112
Optometry	Bldg. 113
Orthopedic	Bldg. 116
Family Planning	Bldg. 112

## MILITARY SICK CALL

**Grades E-6 and Below:** Military sick call is held Monday through Friday from 0700-0730 hours at the troop health clinic (Formerly Dispensary "B"), Building 3493.

**Grades E-7 and Above:** Military sick call for these grades is held at the walk-in clinic, Building 112, from 0730-1130 hours. But active duty personnel are asked to arrive as close to 0730 at possible.

## IMMUNIZATIONS

Routine immunizations for dependents of active duty personnel, retired personnel and their dependents will be given in the Hospital Clinic Services (Building 116) at 0900-1100 and 1230-1600 hours, Tuesday and Thursday. Dependents 10 years of age and above will report to the immunization room in the west wing of the building. Those up to the age of nine years will report to the Pediatric immunization room in the east wing area.

Officers and Senior NCO's (E-7—E-9) will be administered all immunizations, except yellow fever, in the Hospital Services (Building 116) on Monday, Wednesday and Friday from 0900 to 1100 hours.

Immunizations for all other military personnel will be scheduled at Dispensary "B" (Building 3493), phone number 876-4990.



Yellow fever immunizations will be given on Fridays only at 1400 hours in the Hospital Clinic Services (Building 116). These immunizations will be given on an appointment basis only by calling phone number 876-3143.

#### **ALLERGY DESENSITIZATION THERAPY**

Allergy shots will be given only to those patients who have been previously examined by a qualified allergist. These are administered in the Hospital Clinic Services (Building 116). Prior to initiation of any desensitization injections at this facility, the report of consultation from the allergist will be presented along with dosage schedule and desensitization prescription. Patient will be interviewed and records will be reviewed in the medical or pediatric clinic, as indicated. These shots will be given on Tuesday and Thursday from 0930-1100 hours and 1230-1600 hours in the Outpatient Clinic (Building 116). Transient patients will be given desensitization treatment when in the local area if they present own vaccine and dosage schedule.

#### **OCCUPATIONAL HEALTH SERVICES**

The overall Occupational Health Program is organized to prevent illness due to occupational hazards. It encompasses certain special preventive measures for both military and civilian personnel who are exposed to potentially toxic materials or other hazardous environmental influences in their work.

Three specific objectives of the Occupational Health Program are:

1. Assure that all eligible military or civilian personnel are physically, mentally and psychologically suited to their work and that their physical and mental health and well being are maintained during employment.
2. Determine that the work environment for non-combatant areas is safe, hygienic and wholesome.
3. Reduce the economic loss occasioned by physical inefficiency, sickness, and injury of military and civilian employees.

U.S. Army Civilian Employees Health Clinic operates and maintains an Army medical treatment facility for eligible personnel in Building 7110. The facility is open from 0800 to 1630 hours daily, Monday through Friday, except holidays. All eligible personnel will report to the Walk-In Clinic, USAH, Building 112, for service at all other times.

**IMMUNIZATIONS** — Required immunizations for Army civilian personnel are administered from 1400 to 1600 hours ONLY at Building 7110, Monday through Friday, except holidays.

#### **DENTAL CARE**

Dental treatment is rendered to all active duty members of the Uniformed Services assigned or attached to Redstone Arsenal, their dependents and other authorized treatment as provided by AR 40-3 and AR 40-121.

Retirees and all dependents will be given treatment, consisting of examinations and routine dental care, on a space available basis. Emergency dental care for retirees and all dependents is available for pain or suffering and to prevent loss of teeth as well as in conjunction with medical problems relating to general health.

Dental Clinic hours are 0730 to 1630, Monday through Friday; 0900-1100 for dependents. For information, call 876-2616. Emergency dental treatment after duty hours, and on Saturday, Sunday, and holidays, call the hospital, phone 876-7458.

#### **VETERINARY SERVICE**

The Post Veterinary Service, Redstone Arsenal, is in Building 3543, phone 876-2441. A small animal clinic for pets owned by active duty and retired military personnel is operated as follows:

**MONDAY**, 0800-1100 hours. Personnel desiring immunizations for pets may come to this walk-in clinic.

**TUESDAY AND THURSDAY**, 1300-1600 hours. Personnel desiring treatment for pets may make an appointment by calling 876-2441.

Care is limited to pets only, not for animals that are intended to be sold. Bonafide emergencies will be accepted at any time, providing the veterinarian is present.

Personnel residing on Redstone Arsenal proper must register their pets within 72 hours, showing a valid, current rabies immunization certificate. This includes all dogs, cats, and other pets the Post Veterinarian deem necessary. Pets such as birds, mice, guinea pigs and hamsters are exempt from registration and immunization.

#### **CHAMPUS**

The Military Medical Benefits Amendments of 1966 provide many new health benefits to military personnel and their dependents. Included are both hospitalization and outpatient care in civilian facilities for dependents of active duty personnel, retired personnel and their dependents, and survivors of deceased active duty and retired personnel. Also provided is a program of care in civilian facilities for active duty dependents who are mentally retarded or physically handicapped. More information regarding the Civilian Health and Medical Program for the Uniformed Services (CHAMPUS) may be obtained by contacting the Registrar's Office at the Hospital, Phone 876-2971.



## Other Services

### POSTAL DIRECTORY

This headquarters maintains an installation Postal Directory and Locator Service consisting of DD Forms 1175 (Installation and Postal Directory Card) on all military personnel assigned or attached to units at this installation. The directory retains cards on personnel who have departed the post for one year after the date of departure.

Each unit being activated or arriving on post should within 48 hours after arrival or activation furnish the Postal Directory a completed DD Form 1175 for each individual assigned or attached to the unit.

Unit commanders should insure that a DD Form 1175 for all newly assigned personnel from off Post is forwarded to the Postal Director within 48 hours. Cards should show the name, service number, grade and organization (unit). All other information is optional.

The Postal Directory is in Building 5664. Phone 876-3331.

### REDSTONE FEDERAL CREDIT UNION

On the Arsenal, in Buildings 3649 and 4200, an active Federal Credit Union is open to all military and civil service employees on post.

The office is open Monday through Friday from 0900 to 1600.

The Credit Union offers savings accounts and provides loans. Accounts can be transferred from other Posts or new accounts can be opened here upon arrival. All grades are eligible for membership and loans. Dependents also are eligible for membership.

Any persons applying for a loan must establish membership in the Credit Union. Membership may be established by buying one share at \$5.00. Savings are termed shares for dividend calculation purposes.

For further information call 881-0534 or 881-7725.

(Main Office, 511 Sparkman Dr., phone 837-6110).

### POST OFFICE

The U.S. Post Office, Building 3648, offers complete postal service to residents of Redstone Arsenal. It also works in conjunction with the Mail Distribution Branch to insure flow of official mail to and from arsenal work stations.

The Post Office is open 0930 to 1630 hours, Mondays through Fridays. Any normal mail transaction may be accomplished at the facility. Phone 876-8037.

### AMERICAN RED CROSS

American Red Cross service is rendered by the Field Director in Building 3482, Rm. 1, phone 876-4427, 3381. Red Cross service will be rendered to military personnel in coordination with the appropriate unit commander. In

order for the American Red Cross to render efficient service to military personnel in verifying messages regarding leave under emergency conditions, the military member concerned should tell his family first to notify the Red Cross Chapter in his home county.

A request for Red Cross verification must be made by the unit commander, or his representative, of the military member concerned and not by the enlisted man. It must be realized that ordinary sickness in homes does not constitute an emergency. Red Cross verification for sickness consists of a doctor's statement and recommendations, but the military member should endeavor to obtain a clear picture of the situation so that the unit commander can better understand the problem that the serviceman's presence at home will alleviate.

### ARMY EMERGENCY RELIEF

Quite often emergencies necessitate the acquisition of an immediate loan, which can be furnished by the AER Officer. Assistance may be furnished by a loan or a grant and is normally paid back by small monthly payments by class E allotments or by lump sum payment. The following are typical cases in which AER can be extended: Non-receipt of pay and allowances; Loss of pay or other personal funds; Travel expense when necessary for emergency reasons.

Assistance normally is NOT rendered in the following types of cases: Divorce; To maintain a standard of living incommensurate with pay and allowance; To finance business ventures; Purchase of any goods or items for convenience or luxury; Travel expenses not caused by reasons of an emergency nature.

When an emergency arises for which financial assistance is needed, a military member should first contact his unit commander and/or local American Red Cross. If his problems do not meet their requirements for assistance, he then should contact the local AER Officer. The AER Office is in Building 3482. Telephone 876-2022.

### ARMY EXCHANGE

The Army Exchange is operated under the supervision of the Exchange General Manager. Retail facilities include a Main Store in Building 3710 primarily featuring soft-lines; a Branch Retail Store in Building 3651 having sporting goods and hard-line items; Toyland located in Building 3657; and Branch Retail Stores serving troops in Building 3479 and Building 3744. The Main Cafeteria is located in Building 3479 and Snack Bars are found in Building 3651 and the Golf Course Club House. Other facilities include a Service Station in Building 3240, a Washeteria in Building 3475 and a Barber Shop in Building 3475. Concessionaires operate activities such as: Watch Repair Shop in the Main Store, laundry and dry cleaning pick-up point and a tailor shop in Building 3451.





Shopping at the Post Exchange.

A concession operated Beauty Salon is located in Building 1140 on Goss Road in the vicinity of the dependent housing area. Business hours of the Army Exchange activities coincide with Arsenal working hours and troop off-duty hours. Publication of hours of operations is the responsibility of the Exchange General Manager. Phone 881-7375.

#### PRIVATELY OWNED VEHICLES

All privately owned automobiles will be registered at the Provost Marshal's Office, Building 3421. Permanent bumper decals are issued to personnel who are stationed at Redstone Arsenal for a period exceeding 30 days. Permanent bumper decals are issued to active duty military personnel stationed at or within 50 miles of RSA, adult dependents and retired military personnel living within 50 miles of RSA and entitled to post privileges. Temporary passes are issued for less than 30 days. Retired personnel and their dependents that are entitled to post privileges are also issued permanent bumper decals. Registrant must have proof of ownership (tag receipt or bill of sale and driver's license). It is advisable that upon arrival at Redstone registering your privately owned vehicle be on the top of your list on "Things to do." Here are a few of the post regulations:

- (1) All vehicles will be covered by at least 10/20/5 public liability insurance and operator have a valid driver's permit.
- (2) The speed limit on post is 60 MPH during daylight hours and 50 MPH at night except where posted at a lesser speed.
- (3) All personnel are prohibited from entering restricted area unless specifically authorized by the Chief of the Primary organizational element.
- (4) No firearms will be permitted on this post without approval of the Provost Marshal.

(5) All instructions received from security guards or military police must be obeyed.

(6) All vehicles operating on the installation are subject to search.

#### UNIFORM REGULATIONS

##### General

All military personnel are expected to wear the uniform in such a manner as to reflect credit on the military service.

Mandatory dates for the change of seasonal uniforms are as follows:

Winter ..... Third Monday in October  
Summer ..... First Monday in April

##### Officers

The Army Green uniform is the prescribed duty uniform during the winter season. However, it may not be worn at social functions after retreat. The phrase, "social functions," does not include such activities as sporting events, movies, etc.

The cotton uniform is an alternate summer uniform. The tropical worsted or light weight Army Green uniform may be worn as an alternate either on or off duty or during travel.

The service cap is the preferred type of headgear. The garrison cap is optional, and is also authorized when an individual is in travel status away from his home station.

The Army Blue uniform is the prescribed uniform at social functions after retreat. The Army dress uniforms (Army White, White Mess, Evening Dress, and Blue Mess Uniforms) are optional with the individual and may be worn at appropriate times. Civilian clothing may be worn at social functions when appropriate to the occasion.



### Enlisted Men

The Army Green uniform is the prescribed duty uniform for enlisted personnel during the winter season. This uniform may also be worn off duty or during travel. The Army Light Weight Green or the Army Khaki uniform may be worn during the summer season, and may be worn during off duty or during travel. The Army Tan uniform is an optional summer uniform for enlisted men for wear on duty (except in formation), off duty, or during travel. The Army Khaki uniform is the prescribed duty uniform for enlisted personnel during the summer season.

### POST COMMISSARY

Redstone Arsenal's Commissary is a modern, self-service store in Building 3623. Telephone 876-2428.

Commissary purchases are restricted to Armed Forces personnel and their authorized dependents. Any individual who seeks to enter the store must be positively identified as an authorized patron. The military uniform itself is not considered sufficient identification (AR 31-200) and identification as follows must be shown:

Uniformed personnel: DD Form 2A, 2N, 2F, 2MC, 2CG, 2C and GS (Green) and PHS 186601 (Blue).

Members of Reserve components on active duty for training periods of 72 hours or more should submit DD Form 2A, 2N, 2AF, 2MC, 2 CG(RES) (Red) and Component Active duty orders.

Retired personnel: DD Form 2A, 2N, 2AF, 2MC, 2CG (Ret) Gray.

Dependents and other authorized personnel: DD Form 1173.

An express checkout stand is operated for purchasers

**Commissary is a busy place.**



buying 15 items or less. All sales will be for cash, including personal checks made payable to the Treasurer of the U.S., and will be final. Subsistence supplies will be inspected by the purchaser at the time of sale and no refunds or exchanges will be made.

