



# A Historical Interpretation and Preservation Plan for UMore Park.

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Historic Preservation and Community Planning  
*April 2006*

UNIVERSITY OF MINNESOTA

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Prepared for the University of Minnesota  
Center for Rural Design  
UMore Park

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*April 2006*

# UMore Park

## Historical Interpretation and Preservation Plan

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### Introduction

Located in rural Dakota County, Minnesota, about fifteen miles south of downtown St. Paul, the area now known as UMore Park occupies approximately 7,700 acres of land in Empire and Rosemount Townships, near the community of Rosemount.

Originally the domain of the Mdewakanton band of the Dakotah Indians, the UMore Park area was visited by explorers as early as 1680. The land was appropriated by European-American settlers in the mid-1800s, and transformed into farmland. The property remained in agricultural use for nearly a century, becoming an early focus of the state's wheat culture, and later the site of prosperous diversified farms that helped to provide fresh vegetables and dairy products to the nearby Twin Cities.

In 1942, the area was acquired by the United States War Department as the site for the Gopher Ordnance Works—projected to be an enormous factory complex that would produce smokeless gunpowder for the war effort. Eighty-four farm families were evicted from the land to make way for the new facility, and a wave of construction got under way as thousands of workers began the task of converting this rural farming district into a huge industrial park.

The transformation, however, was never completed. First, construction was delayed by wet weather and materials shortages in the summer of 1942. Then the partially completed facility was put on standby status and partially dismantled when the nation's other powder manufacturing plants exceeded their production quotas in 1943 and 1944. The Gopher plant was brought out of mothballs in mid-1944 and a concerted effort was launched to complete six powder lines and put them into production. By the time the work got under way, the war was already winding to a close, and only three of the lines were ever finished. The Gopher Ordnance Works produced its first barrel of smokeless powder early in 1945, and its last one in October of the same year.

Although the Gopher Ordnance Works ultimately played a minor role in the nation's war effort, it left an indelible imprint on the Dakota County landscape, altering transportation patterns, stripping away scores of homes, barns, and outbuildings erected during a century of farming, and leaving behind a collection of concrete smokestacks, abandoned buildings, earthworks, and underground tunnels strewn across the countryside.

After lying dormant for a brief period following World War II, much of the Ordnance Works site and many of its buildings were acquired by the University of Minnesota. Portions of the property were converted into a technical research center which hosted an array of cutting edge studies on polio, cancer and the development of supersonic aircraft. Another part of the property became the University of Minnesota's sixth agricultural experiment station—a place where faculty and students from the University's College of

Agriculture conducted research into turkey and hog production, developed weed resistant crops, and experimented with new types of farm structures, among many other activities.

By the mid-1960s, the level of technical research activity had diminished as funding dwindled and new facilities were completed on the University's main campus. Although activities at the agricultural experiment station had grown, immense portions of the property lay largely dormant. Meanwhile, the area around the site was becoming increasingly urbanized as development extended outward from the Twin Cities. The UMore Park area, "once just another plot of land in a sea of farm fields," as one reporter put it, had become one of the largest contiguous rural landholdings in the extended Twin Cities metropolitan area. As such, it presented the University with a unique opportunity, as well as with a series of unique and complex challenges. During the 1970s, in an effort to maximize the opportunity and mitigate the challenges, the University of Minnesota began to systematically ponder the future of the site, initiating a series of planning studies that has continued to the present time.<sup>1</sup>

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### **Purpose of the Present Study**

In 2001, as part of that ongoing planning process, the University of Minnesota's Board of Regents called for creation of a Comprehensive Master Plan for the UMore Park property. The work began in 2003 under the direction of the University's Center for Rural Design. Recognizing the rich and varied physical history of the UMore Park property, the Center identified a need to create a Historical Interpretation and Preservation Plan for the property as one component of the Comprehensive Plan. In April 2004, John Lauber Historic Preservation and Community Planning of Minneapolis was retained as a consultant to prepare this component of the plan.

In preparing the Historical Interpretation and Preservation Plan the consultant was specifically asked undertake the following tasks:

- Conduct a thorough literature search to trace the history and evolution of the site.
- Identify significant themes in the history of the site that may form the basis for interpretive programs at UMore Park.
- Develop an extensive historic context narrative to discuss factors that have affected development and utilization of the site over time.
- Conduct a baseline field survey to identify and inventory extant buildings, objects and structures on the site.
- Evaluate the significance of extant structures using the historic context and established National Register criteria as filters. Evaluation was also completed in an effort to identify structures that lack formal significance but that can help tell the story of the site.
- Identify historically significant cultural resources (buildings, structures and objects) that may be worthy of preservation.
- Make recommendations for further investigations, preservation activities, and interpretive programs.
- Identify sources of information for further research.

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<sup>1</sup> Mary Jane Smetanka, "U Goes Slowly in Deciding Use of Valuable Land," *Minneapolis Star-Tribune*, 10 November 2005.

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## **Personnel**

Principal investigator and project historian for the study was John Lauber of Minneapolis. Denis Gardner of Crystal served as research historian.

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## **Methodology**

### *Literature Review/Archival Research*

The project historian initiated the research for the UMore Park project in April 2004 with background research into the history and evolution of the site and its surroundings. Repositories visited included the Minnesota State Historic Preservation Office in St. Paul, the University of Minnesota Libraries in Minneapolis; the collections of the Center for Rural Design on the University of Minnesota's St. Paul Campus, and the UMore Park Administrative Offices in Rosemount.

More intensive archival research was completed by Denis Gardner in May through August 2005. Repositories visited included the Dakota County Historical Society in South St. Paul; the Real Estate Office at UMore Park; the University of Minnesota Archives in Minneapolis; the Minnesota Historical Society Library, in St. Paul; the University of Minnesota Facilities Management Office in Minneapolis, and the private collection of MacDonald and Mack Architects, Ltd., in Minneapolis.

Materials consulted included a vast assortment of maps, published histories of Minnesota, Dakota County, and the Rosemount Agricultural Experiment Station, newspaper clippings, magazine articles, historic photographs, annual reports, cultural resource studies, planning reports, theses and dissertations, building records, and departmental papers.

Additional research was conducted as needed throughout the project. The principal investigator has compiled a comprehensive bibliography of sources encountered. A paper copy of this bibliography is attached. A searchable electronic version was also prepared using EndNote 7 bibliographic software.

### *Field Survey*

John Lauber and Denis Gardner completed a site visit to UMore Park on 5 October 2005 to plan the survey portion of the project. Denis Gardner completed a reconnaissance-level field survey of the entire UMore Park property in October and November 2005, recording the site with field notes, sketch maps and more than 340 digital photographs. The survey documented both standing structures and ruins.