Special orders for meat may be made by contacting the Meat Market Manager. Special orders must be for cuts of meat not normally stocked in meat display cases.

Carry-out boys are available to carry out groceries. These boys work for tips only.

### EDUCATION OFFICE

The Army Education Office is located in Building 3484 and provides an education program for all military personnel assigned to this post. This program is designed to improve the intellectual personal goals and performance potential of Army personnel thru a well planned and organized education program. Special programs included in the Army Educational Development Program are Educational Development Counseling, U.S. Armed Forces Institute (USAFI), Achievement Testing; over 200 USAFI Correspondence Courses, High School (GED) Classes and Examinations, College Level General Examinations, Tuition Assistance, Degree Completion and Project Transition Program. Military personnel are invited to avail themselves of the opportunity to complete their education or just visit the office. For further information call the Army Education Office, phone 876-2844 or 876-5468.

### ARMY COMMUNITY SERVICES OFFICE

The ACS Office is in Building 3484. Hours of operation are Monday through Friday from 0800 to 1630. Telephone numbers during duty hours are 876-8957 and 876-8664.

The Redstone Arsenal ACS Office serves as a referral and coordinating office to provide information, assistance, and services to members of the Army Community. Services offered include, but are not limited to, information, advice, or assistance concerning financial matters and lending of household goods.

### LENDING CLOSET

The Army Community Service lending closet has been established to assist newly arriving families to set up limited housekeeping while they await the arrival of their household goods. This closet has a limited stock of dishes, pots, pans, linens, porta-cribs, folding cots and other household items that will facilitate housekeeping until the arrival of personal effects.

The lending closet is operated by Army Community Service volunteers in coordination with the ACS Office,



Building 3484, phone 876-8957. Personnel desiring to use items stocked by the lending closet should visit the ACS Office during the hours of 0800 to 1600 Monday thru Friday.

#### **ARMY COMMUNITY SERVICE VOLUNTEER PROGRAM**

Major personnel support for Army Community Service is provided by volunteer workers. Volunteers provide such services as assisting newly arriving and departing personnel, operating a lending closet, performing essential office duties, supplying transportation and shopping assistance in emergencies, and a variety of other services necessary to the physical and mental well-being of families whose normal routine has been interrupted by unusual problems.

Army Community Service has a continuing need for volunteers. If you can afford to give a few hours a week to a worthwhile cause, call or visit the Army Community Service Center for further information.

#### **RETIRED ACTIVITIES OFFICE**

The Army provides a program designed to prepare the serviceman for retirement and return to civilian life after retirement or release from active duty. The Retired Activities Office which provides the service is in Building 3484, and all prospective military retirees are invited to visit this office for consultation. This invitation is extended to retired personnel of other services and their dependents, also to dependents of deceased active duty and retired personnel living in this area.

A cooperative program is provided for employment assistance and guidance by the Retired Activities office thru the United States Employment Service, the Civil Service Commission and affiliated state agencies. Employment service representatives are prepared to give employment orientation, counseling, testing and placement assistance to those military personnel planning retirement from the Army who desire to develop plans for a second career. Information related to separation or retirement sessions is also provided by other agencies such as the Social Security Administration, and the Veterans Administration. Group separation orientation sessions are provided bi-monthly for service personnel being released from active duty and pre-retirement counseling sessions are provided quarterly for service personnel retiring from the Army. This office provides on-post liaison with the Veterans Administration for questions on veterans education assistance and loan guaranty benefits and insurance. Counsel with a Veterans Administration Contact Representative concerning disability retirements may also be

scheduled thru this office. For further information go to Building 3484 or call 876-8664.

#### **MICOM FINANCE AND ACCOUNTING CENTER**

The MICOM Finance and Accounting Center is in Building 8027. The Military Pay and Travel Pay operations are in Building 3619. Normal hours of operation are 0800-1600, Monday through Friday. Cashier hours are 0800-1615 for both military and civilian personnel. Military paydays are the last workday prior to the end of the month.

An imprest fund cashier, for the purpose of paying advance travel, is located in the Safeguard Systems Command, Research Park.

#### **BANKING**

A branch office of the First National Bank of Huntsville has been established in Building 3708 to provide banking services for Redstone Arsenal personnel. Normal hours of business are from 1000 to 1300 and 1400 to 1600 hours Monday through Friday; 1000 to 1300 and 1400 to 1800 hours on military payday; closed Saturdays. Regular banking services are provided by this branch office.

#### **RELIGIOUS SERVICES**

**Chapels:** The Post Chapel is in Building 3714 on Patton Road, adjacent to Gate 10. Catholic Masses are at 0830, 1245 and 1700 hours at the Post Chapel and 1130 at the Chapel Annex, Building T-3151, on Sundays. Saturday Mass is at 1700 in the Post Chapel. Confessions are heard from 1745 to 1930 hours each Saturday. Tuesday through Friday, Mass is held at 1200. General Protestant services are conducted each Sunday at 1000, 1115 and 1900 hours in the Post Chapel. Church School is held at 0945 hours at the Chapel Annex, Building T-3151 and T-3168. Jewish services are at 1000 hours Saturday in the Post Chapel. In addition, a chapel facility for school troops is located in Building 3218. This provides offices for the School Chaplain, a lounge and worship center easily accessible to students.

**Counseling:** The Chaplains' offices, Buildings 3714 and 3218 are open for visits, consultation, and counseling on home, family, and other problems during regular duty hours and by special appointment. Guidance through personal interviews and consultations (Spiritual, moral, and welfare) is offered by the chaplains, who are available at all times. Wedding and Baptism arrangements to be by appointment. The officiating chaplain will coordinate use of facility.



# Army Special Services

## CRAFTS SHOPS

The RSA Crafts Program is designed for those individuals who wish to repair, build, and create things for their personal satisfaction. Two multi-purpose crafts shops are available for use: Building 3617 houses the automotive, woodworking, machine, and welding shops, wash rack, and sales store. Small crafts are located in Building 3491. These include ceramics, photography and electronics shops.

**Automotive Shop:** The automotive shop has an 18-car capacity, a tool crib and two grease racks. Tools and test equipment may be checked out for your use. Most parts may be purchased at a discount from either the sales store or cooperating dealers in Huntsville. Trained personnel are on hand to give assistance and provide for your safety in all of our facilities.

**Electronics Shop:** The electronics shop is equipped with a complete assortment of test equipment for the repair and assembly of radios, TV's, and like equipment.

**Ceramics Shop:** The ceramics shop is available to create beautiful and useful objects for gifts and for personal use. Molds are provided free, as is the firing, but other materials may be purchased from the sales store at a reduced price.

**Woodworking Shop:** The woodworking shop is one of our most popular facilities. All tools and some materials are furnished by Special Services.

**Photography Shop:** The photography shop is equipped to develop, print, and enlarge black and white film. Chemicals and paper are furnished free.

**Machine Shop:** The machine shop is equipped with metal lathe, milling machine, drill presses, and surface grinders.

**Welding Shop:** The welding shop provides for electric arc welding and acetylene welding.

## THEATER

The Post Theater, Building 3712, provides nightly entertainment at 1800 and 2030 hours, with matinee at 1400 hours on Sunday. Admission rates are \$.35 for adults, and \$.25 for children, except for special shows. Movie

schedules are published in the Daily Bulletins and The Rocket.

Use of the Post Theater is restricted to military personnel on active duty, members of households of military personnel on active duty or retired, widows (not remarried), and dependent children of deceased military personnel, and civilian guests. The term "civilian guest" is considered to mean any friend of a military person on active duty or of his dependents. Personnel bringing guests must obtain a guest authorization card from the cashier and present it to the ticket taker for each guest brought into the theater. Personnel not in uniform and dependents must show their identification card when they purchase their tickets.

## SERVICE CLUB

The Service Club provides a well-balanced recreation program for enlisted men, their families, and friends. Dependents and guests must be accompanied by military sponsor to use the Service Club facilities.

Self-directed activities are made possible by providing facilities and equipment for individual and group use. These include musical equipment, records, small games, pool tables, table tennis, reading and letter writing materials, TV rooms, and movie equipment.

Planned programs provide the opportunity for participating in group activities. These include soldier shows, musical programs, buffet suppers, and holiday observances. Guided bus tours are scheduled to State Parks and special places of interest, with picnic lunches provided for everyone.

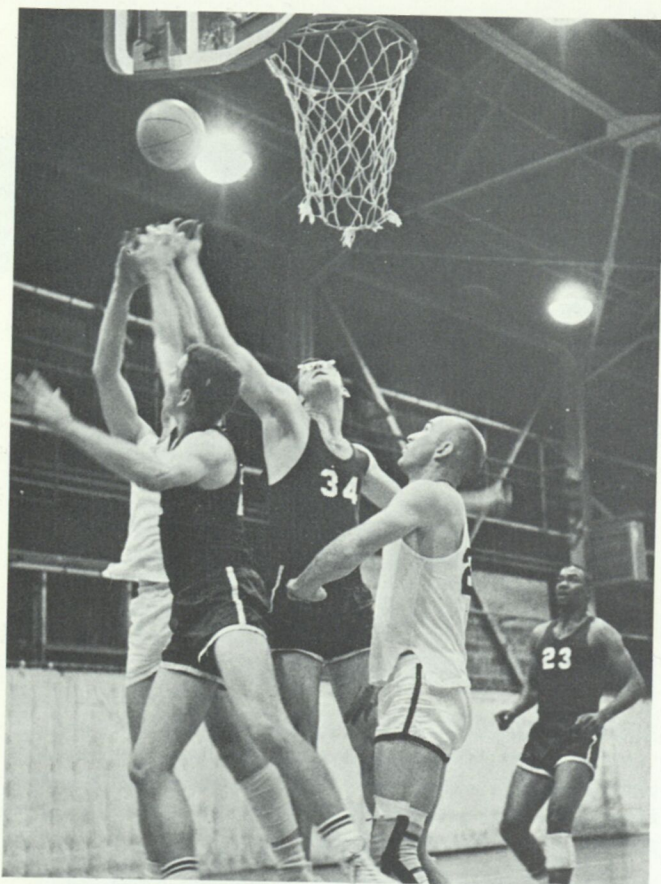
The club is in Building 3711. Hours of operation are Sunday thru Saturday 1330 to 2200 hours.

## WORKOUT FACILITY AND GYMNASIUM

The Workout Facility and Gymnasium are housed in Building 3474. Participants may work out at their convenience to relieve tensions, and develop themselves physically. The facility is available to military personnel (active and retired), reserve personnel on active duty, and their dependents. Dependents under 15 years of age must be accompanied by and under the supervision of an adult authorized to use the building. Male participants will wear pants, or shorts, shoes, and a shirt of some kind, at all times while in the building. Female dependents may use the building Monday through Friday, 0830 to 1030 hours. During these hours no men will be allowed in the building, other than military attendants on duty.

The following equipment is available for use on a





**Athletics**

hand receipt basis: gym shoes, handball, squash, boxing and sparring equipment, jump ropes, basketballs, volleyballs, badminton equipment. Other equipment available for use are weights, vibrating machines, stationary bicycles, steam room and whirlpool bath. A multi-station exercise unit will be added in the near future.

Directly behind Building 3474 are four lighted tennis courts. Tennis equipment may be obtained from Building 3474. Hours of operation are: Monday through Friday 0800-2100 hours; Saturday, Sunday and holidays 1300-1700 hours.

#### **SWIMMING POOLS**

The Special Services swimming pool is open to military personnel, their dependents, and bona fide guests. All children under 14 years of age will be accompanied by, and under the direct observation and supervision of, an adult. Seasonal opening and closing dates will be announced in the "Daily Bulletin."

The pool is in the troop area, Building 3469. Instructional swimming classes will be scheduled during the morning hours.

Hours of operation during season are: Daily, 1200-2030; Saturday, 1000-2030; 0800-1000, swimming teams; 1000-1200, swimming lessons.

#### **GOLF COURSE**

The RSA Golf Course is an 18-hole course and includes a driving range. Yardage for men is 6,547 yards, with a par of 72; for ladies it's 5,791 yards, with par of 74.

Participation is restricted to military personnel (active and retired), their dependents, and guests. Eligible personnel are limited to two guests. Dependents or guests may not play prior to 1200 hours on Saturdays.

Special Services golf clubs are available at the pro shop free of charge on a first-come, first-served basis. These clubs may not be taken off the RSA golf course. Golf equipment may also be purchased at the pro shop.

Golf lessons are available by appointment. Call 876-1484.

Starting times may be reserved for weekends and holidays by calling the pro shop, 876-1484, on Wednesday at 0800 hours. Only threesomes and foursomes are permitted on weekends and holidays when the course is crowded.

Hours of operation, Monday 1230 till dark; Tuesday thru Friday 0800 till dark; Saturday, Sunday and Holidays 0730 till dark.



**Playing golf on the Arsenal Links**



### MADKIN MOUNTAIN RECREATION AREA

This general purpose area is provided for the use of military personnel and their dependents. Included in this area are barbecue pits, picnic tables, a club house, and an approved swimming area. This area is open every day during the summer season. Hours of operation are: Monday through Friday, 1300-2000; Saturday, 1000-2000.



Hunting

### BOWLING ALLEY

The Bowling Lanes facility, Building 3707, adjacent to the main Post Exchange, has 16 lanes and is open seven days a week. Bowling shoes and balls are available for rent, and refreshments may be obtained at the snack bar.

Bowling leagues are formed in the summer and fall seasons, and include bantam and junior leagues.

For further information call 876-4666.



Tennessee River Recreation Area

### LIBRARY

The Special Services Library, in Building 3323, has over 27,000 volumes. Besides fiction and nonfiction, the library has a large reference and research section. Records are available for all types of music. Records may be played in the music room at the library, or may be checked out for a period of two weeks.

Newspapers are received daily from major cities of the United States.

Hours of daily operation are 1230-2100 hours. However, books may be deposited in a convenient bookdrop located outside the library. Phone 876-4741.

### TENNESSEE RIVER RECREATION AREA

The Tennessee River Recreation Area is for military personnel (active and retired), and their dependents. Two inclosed picnic areas are available and may be reserved for groups of 50 or more people by calling the Sports Branch, 876-2943. Reservations may be made by military personnel only, and groups must consist of at least 50% military personnel. Some athletic equipment is available for the picnic areas and may be obtained from the Sports Branch, Building 3474.

The boat docks are also in this area and are restricted to authorized personnel who are launching boats. All boats must be registered and have the minimum safety equipment before launching. (Small fishing boats and motors



may be rented from Special Services Supply Branch, Building 3491, 876-1418.)

Swimming and fishing in this area are prohibited. Water skiing is prohibited within 50 yards of the harbor area.

Rental on boats is \$.50 per day. This includes boat, trailer, life preservers, paddles, and one lock and key for

securing boat when not in use. Rental on motors is \$1 per day, with or without boats. A charge will not be made for the day boats and motors are checked out, but charges will be for each day thereafter, including day of return.

The Tennessee River Recreation Area is closed during winter months. Hours of operation during summer season are 0900 hours until dark daily.

## Joint Activities

### JOINT ACTIVITIES COUNCIL

The Joint Activities Council supervises the various committees concerned with supporting and providing youth-related educational, morale, and welfare programs. It is composed of the activities listed below, with an overall policy of providing all possible aid and assistance to youth groups in furtherance of building character, physical fitness, attainment of higher education and standards, and development of these individuals into mature and responsible citizens. Since JAC activities are conducted primarily by volunteers, contacts with indicated activities are encouraged for additional information or phone 876-5332—JAC Chairman.

**The Thrift Shop:** To patronize the Thrift Shop is a way of helping the military community since its profits go into youth-related programs. In Building 3649, one can find reusable articles like clothing, uniforms, electric appliances, furniture, and other items. The Thrift Shop is open two days a week, on Wednesday and Friday from 1000 to 1400. Phone 881-6992.

**Redstone Pre-school:** The Pre-School is dedicated to the education of 3-6 year old Kindergarten and Nursery School children. The activities and curriculum stress the development of the child in four areas—physical, mental, social, and emotional. A sound foundation in these areas make a youngster's adjustment to first grade easier and happier. The school, in Building T-3185, is open five days a week, 0830-1130, on the same seasons as public schools. Phone 539-3866.

**Nursery:** The Rocket Nursery provides care for children ages three months to twelve years, at reasonable rates. Hours are 0715-2400 Monday-Thursday; 0715-0130 Friday; 0800-0130 Saturday; and 0700-1400 Sunday. Phone 837-6464.

**Teen Club:** In Building 114, the Teen Club offers recreation facilities, including dances and special events, to all dependents between the ages of 13 and 19. The Teen Council itself has a major say-so in the choice of activities. Open Friday and Saturday during school year, with expanded openings during summer vacation. Phone 837-5079.

**Youth Sports Program:** Athletic and recreation programs of all types are conducted for individual or team participation, including archery, volleyball, basketball, softball, tennis, baseball, swimming, and golf. Cheerleader squads encourage the football teams to give it the old college try. Drop by the office on Goss Road, near Gate 8, at noon or after work for more information.

**Scouting Activities:** Two Cub Packs, three Boy Scout Troops, and Girl Scout and Brownie units are always ready to help your youngster along the Scouting trail. Many on-post and area camp sites are explored every month. See you at meetings Monday night in T-3186, or call the Scouting Activities Committee Chairman at 876-1133.

**Red Cross Committee:** A very special group of volunteers provide assistance to medical related activities. Red Cross Volunteers help out in the hospital and clinics and help to make the Bloodmobile an efficient and productive community service. For more information, discuss with one of your volunteer friends or talk with the Red Cross Committee Chairman, phone 876-1117.



MICOM Troop Mess Hall.



# Huntsville

## ROCKET CITY, U.S.A.



Farmers Market

Huntsville, a city of contrasts, is a blend of the old and the new. Its roots are planted deeply in the past, yet it is a vital part of the challenging future. With attractions for every age, it is a stimulating and rewarding place to live. The city itself is progressive, fast growing, beautiful and keyed to the pulsating space age. Located in the Alabama Mountain Lakes section, it is convenient to one of the foremost resort areas in the South. For the history enthusiast, the nature lover, the hunter, the fisherman, the student, the engineer, the business man, the club woman—it is the place to be and the place to live!



First National Bank



## History

John Hunt, for whom the City of Huntsville was named, came to what is now Madison County and built his home near the "Big Spring" in 1805. After the creation of the county by the proclamation of Governor Robert Williams of the Mississippi Territory on December 13, 1808, provision was made by the federal government for sale of the public land at auction during August and September of 1809.

LeRoy Pope, a Georgia planter, bought much of the land surrounding the "Big Spring" for \$23.50 an acre. On July 4, 1810, this area was chosen as the county seat by a special commission appointed by the territorial governor. At the suggestion of LeRoy Pope, the new town was named Twickenham after the English home of Alexander Pope. Later the name was changed by special act of the territorial legislature on November 25, 1811, to Huntsville in honor of its first settler.

When first laid out by John Coffee, the town contained sixty acres in blocks of two acres each subdivided into four lots. Half of the lots were sold to the commissioners at \$23.50 per acre and the remaining portion of the town was retained by LeRoy Pope and his associates. The Commissioners then sold their holding at auction and the proceeds were used to construct a courthouse and jail on the Public Square.

So rapid was the influx of people into the area that the public land office was moved from Nashville to Huntsville in 1811, a newspaper was established a year later, and numerous stores were built around the Public Square. Soon after came the organization of a public school, a bank, a library, the first Masonic Lodge in Alabama, the first organized Presbyterian Church in the State, and what is believed to have been the first water system in the South.

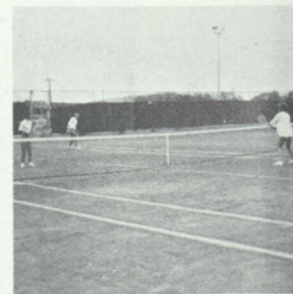
By 1919, Huntsville had become so important in the territory that it was chosen as the convention city where Alabama's first constitution was drafted. The first governor of the state of Alabama was inaugurated here.

## Recreation

Huntsville is noted for its wide variety of recreational attractions, appealing to all tastes and ages.



Horseback riding



Municipal tennis courts

Due to the mild climate, water sports are popular from March to November and fishing season is open 12 months of the year. The Tennessee River is just south of Huntsville and T.V.A. lakes are nearby.

Monte Sano State Park, just east of Huntsville, is a popular playground. The Park contains about 1,900 acres and lies 2,000 feet above sea level. The views of the city and farm lands, 1,400 feet below, are considered to be among the most beautiful in America.

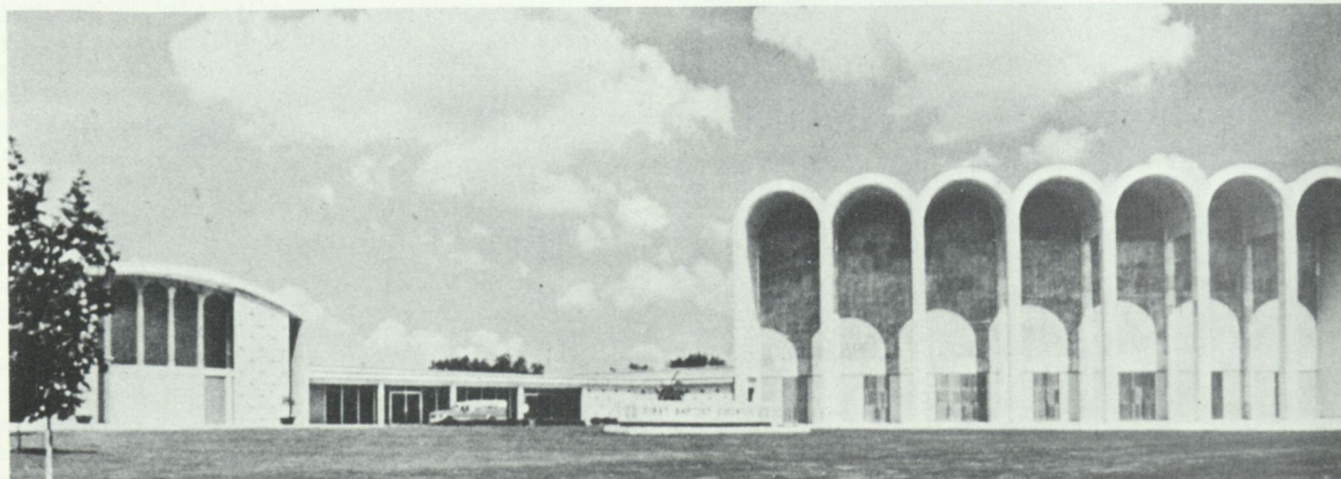
There are a number of attractive cottages in Monte Sano State Park, all fully equipped for family vacations. The lodge, picnic areas, and shelters are ideal for group outings. Hiking trails and bridle paths wind through the Park. Horseback enthusiasts may rent horses at the Park's "Dude Ranch."

Huntsville reflects the nation's growing interest in golf with two 18-hole municipal courses, four private courses, and four country clubs.

Huntsville has 4 bowling alleys with a total of 107 lanes. There are over 26 sanctioned bowling leagues and Huntsville's Amateur Bowling Association is well over 3,000 strong.

A modern ice skating rink with full time instructor is open year around. Roller skating rinks, miniature golf courses, theatres, and other facilities are available.

Many of Huntsville's residential subdivisions have community swimming pools, financed and managed by private groups. The Whitesburg Yacht Club was organized in 1952 to further develop the recreational facilities of the T.V.A. lake waters for the enjoyment of all residents of Madison County and neighboring areas.



First Baptist Church





Graduate Studies building, University of Alabama at Huntsville.

The YMCA facilities have recently been expanded. Basketball courts and an indoor pool are open all year, with gym and swimming classes always available. Camp Cha-La-Kee on Guntersville Lake and a day camp are also operated by the YMCA.

Huntsville owns within its corporate limits 280 acres of playgrounds and park areas and is constantly developing spacious neighborhood playgrounds. During the summer months, playground supervisors are on duty.

The Big Spring Park area contains two community centers, has two modern swimming pools, softball field, picnic areas, and a three-acre lagoon fed by the clear waters of the Big Spring in the heart of Huntsville.

Little League and other organized baseball and softball leagues play regularly in Braham Spring Park. Huntsville has 12 lighted softball and baseball fields, and two football stadiums. Adults' and children's tennis programs are rated among the best in the state.

## Churches

More than 100 churches add a solid warmth and welcome to residents and visitors alike. More than 50 new church buildings have been constructed since 1957 to serve more than 35 denominations. The active Huntsville Ministerial Association coordinates all inter-faith activities. Those of Protestant, Catholic or Jewish faith can find a church home in Huntsville. The church structures themselves are beautiful and represent many architectural types, adding symmetry and beauty to the city scene.

Huntsville Public Library



## Education

The rapid population growth of the Space City has placed tremendous demands on the school system of the area. To keep pace an average of three new classrooms are being built a week. There are 21 elementary schools, seven junior high schools and four high schools. Of the 32 schools, 16 have been constructed since 1956. All are fully accredited by the state and the high schools are also accredited by the Southern Association of Colleges and Secondary Schools. There are approximately 10 private kindergartens plus two private and four parochial schools. The new library is one of the major facilities in the area, offering a huge selection of books. Its location, just a few blocks from the new Court House and City Hall, makes it easily accessible to all the area population.

Higher education facilities in Rocket City U.S.A., include the University of Alabama in Huntsville and its Research Institute, the Oakwood (Junior) College and the Alabama Agricultural and Mechanical College. A fully accredited junior college shares the campus of the State Vocational Technical School in nearby Decatur. The University's Huntsville Campus offers both evening and daytime classes and the range of its courses has grown impressively in recent years in response to the interest of a large number of professional families associated with governmental and industrial space and missile programs. The Research Institute contributes strongly to the development of science and engineering programs of the University of Alabama in Huntsville.