### *Historic Context Development*

Using information gathered during the research phase of the project, principal investigator John Lauber prepared a historic context document for the UMore Park property, tracing the history and evolution of the site from the time it was first mentioned in historical records to the present time. The document explores several phases of development at UMore Park, including:

- Precontact history—the site’s first residents, the Mdwakanton Dakota.
- Early exploration, natural landmarks.
- Opening the land to European-American settlement.
- Early agricultural settlement, the development of wheat culture.
- Development of diversified farming, and the University’s growing role in agriculture.
- Displacement and industrialization—the advent of Gopher Ordnance Works and its impact on local farmers.
- University acquisition of the site and subsequent dual-track development as a center for both technological and agricultural research.
- Changes in the environment both within and around UMore Park, and the University’s efforts to plan for the future.

The text is supported by extensive footnotes, illustrations, and a bibliography.

### *Evaluation*

The historic context was intended to provide a basis for identifying and understanding significant events that have helped to shape the built environment at UMore Park. The context also provides information about the specific types of cultural resources that have comprised the area’s built environment during various periods of time. The field survey provided information about the nature and condition of buildings, structures and objects that still remain at the site. Information from these sources was used to identify cultural resources that may be worthy of preservation.

Several portions of the UMore Park property have been included in previous cultural resource surveys of the area. Information from these surveys was also examined in an effort to evaluate the significance of features remaining at the site.

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### **Evaluation Criteria**

UMore Park’s cultural resources were evaluated according to two distinct sets of criteria. They were first considered for their potential eligibility for the National Register of Historic Places. They were also considered for their potential iconic or interpretive value, as resources that may lack National Register potential, but that still retain the ability to help tell the story of UMore Park’s rich and varied history.

### ***National Register***

For the purposes of this study, resources have been evaluated according to criteria established by the National Register of Historic Places (NRHP), which state that:

The quality of significance in American history, architecture, archaeology, engineering, and culture is present in districts, sites, buildings, structures and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association and:

A. that are associated with events that have made a significant contribution to the broad patterns of our history; or

- B. that are associated with the lives of persons significant in our past; or
- C. that embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
- D. that have yielded, or may be likely to yield, information important in prehistory or history.<sup>2</sup>

To be eligible for the National Register, a property may have local, statewide or national significance, and must generally be at least fifty years old.

The National Register Criteria were established by the National Historic Preservation Act of 1966, and serve as a general model for evaluating the historical significance of cultural resources, whether they are being evaluated for listing on the National Register or for other purposes.

The National Historic Preservation Act was originally instituted to protect historically significant cultural resources from adverse impact caused by federal undertakings, broadly defined as any undertaking by a federal agency, including funding, licensing, permitting, etc. Because portions of UMore Park operate in cooperation with the United States Department of Agriculture, receive federal funding, or in the case of the Navy satellite station, were leased to a unit of the federal government, certain activities of the University may be subject to regulation under the Preservation Act. These regulations may require the university to identify, preserve, or mitigate damage to National Register-eligible cultural resources.

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### **Results of Previous Surveys**

Portions of UMore Park have been examined in at least three previous cultural resource surveys.

- Lone Rock was inventoried as part of a statewide 1989 survey of Geographic Features of Cultural and Historic Significance. That survey, complete by Landscape Research of St. Paul, traces the written history of Lone Rock back to Nicollet's 1838 expedition, and notes that the feature was recorded by numerous geologists and photographers during the nineteenth century, and "seems to have been regarded as a curiosity by local settlers."<sup>3</sup>

According to Scott Anfinson, former National Register archaeologist with the State Historic Preservation Office, Lone Rock is generally considered to be a Traditional

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<sup>2</sup> Mary Ann Nord, ed., *The National Register of Historic Places in Minnesota: A Guide*. (St. Paul: Minnesota Historical Society Press, 2003), 302.

<sup>3</sup> Carole Zellie, Dakota County site DK-EMP-4. "Geographic Features of Cultural and Historic Significance," survey form dated January 1989. On file at the Minnesota State Historic Preservation Office, St. Paul.

Cultural Property by Native American groups in the area, although the site has never been formally designated as such.<sup>4</sup>

-A reconnaissance level survey was completed by Hess, Roise, and Company of Minneapolis in 1993 as part of the planning for a potential new site for the Minneapolis-St. Paul International Airport. In that survey, a number of buildings, structures, and ruins from the Gopher Ordnance Works were inventoried, and a recommendation was made for further evaluation under National Register Criterion D.<sup>5</sup>

-In 1998, a Phase II Evaluation of the Gopher Ordnance Works site was completed by BRW, Incorporated as part of the preparation for improvements on County Road 46, which runs through the center of UMore Park. This study concluded that there were no NRHP eligible properties associated with GOW at the site. Reasons included: a lack of historic integrity at the GOW site (the vast majority of buildings and structures had been removed); a substantial documentary record already existed for the site; and at the time of the survey, a more or less equivalent facility remained standing in Baraboo, WI.<sup>6</sup>

The BRW study also examined the potential eligibility of the Agricultural Experiment Station and determined that because most of its extant buildings date from the mid-1960s and later (less than 50 years old), it did not yet meet the 50 year criterion for National Register Eligibility.

Areas that have not been specifically evaluated in previous surveys include the Navy Satellite Station, and the UM Research Center which conducted a rich and varied assortment of research activities on the eastern portion of the UMore site, and which used the bulk of the 168 GOW buildings that the University acquired from the federal government after World War II.

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<sup>4</sup> Scott Anfinson. Personal interview with John Lauber, 23 November 2005.

<sup>5</sup> Charlene Roise and Deanne Zibell Weber. "Cultural Resources Survey: Dakota County Airport Sites 2, 3, and 6; Volume II: The Built Environment." (SHPO Number DK-93-1H) Unpublished cultural resource survey Report, on file at the Minnesota State Historic Preservation Office, St. Paul.

<sup>6</sup> Jackie Sluss and Chandra Malmquist, "Phase I Archaeological Investigation of Future County Road 46 (CSAH 46), and Phase II Evaluation of Gopher Ordnance Works, Dakota County, Minnesota," 1998. (BRW Report Number 98-03) Unpublished cultural resource survey report, July 1998. On file at the Minnesota State Historic Preservation Office, St. Paul.



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## **A Preliminary Evaluation of the Rosemount Research Center**

Historically, the administration of the UMore Park property was divided between two units of the University of Minnesota—the University of Minnesota Agricultural Experiment Station, Rosemount; and the Rosemount Research Center. The Research Center function, which provided the major impetus for the University’s acquisition of the site in the late 1940s, was itself originally divided into two major research areas—a Public Health/Medical function, and the Rosemount Aeronautical Laboratories. The heyday of operations at the Research Center was relatively brief, with most of the activity taking place between 1946 and 1962. Today the UMore Park property is best known as the former site of the Gopher plant and as the present location for a University of Minnesota Agricultural Experiment Station, and its history as a center for aeronautical and medical research is often overlooked. Nonetheless, the Research Center played a pivotal role in the transition of the Gopher Ordnance Works from a military/industrial site to an academic facility. Consequently, features remaining from the Research Center operation warrant consideration in their own right, apart from their association with the Gopher Ordnance Works or the UM Agricultural Experiment Station.