Montview Elementary School







**Medical Center Hospital**

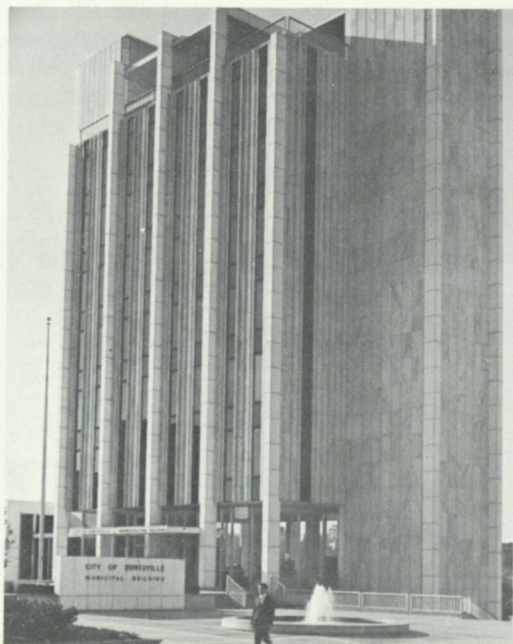
## Medical And Health Services

A public health program, administered by a full-time County Health Officer, has been in operation for many years in Madison County. The department works closely with state and federal health agencies to assure good health conditions throughout Huntsville and Madison County.

The Huntsville Hospital is publicly owned and has an "A" rating from the American College of Surgeons. There are 500 beds available. A School of Nursing for Licensed Practical Nurses is affiliated with the Huntsville Hospital. The one year course, including nine months of on-the-job training, graduates approximately 100 students per year.

The Fifth Avenue General Hospital is privately owned and has 42 beds with planned expansion to bring this total to 89 in twenty-four months. All medical services with the exception of maternity care are available. Crestwood Hospital, a private hospital, has 120 beds with plans to increase to 134 beds in twenty-four months. Nine beds for maternity cases are available at the Huntsville Clinic, a

### Municipal Building



**Huntsville Hospital**

privately owned facility. There are nine doctors on the staff.

The Medical Center Hospital, Inc., privately owned, is Huntsville's newest full service, general hospital. This 305-bed, ultra-modern medical facility was opened to patients early in 1970.

A Military Base Hospital is located on Redstone Arsenal for active and retired military personnel and their dependents. There are 56 beds with medical services available except orthopedics.

The Rehabilitation Center for the Crippled is a comprehensive out-patient facility. Well-staffed and well-equipped departments in this facility consist of Physical Therapy, Occupational Therapy, Speech and Hearing Therapy, and complete Vocational Evaluation. Other services offered are Family Counseling, Prenatal Clinics, Psychological Testing, a special class for Mentally Retarded Children, and Orthopedic and Amputee Clinics. Work is now being done with emotionally disturbed children.

The Madison County Medical Association maintains an office at the Huntsville Hospital to assist newcomers in securing a physician.

### Stairway in the Madison County Courthouse





## Huntsville . . . A Modern Place to Live



Huntsville Jetport



Modern Apartment Complex

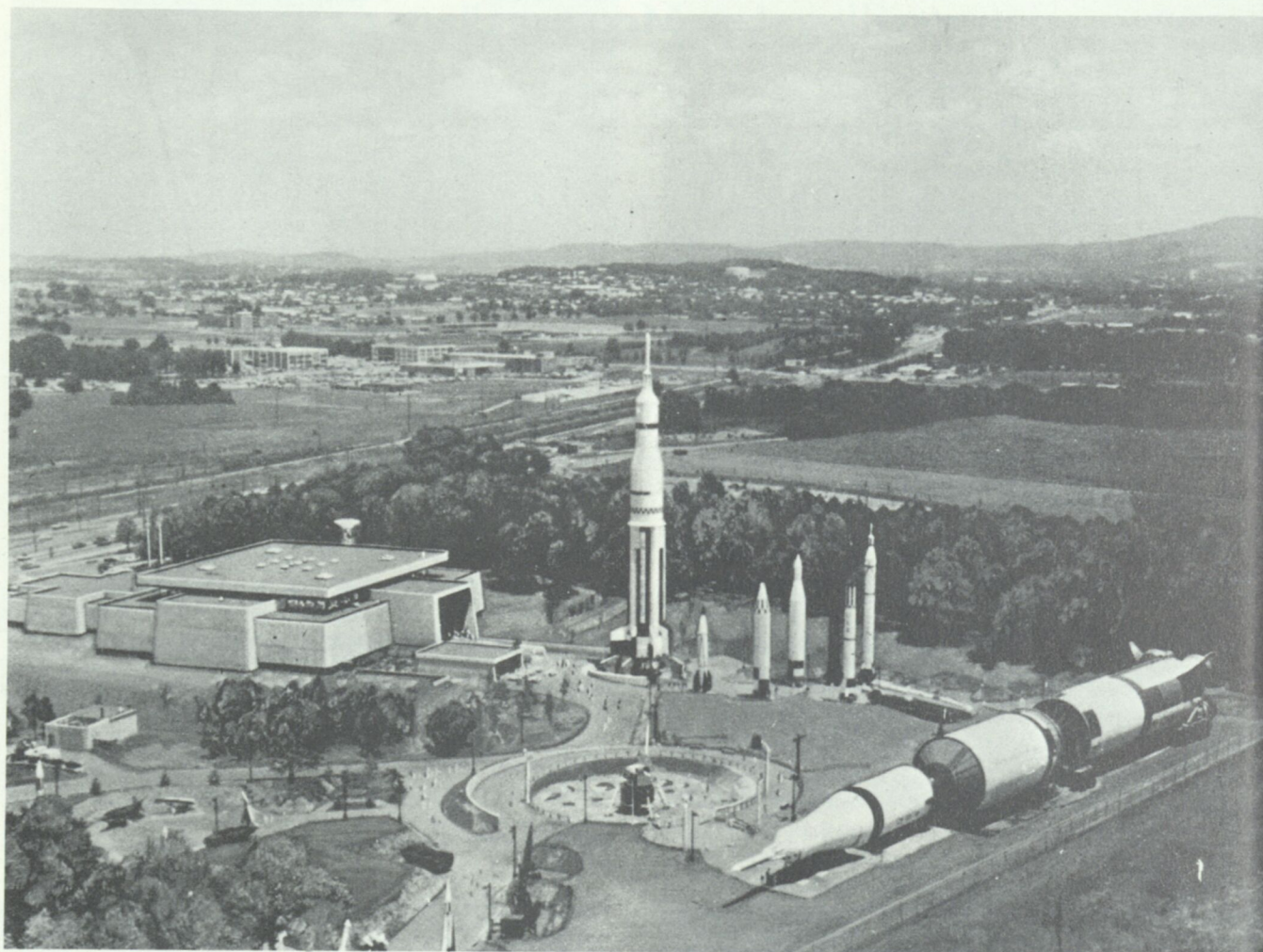


Madison County Courthouse



Spacious Shopping Center





**Alabama Space and Rocket Center**

### *Points Of Interest*

#### **BURRITT MUSEUM**

Monte Sano, near Huntsville. Open 1-5 p.m. Tuesday through Sunday, during summer and fall. Free.

On a scenic mountain top, this unusual home, shaped like a Maltese cross, displays articles of historical value and works of local artists. Archaeological room. Historical room. Art room. Formal and informal gardens. Pioneer homestead now in process of reassembly and restoration.

#### **ALABAMA SPACE & ROCKET CENTER Highway 20 West**

Open September thru May, 9 a.m.-5 p.m. weekly; June thru August, 9 a.m.-6 p.m. weekly. Admission: Adults \$1.75; Children under 12, 75 cents. Group rates: Students 60 cents; Adults \$1.50. Military in uniform \$1.00.

The objective of the Alabama Space and Rocket Center is to acquaint the public with the missile and space accomplishments of the United States. The center displays exhibits representative of the work done by the U.S. Army Missile Command, NASA and U.S. aerospace companies and is the largest missile and space vehicle collection in America.

#### **JOE WHEELER STATE PARK, Red Bank**

Named for General "Fighting Joe" Wheeler, cavalry officer of Civil War fame, this scenic 2,200 acre park is a favorite with picnickers and campers. In the heart of the Tennessee River Valley on both Wheeler and Wilson Lakes, this park offers fishing, boating, bridle trails and nature trails, refreshment stands and boat harbors. Lighted tennis courts in cabin area.

#### **DE SOTO FALLS, DE SOTO PARK, Fort Payne** Open sunrise to sunset, April 1-September 15. Free.

The falls plunge a foaming 110 feet into this cool mountain pool. In spring the walls of the canyon are aglow with wild blossoms, in fall brilliant in autumn dress. A mile-long lake above is excellent for boating, fishing and swimming. Picnicking.

#### **MONTE SANO STATE PARK, Near Huntsville**

Meaning "Mountain of health" because of its fresh pure air, lovely 2,140 acre Monte Sano Park has an interesting cavern known as Natural Well and a Dude Ranch with 10 miles of splendid bridle trails. Ample facilities for picnicking—children's recreational equipment.



### **SPACE ORIENTATION CENTER,**

**Redstone Arsenal, Huntsville**

Open 8 a.m.-4:30 p.m. Mon.-Sat.; 1-5 p.m. Sun. Closed on holidays. Free.

Unique, historically significant exhibits vividly portray the development of rocketry and space travel in this free-world rocket research center.

### **FORT MORGAN, Gulf Shores, Baldwin County**

Open 8 a.m.-6 p.m. year round. Free.

A rich historical treasure, boldly beautiful Fort Morgan was constructed in the 1700's. The massive, five-pointed fortress served under 7 flags, is pitted by shell marks and its granite steps still show the battlestains of a confederate soldier. A copy of an ancient fort near Florence, Italy, designed by the great Michelangelo, its fine brick arches are a gateway to thrilling moments of America's past. Hot Shot Furnace Museum contains fascinating items preserved from the historic past.

### **CATHEDRAL CAVERNS, Grant**

Open 9 a.m.-4 p.m. in winter; 8 a.m.-6 p.m. in summer. Adults, \$2.50; Children, \$1.00; Children under 6 free.

"Goliath," the world's mightiest stalagmite, 60' tall and 200' in girth, is a high point of these colorful caverns. Chasms deep enough to take a 12-story building—a frozen waterfall of pink stone are other features of these inspiring and unforgettable cathedral-like caverns.

### **OAK MOUNTAIN STATE PARK, Near Birmingham**

This cool, spring-fed lake is a haven on a hot day. Scenic Oak Mountain is one of many beautifully tended and well-staffed parks in Alabama.



Monte Sano State Park

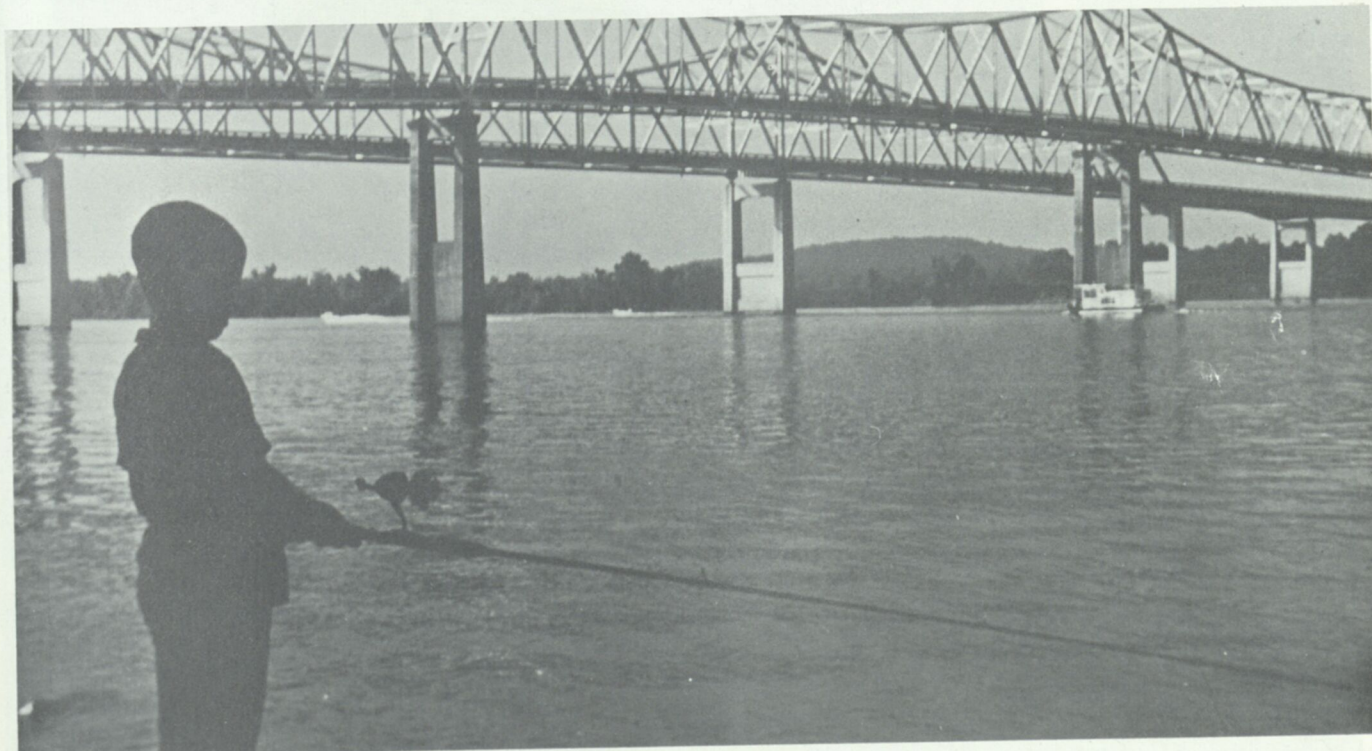
### **GULF STATE PARK, Gulf Shores**

Balmy and beautiful, Gulf State Park has an outstanding 2¼ mile beach on the Gulf of Mexico and large fresh water lakes for fishing and boating. A vast 4,087 acre tract, it is intensively developed.