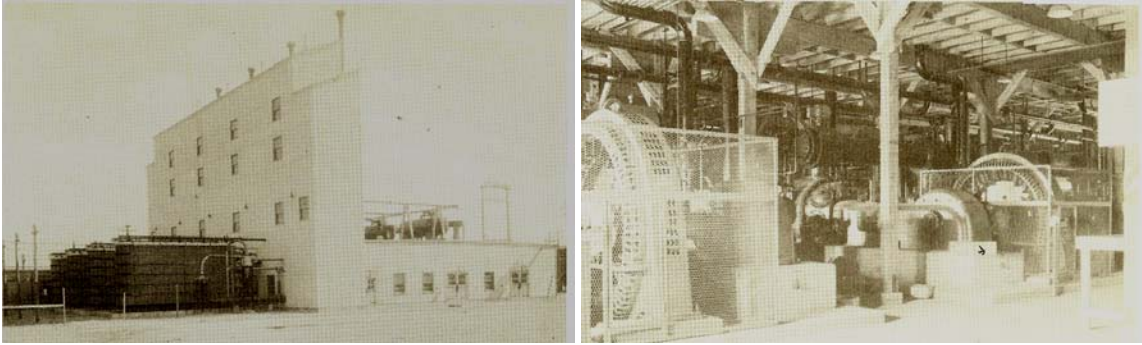


**Figure 1.** *Building 703 A, the main office for the Gopher Ordnance Works was converted into a polio hospital after the University acquired the property in 1947. U.S. Army Corps of Engineers, 1944.*

### ***Public Health/Medical Research Facilities***

In the years immediately following World War II, the University of Minnesota School of Public Health and the University of Minnesota Medical School utilized a cluster of GOW buildings near the northern edge of the Rosemount site for a variety of purposes. The former administration building was converted into an isolation hospital for polio patients, and several adjacent buildings were converted into cancer research laboratories and housing for laboratory animals. The University maintained populations of laboratory animals at UMore Park for many years, but the use of the site for hospital treatment of human patients was of short duration, ending in 1948. The hospital facility was used for temporary housing of psychiatric patients from the Hastings State Hospital for a short period in 1949, but by 1950, the facility had been vacated.

In 1971, a large part of the public health portion of the Research Center was sold to the Dakota County Area Vocational Technical Institute as the site for a new academic campus. In 1977, the college purchased additional acreage, and a year later, the former polio hospital and other structures were demolished to make way for new Technical College Facilities. Consequently, this portion of the Research Center site has no potential for National Register listing.



**Figures 2-3.** *Building 302 A. Ammonia Oxidation Bldg. U.S. Army Corps of Engineers, 1944.*



**Figure 4.** *The same area as it appears today. The Ammonia Oxidation Building (302-A) containing the Rosemount Aeronautical Laboratory's wind tunnel equipment burned in 1976 and was replaced with a steel pole structure. The Morton Sphere is visible at right.*

### ***Rosemount Aeronautical Laboratories***

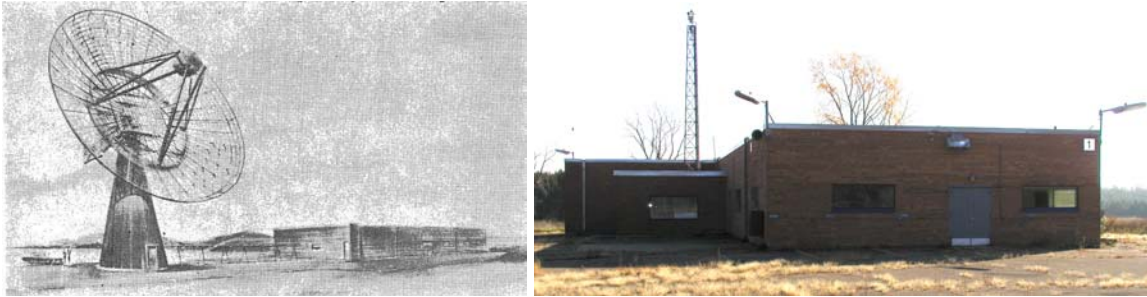
From 1946 to 1962, the University of Minnesota operated an active program of aeronautical engineering research at Rosemount, focusing on the development of supersonic and hypersonic aircraft. It was this program that provided the initial impetus for the University's acquisition of the Gopher plant. Essential to this operation was a set of surplus GOW facilities that provided the aeronautical engineering department with the specialized equipment it needed to build and operate a series of wind tunnels capable of generating speeds of up to eleven times the speed of sound.

Of paramount importance to the operation of the laboratory was Gopher Ordnance Works Building 302-A, the ammonia oxidation building. This structure contained five electrically driven compressors and four gas driven compressors that provided the high volume air flow necessary to power the wind tunnels. Although the Aeronautical Laboratory utilized a number of other buildings and structures at the site for purposes including office and cafeteria space, compressed gas storage, machine shop areas, and secure storage facilities for aircraft components, building 302-A was the centerpiece of



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## Recommendations for Further Investigation



**Figures 6-7.** Artist's depiction of the Navy Satellite Station (*Dakota County Tribune*, 5-23-1963), and the main building as it appears today.

### ***Evaluation of the U.S. Navy Satellite Station***

Built in 1963 on land leased from the University of Minnesota, the Navy Satellite Station was one of four TRANSIT satellite navigation tracking stations established by the Navy in the early 1960s to guide nuclear-armed submarines. Developed by the Applied Physics Laboratory at Johns Hopkins University, the TRANSIT system was the first operational satellite-based navigation system and anticipated the development of the present Global Positioning System by decades. Although the facility is less than fifty years old, is no longer in operation, and may have lost integrity due to the removal of its satellite dish ca. 1996, the station could possess historical significance as an important artifact of the Cold War era, and should be formally evaluated to determine whether it is eligible for the National Register. Such an investigation is beyond the scope of the present project. [For the location of the satellite station, see item 11 on the aerial map: *Cultural Sites of Iconic or Interpretive Significance.*]

### ***Consultation with SHPO***

Resources associated with the Gopher Ordnance Works have been determined ineligible for the National Register due to a lack of integrity. Nonetheless, before proceeding with demolition of any remaining GOW artifacts, University of Minnesota representatives should confer with the review and compliance officer at the Minnesota State Historic Preservation Office in St. Paul to make certain that the SHPO concurs with the finding of no properties and to determine whether documentation or other mitigation procedures must be completed prior to demolition.

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### **Conclusions Regarding the National Register Eligibility of UMore Park Properties**

At present there do not appear to be any National Register-eligible properties associated with early settlement, the Gopher Ordnance Works, the University of Minnesota Research Center, or the University of Minnesota Agricultural Experiment Station.