### **CHEAHA STATE PARK, Near Munford**

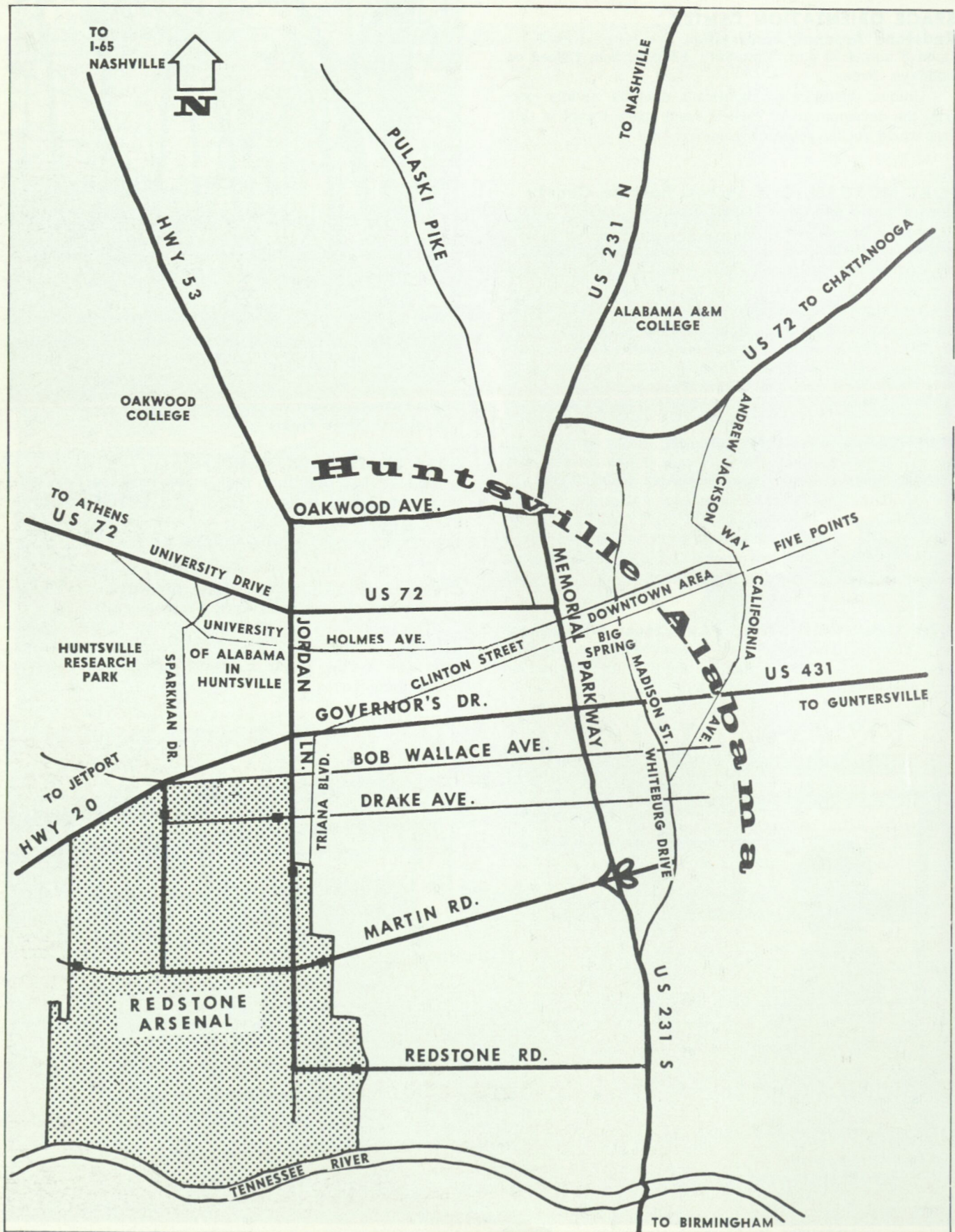
Full facilities in operation April 1-September 15.

This peak with its breathtaking view is the highest point in the state, 2,407 feet. Cool year round, it has a hotel, plus cabins, picnic facilities, fishing, hiking and a fine bathing beach.



Fishing in the Tennessee River.







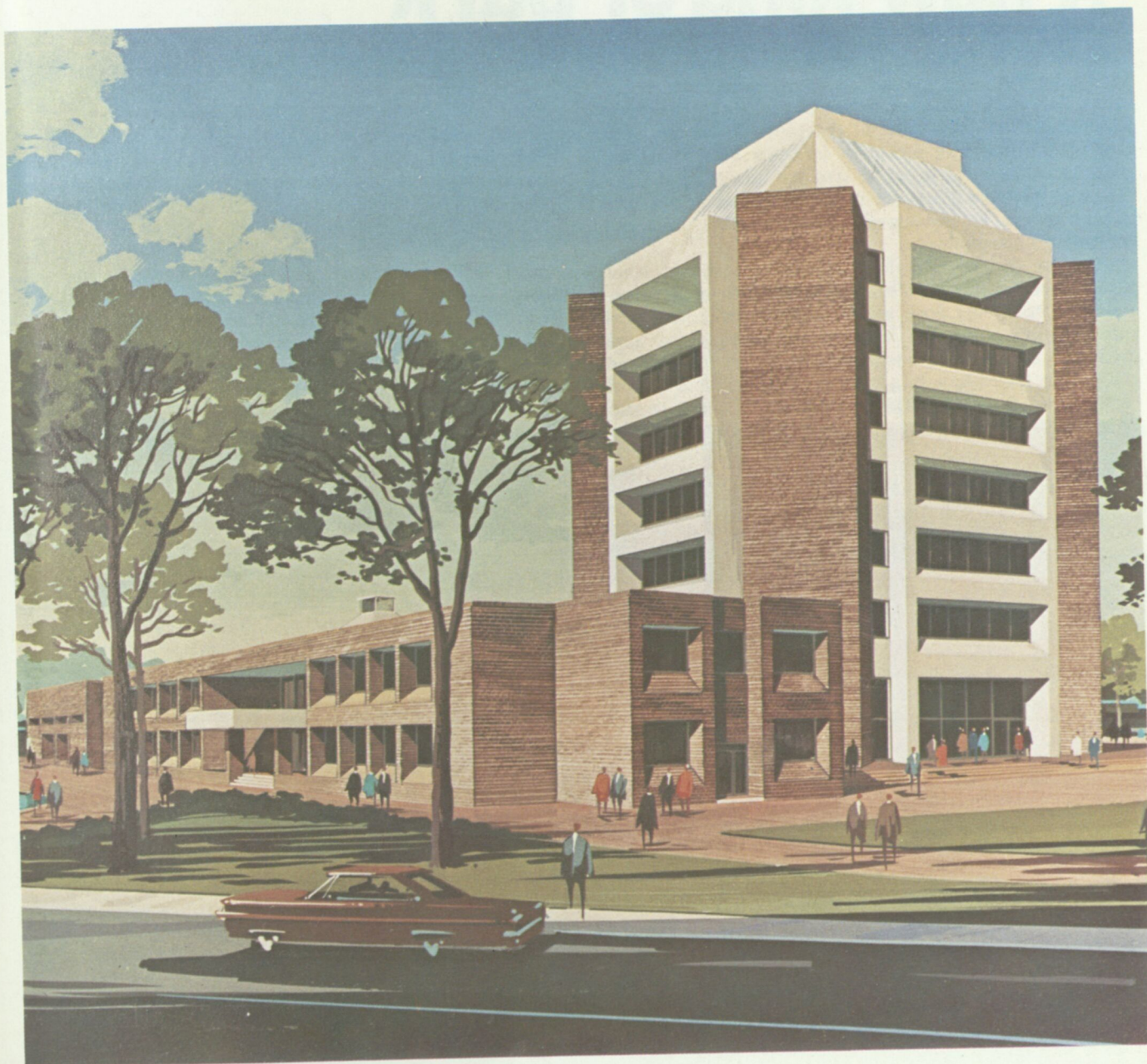
# A new kind of city

Decatur is building "A New Kind Of City" — Bold, Exciting and Imaginative. It's what the name implies, an "Operation New Decatur," a transplant of sorts, a restoration. A long tedious, expensive operation from which we will emerge a leader among cities for the twenty-first century.

Some things are already happening. We have just completed a new two million seven hundred thousand dollar City Hall and police complex, a million dollar high-rise apartment for the elderly, a new federal building, a new chamber of commerce building, three recreational

centers and a new service complex for the street and sanitation departments. The first phase of Point Mallard is completed.

The drawing board indicates that other projects are being constructed or will be in the near future. These plans include a new library, county courthouse and a second highrise apartment for the elderly. The federal government has approved a grant of over six million dollars for the development of two separate shopping malls.







## Point Mallard

# A new kind of park

Point Mallard Park is under the direct supervision of the Public Park and Recreation Board of the City of Decatur. This park is located on the banks of the Tennessee River and Flint Creek east of the heart of the city. The City of Decatur was fortunate in being able to secure about seven hundred acres of land for this complex.

Point Mallard Park, as presently planned, will ultimately involve an investment of approximately five and one-half million dollars.

One of the world's most unique recreational complexes, Point Mallard's first phase consists of a wave-activated swimNsurf pool, a fully olympic swimming pool with Alabama's only ten meter diving tower, a six hundred foot sand beach, complemented by picnicking and playground facilities with a modern bathhouse and control center. Also included is the construction of one eighteen-



hole championship golf course and a tennis center developed around a series of rubico tennis courts. The clubhouse will accommodate a tennis and golf pro.

Projected phases of the development of Point Mallard Park include plans for a riverside motel, a full-service marina, horse stables and riding areas, botanical garden, camping sites, bicycle trails, and boating and fishing. Other attractions will be added in the future.

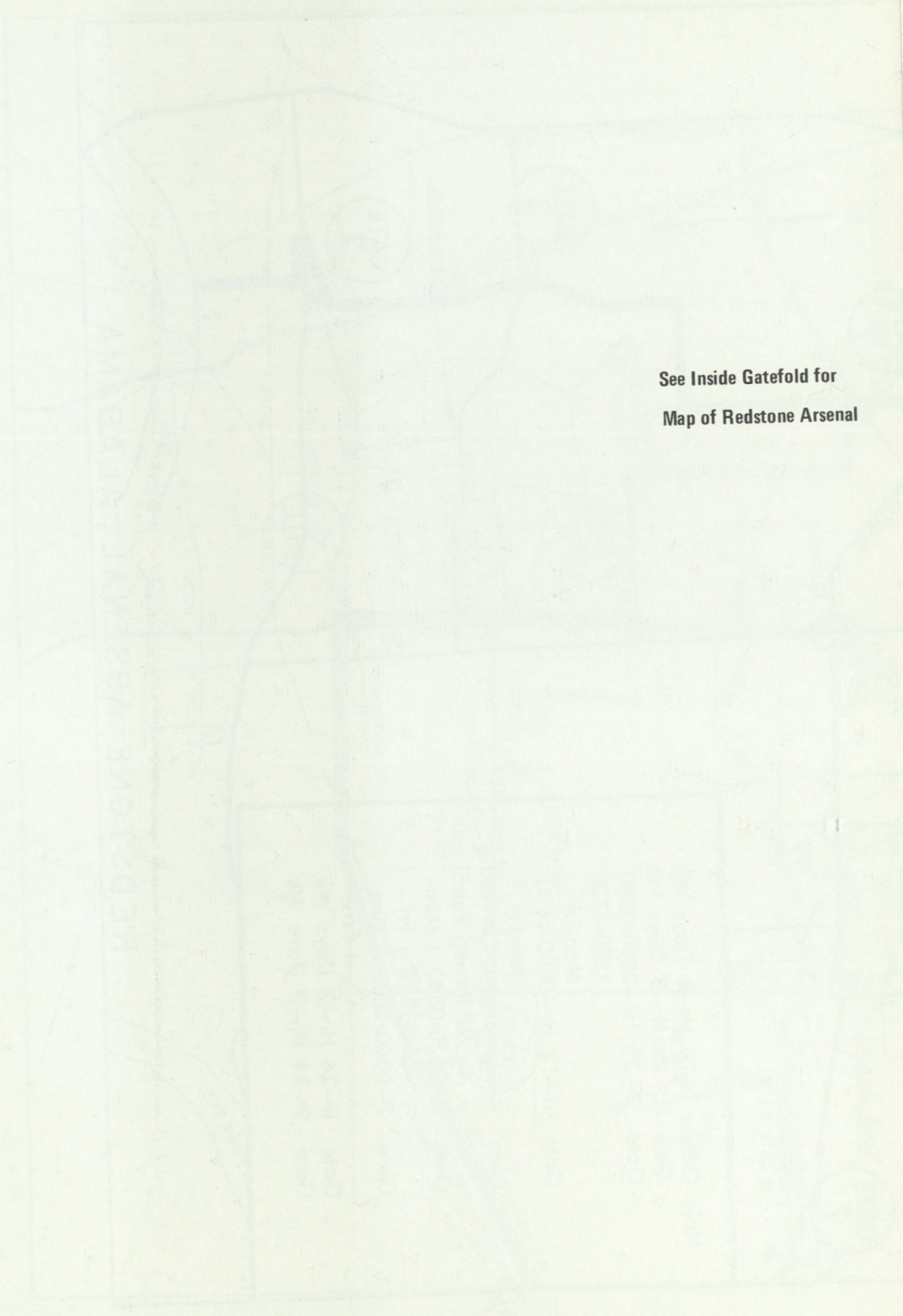
The City of Decatur has a full time staff of recreational leaders planning year around activities for all ages. Three recreational centers have been erected and furnished at the cost of one and one-half million dollars. The Aquadome Center is located in the southwest section of the city, the Carrie Matthews Center in the northwest section and the T. C. Almon Center at Point Mallard Park near the beach complex.