Lone Rock has been identified as a potential Traditional Cultural Property and should be formally evaluated.

The U.S. Navy Satellite Station should be formally evaluated for potential eligibility as an important artifact of the Cold War.

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## Cultural Sites of Iconic or Interpretive Significance

Certain physical remnants of UMore’s cultural past lack sufficient integrity to be designated as historically significant according to the National Register criteria, but several of them have achieved nearly iconic significance over time, serving as *de facto* local landmarks that serve to remind visitors that something important happened on this site. Other features of the site retain significant interpretive value—serving as tangible reminders of UMore Park’s rich and varied history. These features should be retained and integrated into future land use and interpretive plans.



**Figure 8.** *A picnic at Lone Rock, ca. 1903. Minnesota Historical Society.*

### 1. Lone Rock

Lone Rock has been an important landmark to occupants of the UMore Park area since prehistoric times. It is considered a traditional cultural property by indigenous people. It was also a significant landmark to early explorers, and has been a popular destination for many generations of later visitors. It should be protected and interpreted as part UMore Park’s land use and interpretive plans.

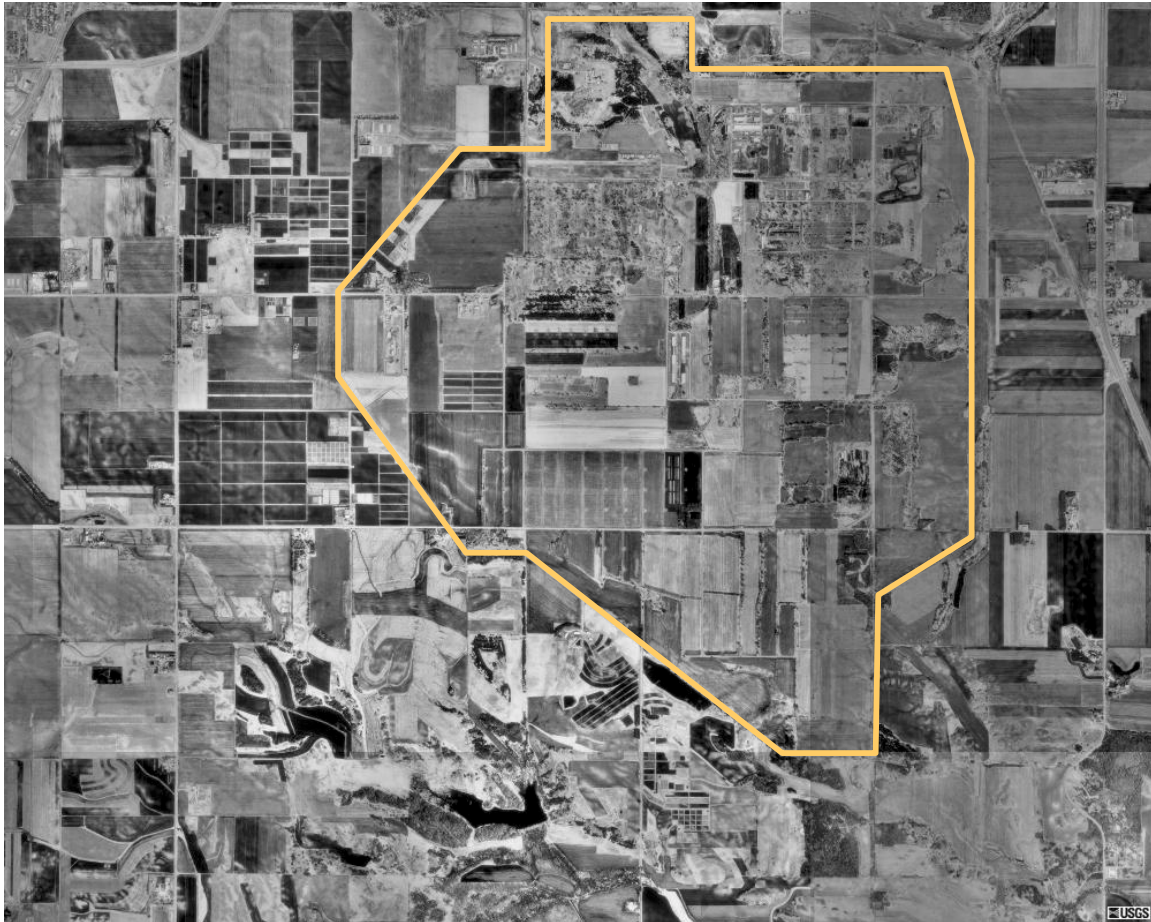


**Figures 9-10.** *The Wachter farmhouse as it appeared in 1944 (U.S. Army Corps of Engineers) and today.*

### 2. Wachter Farmhouse

The UMore Park area was opened to European-American settlement in 1853. The area was quickly occupied by Irish immigrants who transformed the unbroken prairies into a rich wheat producing area. By the late 1800s, the area had begun to diversify, both in terms of ethnicity and in terms of farming, with many residents adopting the practices of scientific agriculture promulgated by J. J. Hill and the University of Minnesota. By the

early 1940s, the area had become an important provisioner to the nearby Twin Cities, producing dairy products, vegetables and meat for their urban neighbors. When construction began on the GOW in 1942, the farmers in the area were displaced and most of the farms were bulldozed to make way for industrial facilities. The most intact remnant of the pre-GOW history of the site is the Herman Wachter Farmhouse, located at the intersection of Babcock Avenue and County Road 46. Although this farmstead lacks sufficient integrity to be eligible for the National Register, it should be retained as a tangible reminder of UMore's early history as a rich agricultural area, populated by small family farms.



**Figure 11.** Aerial view of UMore Park, ca. 1991. Patrol Road is highlighted in orange. USGS Terraserver.

### **3. Patrol Road**

Following the federal government's acquisition of the Gopher property in 1942, work began immediately on a perimeter road that completely enclosed the industrial portion of the plant site. The road was originally outlined with a security fence and punctuated with a series of guard towers. Security guards with radio equipped automobiles drove the patrol roads twenty-four hours a day to protect the Gopher plant from saboteurs, spies and other unwanted invaders. The fencing and guard towers were removed long ago, but the road system remains in place, clearly delineating the extent of the Gopher Ordnance Works. This pathway should be retained as a tangible reminder of the site's history. It

could serve as a template for development of an interpretive trail for walkers, runners, and cyclists, offering views of important features both inside and outside the GOW perimeter.



**Figure 12.** Aerial detail of production line area, ca. 2005. Line A is outlined in orange. Rectangular structures at top are cotton storage warehouses. GoogleEarth.

#### **4. Production Line A (Ruins)**

The Gopher Ordnance Works was the last of a series of Government Owned Contractor Operated (GOCO) facilities rushed into service during World War II to help the nation overcome a shortage of smokeless gunpowder—the most important component of U.S. armaments. Although the Gopher Works eventually included nearly 800 structures, the core function of the plant was to be carried out in series of six nearly identical production lines where cotton lint was transformed into propellants for cannon and rifle shells.

Materials shortages and fluctuations in the supply of smokeless powder from other plants had a direct impact on the construction schedule at Gopher, delaying the projected start of production from January to October of 1943. In July of 1943, the plant was put on standby status, and in January 1944, the plant was abandoned.

Shortly after D-Day in June 1944, the government brought the plant out of mothballs. Ultimately three of the six production lines were completed. The first of the three was put into operation in February 1945, and the final batch of gunpowder came off the line in October of that year.

Although the Gopher Ordnance Works was in operation for only a few months, the construction of the plant went on sporadically for more than three years, transforming the

a portion of Dakota County's rural landscape into an industrial site. Among the most enduring reminders of the frenzied activities at the site are the massive concrete tank stands, columns and foundations that mark the locations of production lines A, B, and C. Each line originated with an enormous cotton storage warehouse and stretched out for more than a mile. The remnants of one representative line (Line A) should be retained and interpreted to serve as a physical record of the site's role in the war effort.



**Figure 13.** Cotton Warehouse (Building 101-A) at north end of Line A. North and west sides.



**Figures 14-15.** Ruins of concrete tank stands on Line A.

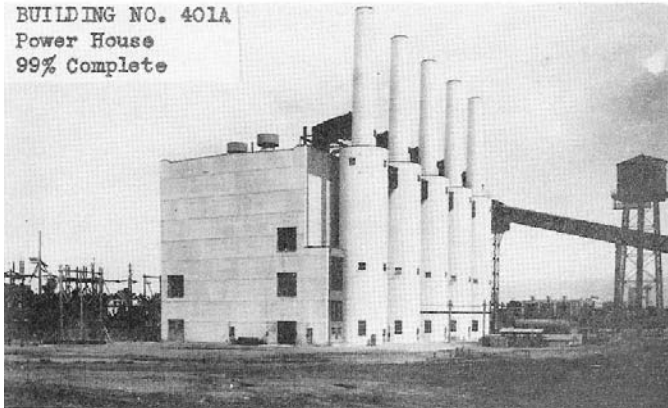


**Figure 16.** Looking south from tank stand area on Line A.

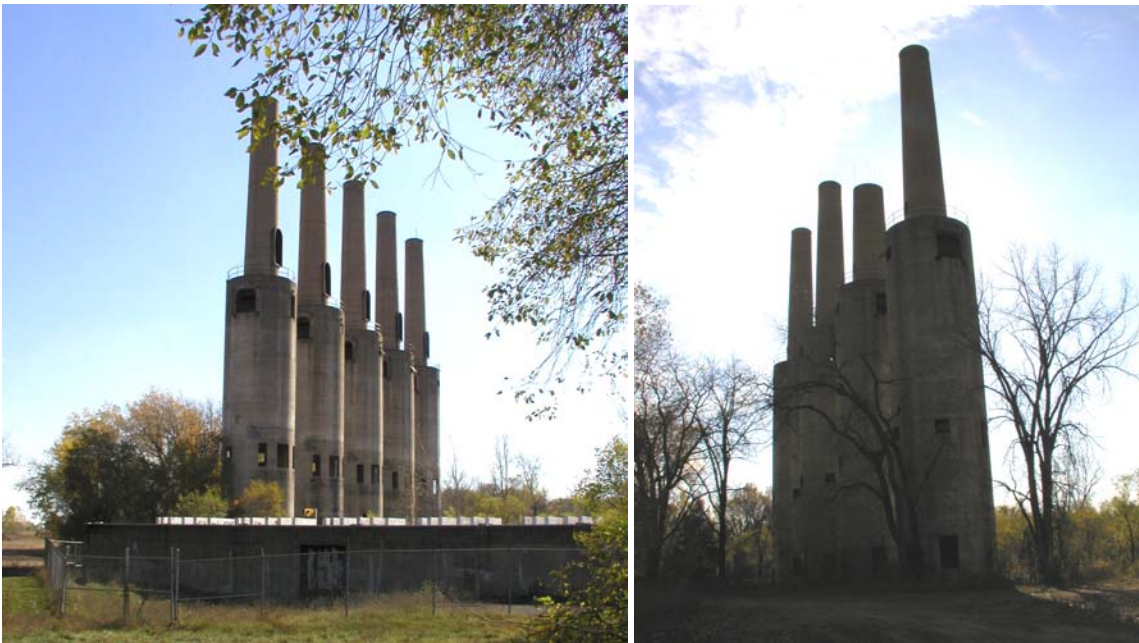


**Figures 17-18.** Line A ruins along Blaine Avenue.





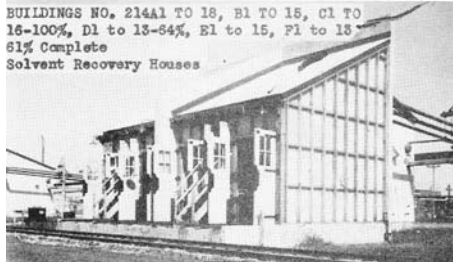
**Figure 19.** *The steam plant for the A-B- C lines as it appeared in 1944. U.S. Army Corps of Engineers.*



**Figures 20-21.** *The five stacks are all that remain of Power House A today. The four stack unit for lines D-E-F (right) was never completed.*

### ***5 and 6. Power House Stacks***

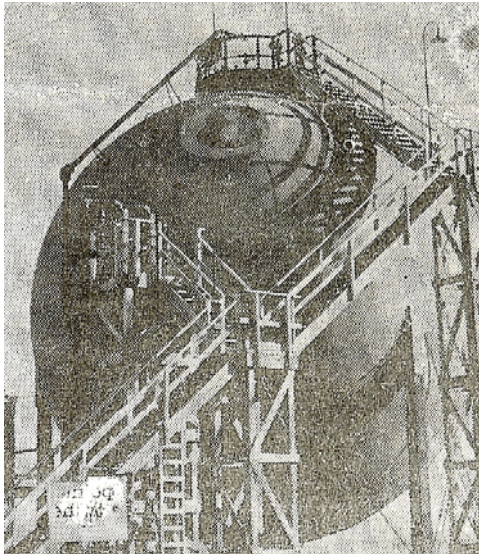
Perhaps the most widely recognized features of the Gopher Ordnance Works are the smokestacks remaining from the GOW’s dual steam power plants. The five stacks that served the A, B, and C lines, and the uncompleted four-stack unit that was to serve the D, E, and F lines are visible from nearby roads and have become familiar landmarks to passers by. They should be retained as a reminder of UMore Park’s history as a defense plant during World War II.