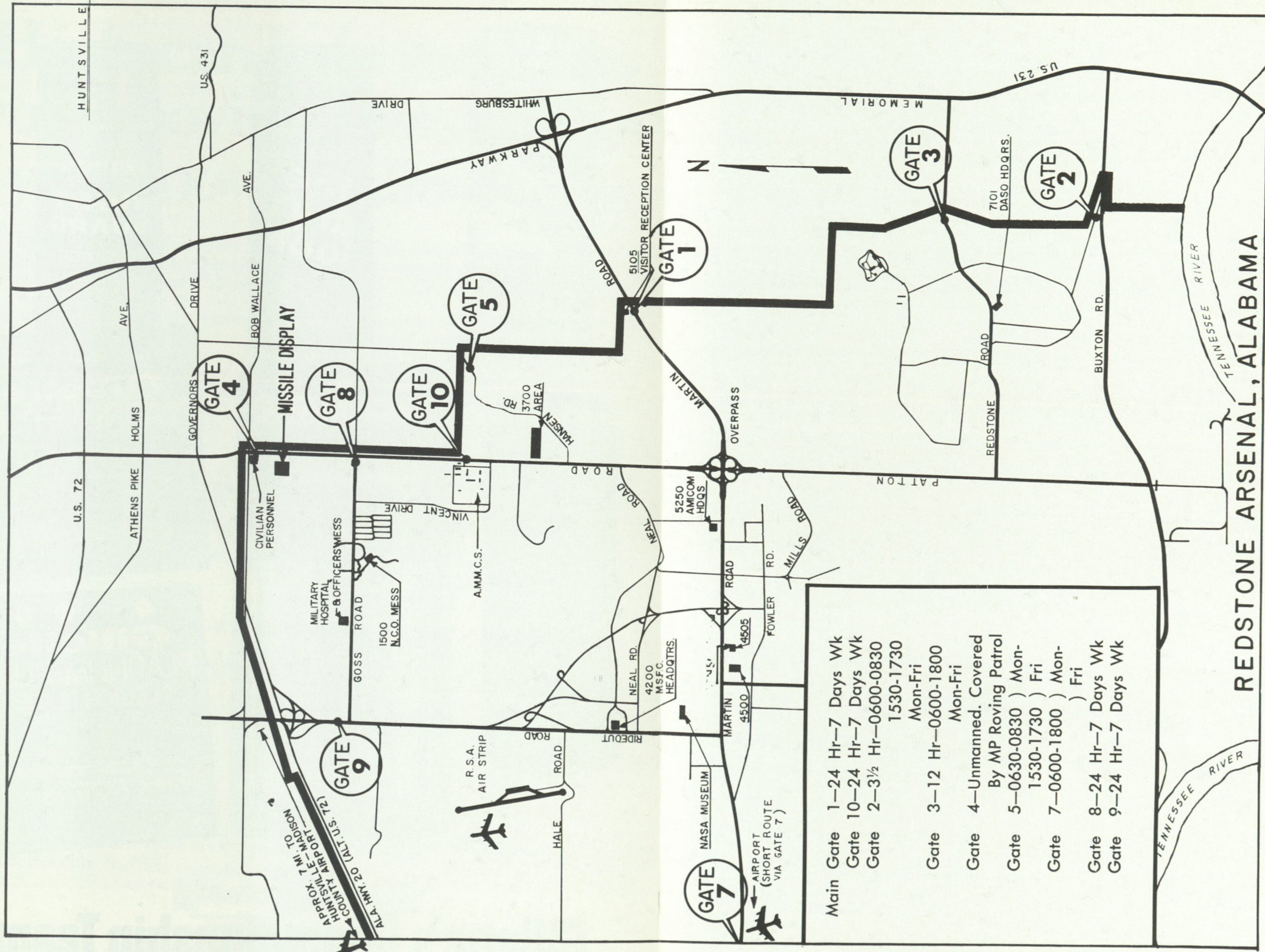


-  
-  
d  
e  
,  
.  
-  
l  
d  
t  
k

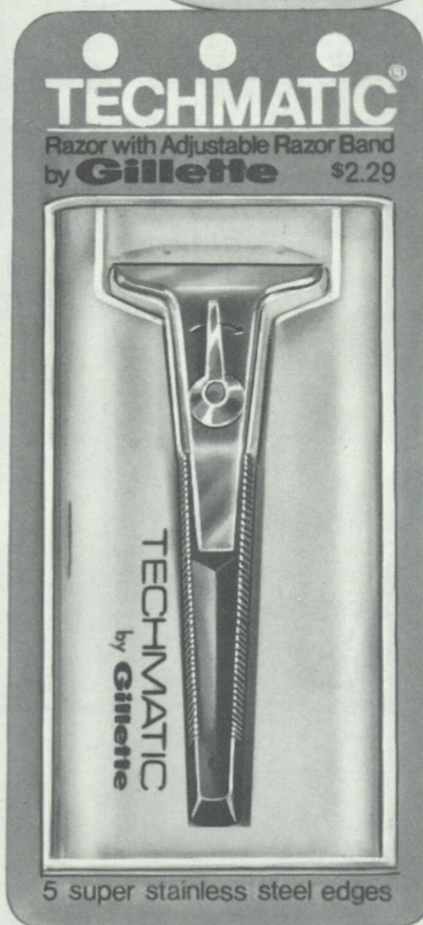
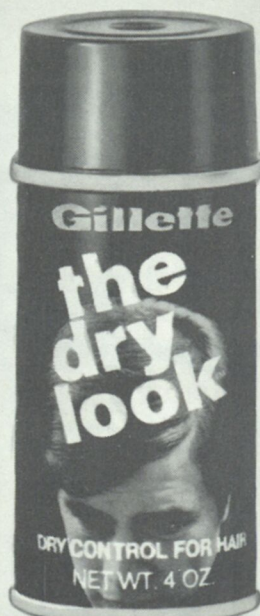
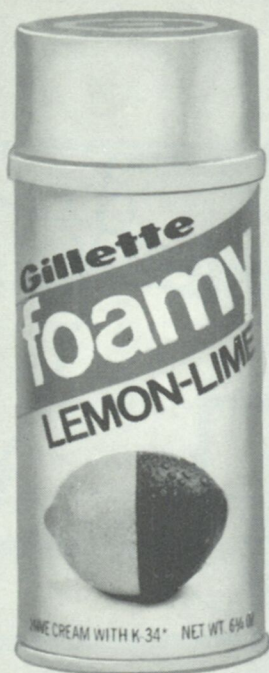


See Inside Gatefold for  
Map of Redstone Arsenal









**Gillette's Championship Team.**



# Hertz can help you keep your moving costs within your moving allowance.

By renting a truck from Hertz, you can save up to half of what having someone else move you would charge.

What's more, you move when you want to. And your furniture arrives when you do.

And moving yourself is less expensive and more convenient.

We have Ford Econolines, 12-foot and 18-foot vans. The Econolines and Ford 12-foot vans come with automatic transmission. The 12- and 18-foot vans are available with loading ramps; some of the 18-footers have power lift gates, and each one-way truck has a radio.



(Not a big deal, perhaps, but on the road it seems like one.)

And we make available all sorts of moving aids to make packing, loading and unloading your furniture as easy as possible.

As a little incentive, Hertz will give you a free transistor radio after you've made your first one-way rental. Just fill out the coupon below, attach it to your paid Truck Rental agreement, and mail it to the address shown. The radio will be sent to you by return mail. To get a complimentary copy of The Hertz Guide to Do-It-Yourself Moving and to reserve a Hertz truck at the location nearest you call the number listed below.

**Call: 353-9601**

Dear Hertz,

I've rented one of your trucks. Attached is my paid agreement. Send me the radio.

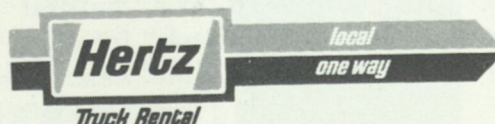
Name \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Mail coupon to: Hertz Truck Division, Box T1W, 660 Madison Ave., New York, N.Y. 10021.

(Allow 4 to 6 weeks for delivery.) Offer void where prohibited by law. Offer expires July 31, 1972.





# How 2 million women in our U.S. military world learn about beauty

**I**t is very easy to be more attractive when you are in the military. You have your own personal beauty advisor wherever you go! Max Factor sends specially trained Make-Up Artists to exchanges all over the world, just to make sure you can get personal beauty advice anytime, starting with a complete Beauty Analysis and free Make-Up.

**Your skin care**  
First, you will learn about skin care. Your Max Factor Make-Up Artist will tell exactly what your skin has been missing...and what to do about it.



She will give you the perfect cleansing, nourishing and toning formula to keep your complexion fresh and flawless. (It's smart to have a re-analysis

when you move to a new base, since climatic changes often call for skin-care changes.)

**Complimentary make-up**  
Next, you will learn to be your own Make-Up Artist. She shows you how to apply make-up like an expert, using just the right base shade, special highlighting and contouring techniques. You will find out how to



dramatize your eyes...which lipstick shades are best for you...all about haircoloring and fragrances.

**Your own beauty plan**  
Begins with a complexion analysis. What kind of skin do you have?

What shades are right for your coloration? Your Make-Up Artist designs your beauty plan on a personalized



chart that tells you all about your new skin-care routine, make-up, lipstick and eye color shades for a "natural look" for daytime wear or "high fashion" for evenings.

**More services**  
How can you learn about exciting, new beauty and fashion ideas? Through your Max Factor Make-Up Artist! She conducts special seminars for exchange cosmetic personnel so they can pass along beauty news directly to you. You can request the free service of a Max Factor Make-Up Artist for your club group. Hear a "what's



new in beauty" talk, or have her do make-ups at your next fashion or dramatic show. Just write to: Max Factor Armed Forces Division, 1655 North McCadden Place, Hollywood, California 90028. Max Factor gives women in the military world very special beauty treatment.

©1970-MAX FACTOR & CO.

*Your Max Factor  
Make-Up Artist*



# Military Yellow Pages

"Everything advertised in this publication must be made available for purchase, use or patronage without regard to the race, creed, color, national origin or sex of the purchaser, user, or patron. A confirmed violation or rejection of this policy of equal opportunities by an advertiser will result in the refusal to print advertising from that source."

Boone Publications, Inc., 4007 Avenue A, Lubbock, Texas • Phone (806) 747-1623 • February, 1972

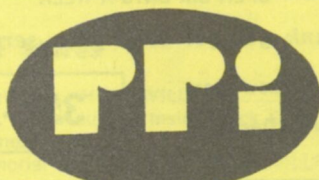


**189 — 1 & 2 BEDROOM APARTMENTS**  
Furnished or Unfurnished

Air Conditioned Throughout — Built-in Kitchens  
Wall-to-Wall Carpets — Draperies  
Swimming and Wading Pool — Garbage Disposal

**536-6512**

**3101 THURMAN ROAD, S.W.**



OFFERING

- TOTAL ON-SITE APARTMENT MANAGEMENT
- LEASE-BACK WITH MONTHLY INCOME TO OWNER

**536-9831**

**PRO PAR INC.**

"PROFESSIONAL APARTMENT MANAGEMENT"  
ALABAMA — MISSISSIPPI — TENNESSEE — GEORGIA — FLORIDA



FURNISHED — UNFURNISHED

**536-3743**

2516 12th St. S.W.

YOU ARE QUALIFIED IF  
YOUR ANNUAL INCOME  
DOES NOT EXCEED A  
CERTAIN MAXIMUM

a new concept in old world living . . .



**Fontainebleau  
Apartments**

**539-2636**

417 JULIA N.W.

*Park Place*

APARTMENTS  
COCKTAIL LOUNGE  
2022 GOLF RD., S.W.

"For Luxury  
Living"

1, 2 & 3  
Bedrooms

- FURNISHED
- UNFURNISHED

**881-5381**

**MADISON  
GARDENS**

Huntsville's Thoughtful  
Landlord

Luxurious 1, 2 & 3 Bedrooms —  
Garden Type & Town House De-  
signed — Furnished & Unfurn-  
ished — Swimming Pool & Tennis  
Courts — Convenient to RSA-  
NASA and Research Park

**837-1974**

6315 MADISON PIKE, N.W.

**SHERWOOD  
PARK**

- Party and Game Room
- Sun Deck, Swimming Pool
- Wall-to-Wall Carpets
- 2 Full Baths
- Fully Equipped Kitchens
- Built-in Ranges
- Refrigerators
- Dishwashers
- Garbage Disposals
- Radio & Intercom in all Rooms

**837-1974**

One  
Bedroom  
Furnished

**RIVIERA**

Utilities  
Furnished

*Tom Taylor*  
**AGENCY**

**536-1549**

2005 14th S.W.