**Figures 22-23.** *The Solvent Recovery Houses as they appeared in 1944 (U.S. Army Corps of Engineers). Only the massive concrete walls remain in place today.*

### **7. Solvent Recovery House Ruins (T-Walls)**

The massive concrete ruins of the solvent recovery houses (commonly referred to as “the T-walls”) lining the south side of Highway 46 constitute another local landmark. Both the stacks and the T-walls capture attention and interest of people who pass through the area, reminding them that this area has an unusual and fascinating history. These features should be retained and explained as part of UMore Park’s interpretive strategy.



**Figures 24-25.** *The Morton Sphere as it appeared during the early days of the Rosemount Aeronautical Laboratory (Dakota County Tribune 12-23-1949) and today. A student with a sense of humor applied the “8-ball” insignia (left).*

### **8. Morton Sphere**

The Morton Sphere, a spherical tank standing near the heavy equipment training facility at the northeast corner of this area was used to store anhydrous ammonia during the GOW days, and was later used by the University as part of the supersonic wind tunnel facility that was the most important functional component of the Rosemount Aeronautical Laboratories. The building housing the wind tunnels and the compressors that powered them was destroyed by fire in December 1976, and the Morton Sphere is the only piece of the test apparatus that remains on site. It should be retained and interpreted as a reminder of the important aeronautical research activity conducted at Rosemount during the 1950s.



**Figure 26-27.** A surplus Powder Rest House from the Gopher Works was transformed into the first administrative office building for the newly designated Rosemount Agricultural Experiment Station in 1949 (*Dakota County Tribune*, 12-23-1949). The remaining powder rest houses at the site have all been altered since then (right).

### **9. Powder Rest Houses/Original Ag Experiment Station Administration Building**

Approximately 1450 acres of the GOW site were set aside by the University of Minnesota in 1946 as the nucleus of a new Agricultural Experiment Station—the sixth in the University of Minnesota system. The Rosemount facility attained formal Experiment Station Status in 1949. Unlike the Research Center, however, the Experiment Station started with very little funding, and the federal government retained the right to reclaim the property for a period of twenty-five years after the transfer if it determined that the land were needed for national defense purposes. This reclamation clause made the Minnesota legislature reluctant to invest in capital projects at the site until the clause expired. Consequently, the Agricultural Experiment Station operated on a shoestring budget for more than two decades, with virtually no new construction being completed before the mid-1960s. Instead, the Station met its facilities needs by moving extant GOW buildings in from the industrial area, remodeling existing buildings for new uses, and building temporary structures with salvaged materials and building parts and staff labor. The Experiment Station’s original administrative offices were housed in a converted “powder rest house,” an earth sheltered bunker located across the road from today’s Experiment Station Headquarters. This adaptive reuse of an existing building was symbolic of the “make do” attitude that marked the transition from an Ordnance Plant to an agricultural facility. Most of the extant powder rest houses have been modified, and it is not clear which of them was utilized for the administrative offices. Additional research should be conducted to determine which building housed the original Experiment Station Office. The building should be restored to its 1950 appearance and used as a venue for interpreting the history of the Agricultural Experiment Stations.



**Figure 28.** *The energy-efficient Ouroboros House remains in use as a rental property.*

### **10. Ouroboros House**

The Ouroboros House on Blaine Avenue was developed by University of Minnesota architecture students in the late 1970s as a practical embodiment of energy-efficient design principles. While it is too new to be considered historic, it nonetheless exemplifies the University’s use of the UMore site in the decades after World War II as a larger-than-life laboratory for testing cutting edge ideas.

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### **Interpretive Themes**

The historic context narrative developed as part of this project, entitled “Land in Transition: A History of UMore Park,” outlines the developmental history of this large tract of Dakota County land over approximately the past 175 years, and is intended to serve as a basic framework for interpreting the site. Most of the physical evidence remaining at the site today immediately suggests interpreting UMore’s history as an ordnance plant and as an agricultural experiment station. A close examination of the history of UMore Park, however, suggests several other interpretive possibilities that may be less immediately apparent, but that are no less important to understanding the evolution of the place.

#### ***Cycles of Displacement.***

A recurring theme in the history of UMore Park is the theme of displacement. Over the past 175 years, the utilization and character of the land at UMore Park have changed dramatically and with some regularity in direct response to a disparate assortment of external forces: diplomatic negotiations, westward migration, soil depletion, weather, economics, national emergencies, obsolescence, technological advancements, and development pressure. Although these individual forces seem to have little in common, they have all caused one activity or group of people to be replaced with another, and each displacement brought about significant changes in the character of the land itself. Thus the Native Americans who had used the land for hundreds of years without altering it were displaced by European-American settlers who opened the prairies for agriculture. The early wheat croppers whose inefficient methods quickly depleted the soil were

displaced by farmers who adopted the new “scientific agriculture” promulgated by railroad baron J.J. Hill and the University of Minnesota. Families that had farmed in the area for decades were displaced first by the economic pressures of the Great Depression, and then by the exigencies of a great World War that turned farmland into an industrial site. The Gopher Ordnance Works became obsolete and unnecessary before it was completed, and was replaced by a bustling research center that sought to address a host of scientific and agricultural challenges that began to emerge during the Cold War. Today the rapid growth of a major metropolitan area has transformed this pocket of relatively undeveloped land into a valuable commodity at the same time that several years of sparse appropriations from policymakers have placed unprecedented economic pressure on the University of Minnesota. Interpretive activities at UMore Park should examine the complex assortment of factors that inform land use decisions and discuss the impact that changes in land use have on the people who live there.

### ***The Evolution of Agriculture.***

With the exception of its short episode as a defense plant, and a slightly longer period during which a portion of the property served as a high-technology testing laboratory, the recorded history of UMore Park has always been mostly about agriculture. In a sense the site encapsulates the entire history of agriculture in Minnesota, having borne witness to the opening of the land by European-American immigrants in the mid-1800s, the development of one of the state’s first wheat producing areas after the Civil War, agricultural diversification and the rise of scientific farming at the end of the nineteenth century, the arrival of the so-called “golden age” of agriculture during the early part of the twentieth century, and the federalization of farming during the 1930s. UMore Park has played a crucial role in developing and nurturing many of the enormous transformations that have taken place in farming since the Second World War. And the Ag Experiment Station continues to provide an important venue for research and development that will make agriculture an important part of Minnesota’s economy in the years to come.

The University of Minnesota’s College of Agriculture has played an important part in this history--and its involvement began long before the formal establishment of the Agricultural Experiment Station in 1949. For more than six decades before acquiring the land at UMore Park, the University sponsored programs such as the Farmer’s Institutes and the Extension Service; developed improved varieties of crops and improved breeds of animals; offered advice on soil conservation, drainage systems and buildings; and suggested innovative ways to process and market farm products—all in an effort to improve the lives and livelihood of area farmers. This is an important story that was repeated many times over throughout the state. It is a story that should be told at UMore Park.