## Apartments

Cabana Apartments

3101 Thurman Rd. S.W., HUNTSVILLE ..... 536-6512  
See our ad this Classification

Courtesy Realty Apartments

4017 Patton Rd. S.W., HUNTSVILLE ..... 539-6771

## FANTASIA APARTMENTS

- 2 Bedroom Furnished Apts. ■ Central Heating & Air
  - Featuring Swimming & Laundry Facilities
  - Children & Pets Welcome ■ Reasonable Rates
- 2503 Fantasia Dr., Apt. 5B, HUNTSVILLE ..... 539-1956

Pro Par, Inc.

2516 12th St. S.W., HUNTSVILLE ..... 536-9831  
See our ad this Classification

Taylor, Tom Agency, Inc.

2005 14th St., HUNTSVILLE ..... 536-1549  
See our ad this Classification

## UNIVERSITY CONTINENTAL APARTMENTS

Efficiencies — 1 - 2 - 3 Bedroom Apartments  
Furnished-Unfurnished — Central Heat & Air Conditioning  
Two Pools  
1410 Lancewood Dr., HUNTSVILLE ..... 837-1661

**SHOP THE  
YELLOW PAGES**



## Bobby's Gulf & Body Shop

908 Memorial Pkwy.  
Huntsville

534-9554

"Bodies Beautiful by Bobby"

- Custom Paint & Body Work
- Free Estimates • Towing Service

Home 828-3886  
Hazel Green, Ala.

828-0380



## CARPETS EXPERTLY CLEANED RESIDENTIAL & COMMERCIAL

ON LOCATION CLEANING

CLEANS • REVIVES BEAUTY •  
PROTECTS

FREE  
ESTIMATES

DIAL 536-1430

BROWN'S CARPET & RUG CLEANING



### Automobile Body Shops

Bobby's Gulf & Body Shop  
908 Memorial Pkwy., HUNTSVILLE .....534-9554  
See our ad this Classification

### DURHAM'S, BOB BODY SHOP

- Over Twenty-Five Years Experience
- All Makes & Models — Expert Auto Painting
- No Dent Too Large or Too Small

3200 Triana Blvd. S.W., HUNTSVILLE .....539-6456

### Jones Body Shop

2516 Washington St., HUNTSVILLE .....534-3381

### Automobile Dealers—New Cars

Smith Pontiac Company  
515 Washington, HUNTSVILLE .....536-2475

Tait's Huntsville Dodge  
705 Wheeler Ave. N.W., HUNTSVILLE .....536-8513

See our ad Outside Back Cover

Thomas, Jay Volkswagen—New & Used  
Highway 31 South, DECATUR .....353-2122

See our ad this Classification

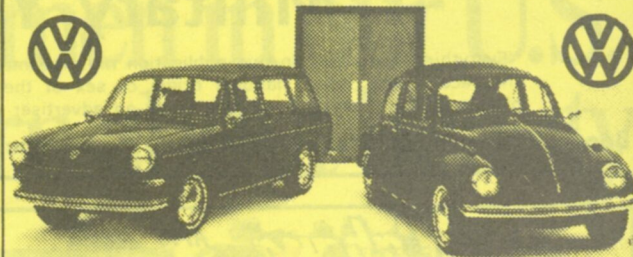
### Automobile Parts

#### CITY AUTO PARTS, INC.

Special Wholesale Prices

To Base Personnel with I.D. Card

612 Pratt Ave., N.W., HUNTSVILLE .....534-1637



Our showroom's not too flashy  
but there's a lot behind it.

Twenty Minutes From Gate 9  
In

# Decatur

WE HONOR ALL VOLKSWAGEN WARRANTEES

OPEN SIX DAYS A WEEK

"We thank you for letting us serve you."

Jay Thomas Volkswagen

Hwy. 31 South, Decatur

353-2122

### Automobile Repairing & Used Cars

#### NORTON'S AUTOMOTIVE REPAIR SHOP

\* Specializing in Volkswagen & Other Foreign Cars \* Over  
Ten Years Experience in Frankfurt, Germany \* William A.  
Norton, USA Ret. \* Used Car Sales \* 20 Min. from Gate 9  
1727 Wolverine Dr. S.E., DECATUR, Ala. ....353-2080

### Banks

First National Bank, The

Main Office: 216 W. Side Square, HUNTSVILLE ...534-6412

See our ad Outside Back Cover

### Beauty Salons

#### BE-JA BEAUTY SALON

Zotos & Realistic Permanents • Hair Coloring • Wigs Svcd.

Katharine Atkinson—New Owner

Wk. Days, 8:30 AM-6:30 PM • Closed Mon. • Eve. Appts.  
6212-C Madison Pike, (Outside Gate 9) .....837-2244

### Beverages

#### COCA-COLA

IT'S THE REAL THING

Bottled Under the Authority of the Coca-Cola Company

By Huntsville Coca-Cola Bottling Company

### Carpet & Rug Cleaning

Brown's Carpet & Rug Cleaning

3300 Governors Dr. W., HUNTSVILLE .....536-1430

See our ad this Classification



Buy  
U.S. Savings Bonds  
through payroll savings

### Churches

Fanning Heights Church of Christ  
604 Jordan Lane, HUNTSVILLE .....837-6607

### Credit Unions

Redstone Federal Credit Union  
511 Sparkman Dr., HUNTSVILLE .....837-6110  
See our ad Inside Front Cover

### Dairies

Meadow Gold Dairies  
601 W. Clinton St., HUNTSVILLE .....534-8464  
See our ad this Classification

### Data Processing

Braddock, Dunn and McDonald, Inc.  
HUNTSVILLE .....(205) 539-0279  
See our ad Inside Front Cover

### Department Stores

Dunnivant's  
100 Washington, HUNTSVILLE .....534-6425  
See our ad Inside Back Cover  
GEX Department Stores  
2601 Memorial Parkway N.W., HUNTSVILLE .....859-3100

### Fabric Shops

Fab - N - Trim  
4710 University Dr., HUNTSVILLE .....837-6560

### Furniture

Midway Furniture Co., Inc.  
Hwy. 20, MADISON .....772-9388  
See our ad this Classification  
Riddle Furniture & Appliance, Inc.  
3004 University Dr. W., HUNTSVILLE .....539-7749  
See our ad this Classification

### Garden Centers

Chase Garden Center  
Hwy. 72 East, CHASE .....539-5123

### Gift Shops

#### SHOWCASE INTERNATIONAL'E, INC.

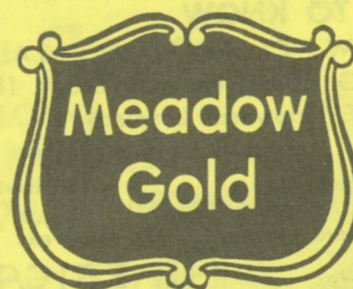
Exclusively Different Fashions, Jewelry, Handcrafted Gifts  
from India and around the world.  
Also World Famous Holiday Magic Cosmetics  
Oakpark Shp. Ctr., S. of Oakwood at N. Parkway 536-8426

#### TROUSSEAU SHOP, THE

• Unusual & Unique Gift Ideas • Elegant Lingerie & Linens  
• Exclusively Styled & Monogrammed • Complete Line of  
Travel Items • Co-Ordinated Bedroom & Bath Accessories  
913 Franklin S.E., HUNTSVILLE, Ala. ....536-3896

### Groceries—Wholesale

Halsey, W. L., Grocery Company, Inc.  
300 Jefferson St. N., HUNTSVILLE .....539-0707  
See our ad this Classification



Huntsville's Only Local Dairy

601 West Clinton St.

534-8464

"Just over the hill from high prices."



### FURNITURE & APPLIANCES

- Frigidaire • Whirlpool • Lane
- American of Martinsville
- Kroehler • Norwalk • Bassett

Hwy. 20, 2 Miles E. of Jetport

772-9388



**RIDDLE**  
Furniture &  
Appliance, Inc.

1004 UNIVERSITY DRIVE W

PHONE 539-7749



Monday - Friday  
8:30 a.m. to 8:00 p.m.  
Saturday Close at 6 p.m.



- \* AMONG THE LOWEST PRICES IN ALABAMA
- \* FULL LINE OF APPLIANCES
- \* TWO FLOORS OF FINE FURNITURE

3004 University Drive West

539-7749

## W. L. HALSEY GROCERY COMPANY, INC.

Institutional Wholesale Grocers

"We Feature CODE Quality Foods"

CANNED FOODS — FROZEN FOODS

RESTAURANT SUPPLIES

HUNTSVILLE, ALABAMA



**GET TO KNOW**

C. W. "Charlie" Freeze, U.S.A. (Ret.)

R. G. "Dick" Heilman, U.S.A. (Ret.)

H. E. "Howard" Lovelady

Combination Agencies

3312 Bob Wallace Ave

Huntsville, Ala.

Phone 534-0591

Friends you can always count on.

**AMERICAN  
NATIONAL**

LIFE INSURANCE COMPANY HEALTH

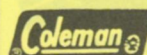
Home Office: Galveston, Tex.

**NORGETOWN****Laundromat—Dry Cleaners****12-20-30 Lb. Washers****534-9323****712 8th Street****(Corner Holmes Ave. & 8th St.)****MOBILE HOME  
SUPPLY & SERVICE CO.**

REPAIRS — PARTS — ACCESSORIES

**TRAVEL TRAILER  
PARTS & EQUIPMENT  
Heating & Air Conditioning**

Authorized Distributor For Service Center For



- International
- Duo-Therm
- Evans

**539-6506**

105 BROWN N.W.

**WE SELL & INSTALL**

Plumbing Fixtures  
Water Heaters — Butane  
Tanks — Roof Coating  
Vents — Tubing — Trailer  
Hitches — Electrical Supplies

**Insurance**

American National Insurance Co.

3312 Bob Wallace Ave., HUNTSVILLE .....534-0591

See our ad this Classification

**Interior Decorators****BEV-RO INTERIORS**

- New & Unique Ideas in Interior Decorating
- Guaranteed Customer Satisfaction
- Contemporary • Oriental • Traditional • Eclectic

1316 Wind River Circle S.E., HUNTSVILLE .....881-1534

**Jewelers****JEWEL SHOP, THE**

- \* WE BUY DIAMONDS - Gold - Silver - Antique Jewelry & Platinum — "The Home of Diamond Values"

- \* Complete Repairs & Sales — Bulova & Seiko Watches

Lyric Theatre Bldg. (Downtown) Washington St. S., 534-7384

**Kennels****ACTION PET SITTING SERVICE**

Loving Care For Your Pet in Your Own Home

- ALLIGATORS TO ZEBRAS •

Feed — Water — Walk — Anything You Request

806 Randolph Ave., HUNTSVILLE ..536-2793 or 883-2508

**Laundries & Dry Cleaners**

Norgetown

712 8th St., HUNTSVILLE .....534-9323

See our ad this Classification

**Lumber****DILWORTH LUMBER COMPANY**

Cabinet Hardwoods • • Free Delivery

- Quality Since 1907 •

415 Church St., N.W., HUNTSVILLE .....539-4123

**Mobile Homes****COLONIAL MOBILE HOMES**

South's Largest and Most Dependable Dealer

Hwy. 31, DECATUR, Ala. ....353-5917

3604 S. Memorial Parkway, HUNTSVILLE .....881-4343

Mobile Home Supply &amp; Service Co.

105 Brown St. N.W., HUNTSVILLE .....539-6506

See our ad this Classification

**USE YOUR CLASSIFIED  
BUYING GUIDE FOR  
THE SERVICE YOU NEED**





*"One of Alabama's Finest"*

- MILITARY FAMILIES WELCOME
- ENJOY OUR MODERN FACILITIES

**Barclay** 536-7441  
MOTEL

2201 N. MEMORIAL PARKWAY — HUNTSVILLE, ALABAMA

Two Pools  
Swimming Pool  
Wading Pool



**Accommodating**



**EVERY  
TRAVELER'S  
NEED!**

**JUST MINUTES  
FROM JETPORT**

**115 LUXURIOUS ROOMS**

**FOR YOUR LIVING  
ENJOYMENT**

- **HUGE HEATED POOL**
- **LOUNGE**
- **RESTAURANT**

COURTESY CAR — CONFERENCE ROOM — LIVE ENTERTAINMENT

MR. & MRS. HAROLD CAVIN, INNKEEPERS

**WEST SIDE OF OVERPASS — NEXT TO HOLIDAY OFFICE CENTER**

**Kings Inn** MOTOR HOTEL

- Open 24 Hours
- 180 Rooms
- Club
- Sun Deck
- Restaurant



North Memorial Parkway Huntsville 539-8441



**Serving Military  
&  
Government  
Personnel**

**Convenient Location  
2700 Memorial Pkwy.  
at  
Bob Wallace**

**536-6661**

#### Motels

- Barclay Motel  
2201 N. Memorial Parkway, HUNTSVILLE .....536-7441  
See our ad this Classification
- Ken-Bar Inn  
3312 S. Memorial Pkwy. S.W., HUNTSVILLE .....881-1310  
See our ad this Classification
- Kings Inn Motor Hotel  
1220 N. Memorial Pkwy., HUNTSVILLE .....539-8441  
See our ad this Classification
- Sands Motor Hotel  
2700 Memorial Pkwy., HUNTSVILLE .....536-6661  
See our ad this Classification
- Tourway Inn  
1304 N. Memorial Pkwy., HUNTSVILLE .....539-9671  
See our ad this Classification

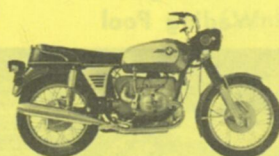


- Spacious Rooms and Suites
- 24 Hour Switchboard Service
- Individual Heating & Air Cond.
- Same Day Laundry & Dry Cleaning Service
- Music
- 100% Guest Parking
- TV, Radio & Music in Rooms
- Direct Dial Telephones
- Swimming Pool—Heated
- 7-Ft. Beds in All Units
- Restaurant Open 24 Hours Per Day

**North Memorial Parkway Huntsville 539-9671**



# MOTORCYCLES



The Rolls Royce  
of Motorcycles



Sales - Parts  
Service

- ZUNDAP • MONTESA
- JAWA CZ • HODAKA

Huntsville's Headquarters for Hi-Performance Parts & Accessories

**ALABAMA MOTORCYCLE SALES**

3206 Governors Dr., W.

534-3306

let  
us  
help  
you  
move  
ahead



with the new look in moving

From wrapping,  
packing, padding  
and loading, to mov-  
ing and storage, the  
American Red Ball  
moving special-  
ists take complete  
care of you and  
your move ahead  
with exclusive Red  
Carpet Service.

**Williams Moving & Storage Co.**

315 NORTH JEFFERSON STREET  
HUNTSVILLE, ALABAMA

536-1538



**Dr. J. F. Hartsfield, O.D.**

**Complete Optical  
Service**

**SAME DAY SERVICE  
IN MOST CASES**

**CONTACT LENSES**

**OUTSIDE Rx FILLED**

**We Polish and Modify Contact Lenses  
While You Wait**

**Dial 539-2020 For Vision**

**2319 S. Memorial Pkwy.**

**Huntsville**

## Motorcycles

Alabama Motorcycle Sales, Inc.

3206 Governors Dr. W., HUNTSVILLE ..... 534-3306  
See our ad this Classification

## Moving & Storage

Williams Moving & Storage Co.

315 N. Jefferson St., HUNTSVILLE ..... 536-1538  
See our ad this Classification

## Office Equipment & Machines

Monroe Business Equipment Co.

116 S. Jefferson St., HUNTSVILLE ..... 534-1623



**BAIRD  
REALTY  
Company**

**Exclusive Agents**

**For**

**Huntsville's Finest Homes**

**534-6556 or 536-6377**

**Bauman Realty Co.**

**RESIDENTIAL — COMMERCIAL  
Multiple Listing Service**

**List With Us For Fast Service**

**CHARLES BAUMAN, REALTOR**

**"For Information Call"**

**BAUMAN REALTY COMPANY**

**881-2500**

**Holiday Office Center**

## Optometrists

**GIBSON, SMITH & NEWSOME, DRs.**

- Visual Training • Examination • Contact Lenses

**PARKWAY CITY ..... 536-9021**

**123 Green St., HUNTSVILLE, Ala. .... 534-4911**

**Hartsfield Optical**

**2319 S. Memorial Pkwy., HUNTSVILLE ..... 539-2020**  
See our ad this Classification

## Paints & Decorating

**GLIDDEN PAINT & DECORATING CENTER**

- Paint • Carpet • Decoupage • Wall Paper • Art Supplies
- Free Home Inspections and Decorator Service
- Open All Day Saturdays • Honor All Charge Cards

**2007 Bob Wallace Ave., HUNTSVILLE ..... 539-9371**

## Real Estate

**Baird Realty Co.**

**2603 Artie Dr., Suite 11, HUNTSVILLE ..... 536-6377**  
See our ad this Classification

**Bauman Realty Co.**

**Holiday Office Center, Suite 46, HUNTSVILLE ..... 881-2500**  
See our ad this Classification



**Real Estate, (Cont'd.)**

- Cedar Gate Realty  
2414 N. Memorial Pkwy., HUNTSVILLE ..... 539-3451  
See our ad this Classification
- Cockrell Realty Co.  
1008 6th Ave. S.E., DECATUR ..... 355-6115  
See our ad Outside Back Cover
- Porter, Ben Real Estate  
Memorial Parkway, S., HUNTSVILLE ..... 881-9676  
See our ad this Classification

**RUTLEDGE REALTY COMPANY**

- Property Management, Sales & Rentals
- We Cater to Federal Personnel
- Specializing in F.H.A. & V.A. Financing

614 Madison St., P.O. Box 911, HUNTSVILLE ..... 539-0387

- Sam Realty, Inc.  
921 Willowbrook Dr. S.E., HUNTSVILLE ..... 881-1830  
See our ad Inside Front Cover

**Service Stations**

- Ardmore Enco Servicenter  
2424 Jordan Lane, HUNTSVILLE ..... 837-0272  
See our ad this Classification
- Walters Gulf Service  
1020 Jordan Lane N.W., HUNTSVILLE ..... 539-9236

**Skating Rinks—Ice****ICE PALACE SKATING RINK**

- Instructions, in Beginners, Intermediate and Advanced Skating
- Special Rates For Service Families
- Ice Hockey and Skating Parties

406 Governors Dr. HUNTSVILLE ..... 539-3571

**Television Repairing****ASSOCIATED AUDIO & T.V. SERVICE, INC.**

- G.E. • Magnavox • Sylvania • Zenith  
R.C.A. • Panasonic • Motorola • Sony  
Catalina • Fisher • Electroponic

4320-F University Dr., University Shopping Center, 837-4880

**Travel Trailers**

- Stockton Travel Trailer Sales  
404 Washington St. (Behind Stockon Buick),  
HUNTSVILLE ..... 536-6546  
See our ad Inside Back Cover

**REALTY & HOMES**

**Let Us Build Your Dream Home**

Your Plans or Ours

We Cater to Both Military & Civilian

2414 N. Memorial Pkwy.  
Huntsville, Ala. 35811

**Phone**  
**539-3451**

**Why Pay Rent?**

When For As Little As \$25.00

You Can Have A

**BANK REPURCHASE**  
**AGREEMENT**

MULTIPLE LISTING SERVICE  
**MLS**

Sales - Rentals - Property Management

Over 10 Years in Huntsville

GI — FHA — Conventional or Equity Financing

**BEN PORTER**  
**REAL ESTATE**

Memorial Parkway  
South

HUNTSVILLE

*Anytime*  
**881-9676**



**ARDMORE**

**ENCO**

**SERVICE**

**CENTER**

- ★ COMPLETE AUTO REPAIR
- ★ TIRES ★ BATTERIES ★ ACCESSORIES
- ★ SEE "DON DAVIS" U.S. NAVY RETIRED

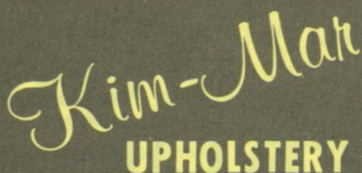
2424 Jordan Lane

**837-0272**



**Buy United States Savings Bonds**





- ## Huntsville, Alabama

**534-8994**

## Upholstering

## AUTO CUSTOMIZING

Seat Covers  
Truck Seats  
Boat Seats  
Vinyl Roofs  
Convertible  
Tops - VW Seats  
Resewn

**534-6634**

## TERRY'S UPHOLSTERY

2107 13th S.W.



**Serving Huntsville  
Since 1964**

## Huntsville's Exclusive Wig Salon

- Specializing in Quality  
Human & Elura Hair  
Complete Styling Service

Hours 10 a.m. to 9 p.m.

## THE MALL

**536-7879**

Kim - Mar Upholstery

2204 Whitesburg Dr., HUNTSVILLE

534-8994

See our ad this Classification

Terry's Upholstery

2107 13th St. S.W., HUNTSVILLE

534-6634

See our ad this Classification

Wig Room, The

ig Room, The

The Mall, HUNTSVILLE

536-7879

See our ad this Classification

# NUMBER FINDER

[illegible]



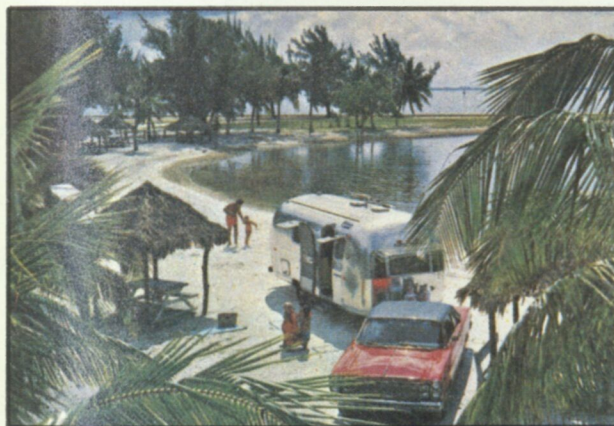


Your Hometown Quality Store  
Since 1914

**Dunnivant's**

Downtown & Dunnivant's Mall  
Huntsville

Phone 534-6425



## Stockton Travel Trailer Sales

A Division of Stockton Motor Car Co.

*Sales & Service*

**Airstream & Shasta Trailers**

**Superior Motor Homes**

Complete Wally Byan Store For All Of Your  
Trailer & Camper Needs

404 Wash. St.

(Behind Stockton Buick) **536-6546**

# Boone Publications, Inc.

*World's Largest Publisher of Military Guides*

**HAS**

**EXCELLENT JOB OPPORTUNITIES FOR  
RETIRED MILITARY PERSONNEL**

**Selling Advertising In Base Guides  
(Military Yellow Pages)**

**All Points In USA**

**High Commissions — Some Travel**

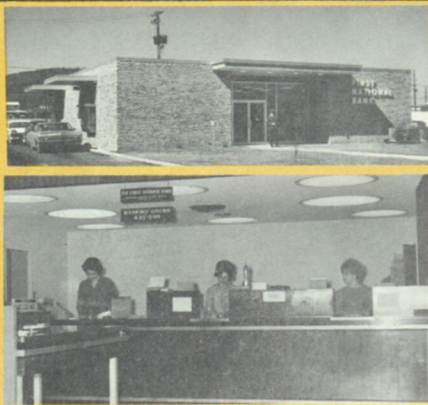
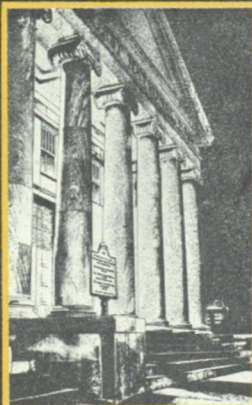
Phone  
(Area Code 806)  
**747-1623**

*For Further Particulars  
Write or Call*

**MR. JACK BLAKE, GENERAL SALES MGR.  
BOONE PUBLICATIONS, INC.  
P.O. BOX 883  
LUBBOCK, TEXAS 79408**







**THE  
FIRST  
NATIONAL  
BANK**

HUNTSVILLE, ALABAMA

A FULL  
SERVICE  
BANK

MEMBER FDIC

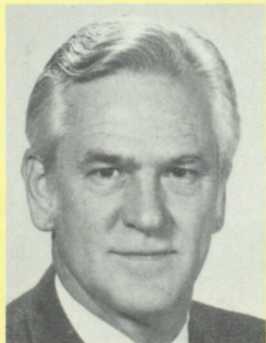
12 CONVENIENT LOCATIONS

Left: Main Bank, downtown, the first of our twelve locations

Right: First National's two locations on Redstone Arsenal

Above: Redstone Branch, Building 3708

Below: MSFC Facility, Building 4200



Eldridge H. Cockrell  
Lt. Col. U.S. Army (Ret.)



live in  
**DECATUR**

Only Minutes Away



**COCKRELL Realty Company**

Phone 205 — 355-6115

1008 6th Avenue, S.E. • Decatur, Ala. 35601

**DODGE** "Depend On It"



Arthur Tait

Authorized Sales & Service & Parts

- DEMON
- DART
- CORONET
- CHARGER
- POLARA
- MONACO
- DODGE TRUCKS
- COLT
- RECREATIONAL VEHICLES

• USED CARS

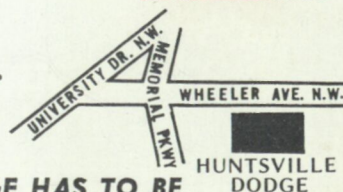
COMPLETE SERVICE DEPT.

PAINT & BODY SHOP

Dodge Cars

**Dodge**

Dodge Trucks



ALL OF YOUR DEALINGS WITH TAIT'S HUNTSVILLE DODGE HAS TO BE  
RIGHT OR ARTHUR TAIT PERSONALLY WANTS TO KNOW ABOUT IT.

**TAIT'S HUNTSVILLE DODGE**

705 Wheeler Avenue, N.W.

PHONE 536-8513