### ***The Rosemount Aeronautical Laboratories.***

UMore Park’s history as a World War II ordnance plant and its more recent history as an Agricultural Experiment Station are well documented and well known. What has been largely forgotten today, however, is that the original impetus for the University’s acquisition of the Gopher plant came from Professor John Akerman of the Department of

Aeronautical Engineering, who was seeking to build and equip facilities for research into supersonic aircraft during the early years of the Cold War. Between 1946 and 1962, the university constructed and operated a series of state-of-the-art wind tunnel facilities at Rosemount, attracting a number of well known academics and garnering hundreds of thousands of dollars in research grants. This is a story that should be told as part of the interpretation of UMore Park.

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## **Opportunities for Further Research**

### ***Oral Histories***

Many features of the built environment at UMore Park are products of relatively recent history. The site was essentially rebuilt from the ground up beginning in 1942, and has been through many cycles of change and development since then. Many of the people who were involved in these changes are still living, and their personal stories and recollections are compelling. One previous effort to capture these voices focused primarily on the site's transition from a farming community to an ordnance plant.<sup>8</sup>

The University should undertake a new effort to record the stories of individuals who farmed the area prior to the GOW era, who worked on or in the Ordnance Plant, who participated in UM Research Center Activities, who have been instrumental in operating the Agricultural Experiment Station, and who have spearheaded planning efforts for the property over the past 30 years.

### ***Rosemount Aeronautical Laboratories***

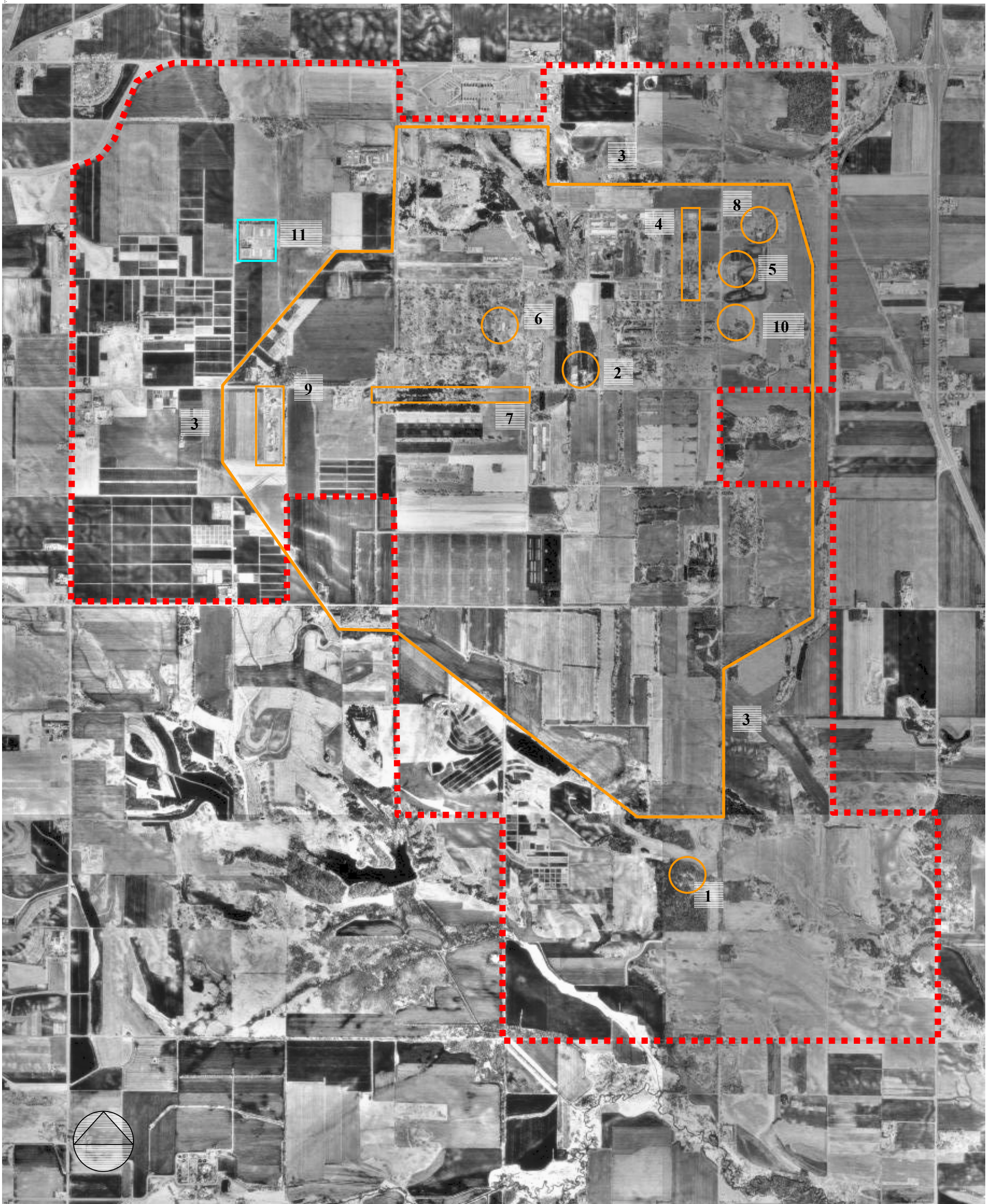
The University of Minnesota Archives in Minneapolis retains a number of collections pertaining to the origins and operation of the Rosemount Aeronautical Laboratories. These collections include the papers of Professor John Akerman as well as records of the College of Engineering and Aeronautical Engineering and the Institute of Technology. These materials may prove to be a rich source of information about this often overlooked episode in UMore Park's early history.

### ***UMore Park Photograph Archives***

UMore Park maintains a large collection of historic photographs in its administrative offices on Highway 46, as well as in the Real Estate office on Babcock Avenue. These collections have not been systematically examined, and may prove to be rich sources of visual information for interpretive programs at the site.

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<sup>8</sup> Nancy Pilgrim, Teresa Seliga, Kim Foster, Helen Davis, and Tim Copeland. Dakota County Gopher Ordnance Munitions Plant Oral History Project. Minnesota Historical Society Oral History Call Number OH 90. Audio cassettes and partial transcripts of interviews with former residents of the GOW site. 1976. Minnesota Historical Society, St. Paul.



# UMore Park

## Cultural Sites of Iconic or Interpretive Significance

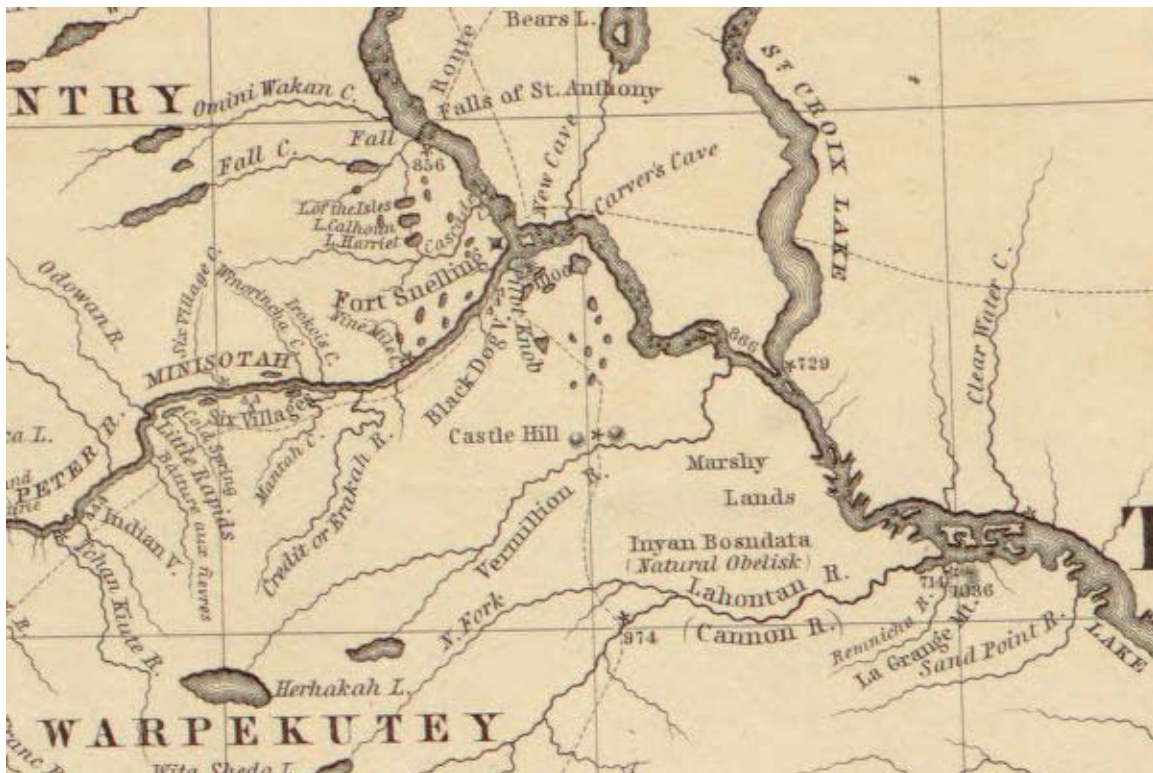
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|---|---|
| <ul style="list-style-type: none"> <li><span style="color: red; font-weight: bold;">- - - - -</span> <i>UMore Park Property Boundary</i></li> <li><span style="color: orange; font-weight: bold;">—</span> <i>Sites to be preserved and interpreted</i></li> <li><span style="color: cyan; font-weight: bold;">—</span> <i>Sites to be evaluated</i></li> </ul> | <ul style="list-style-type: none"> <li>1. Lone Rock</li> <li>2. Wachter Farmstead</li> <li>3. Patrol Road</li> <li>4. Production Line A</li> <li>5. Power Plant Stacks A</li> <li>6. Power Plant Stacks B</li> <li>7. Solvent Recovery Houses (T-walls)</li> <li>8. Morton Sphere</li> <li>9. Powder Rest Houses (Ag Exp. Station Admin.)</li> <li>10. Ouroboros House</li> <li>11. Navy Satellite Station</li> </ul> |
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# Land in Transition: A History of UMore Park

## Introduction

When the French astronomer and cartographer Joseph Nicollet awoke on the morning of Tuesday October 16, 1838, he was chilled to the bone. Commissioned by the United States War Department to complete a geographical survey of what would eventually become southeastern Minnesota, he was headed back to the fur trading outpost at Mendota after an excursion to Spirit Lake, 130 miles to the south and west. He and his traveling companions had set out from their camp on the Cannon River the previous day, hoping to spend the night on the wooded banks of the Vermillion. But the autumn sky had been overcast. Without the sun to help them chart their course on the nearly featureless prairie, the explorers had lost their way and wandered in freezing rain and blustery winds until dusk, when they stopped, exhausted, at the edge of a swamp which afforded neither shelter nor firewood. While they shivered and tried to sleep, the temperature had dropped to an unseasonable thirteen degrees Fahrenheit. “The night,” wrote Nicollet, “was very hard.”<sup>1</sup>



**Figure 1** A section of Joseph Nicollet's 1843 map of the Mississippi River drainage, showing his route through the UMore Park area (dotted line), and identifying Castle Hill, a natural landmark that later became known as Lone Rock. Library of Congress.

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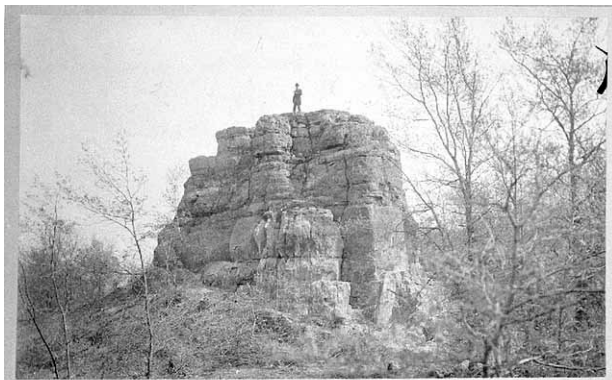
<sup>1</sup> Edmund C. and Martha Coleman Bray, *Joseph N. Nicollet on the Plains and Prairies* (St. Paul: Minnesota Historical Society Press, 1976), 133.



After rising on the sixteenth, Nicollet sent an advance party ahead on horseback to find the way back to Mendota. Then he and his four companions set out with their three slow-moving carts to follow them. After a trek of six miles the group finally reached the Vermillion River in mid-morning. Two miles further on, they came to “Sandstone Hill,” a natural outcrop where they stopped to eat breakfast and measure the altitude. Nicollet described the spot in his journal as a “pretty hill of soft and rough-grained and varied colored sandstone. Worked over by the wind and the rain, it has the appearance of an old chateau, or fort in ruins with castellations, window openings, and loopholes.”<sup>2</sup>

Looming above the surrounding countryside, the formation was to Nicollet a familiar landmark. On a trip through the area a year earlier he had paused there long enough to carve his name in the soft stone, perhaps feeling a need to leave a sign letting subsequent travelers know that someone had passed this way before.<sup>3</sup>

That carved inscription eroded away long ago, but Sandstone Hill is still there today. Now known as Lone Rock, it remains an important point of interest at the southern edge of UMore Park, a twelve-square mile parcel of rural Dakota County land, owned by the



*Lone Rock, N.E. 1/4, sec. 16, Empire, Dakota County, Minn.; about 30 feet high; view looking southeast.*  
**Figure 2.** Lone Rock as it appeared in 1903. Collection of the Minnesota Historical Society.

University of Minnesota and situated in the midst of an increasingly urban environment. For more than 150 years, Lone Rock has stood largely untouched as the landscape all around it has been in nearly continuous transition—a sort of geological palimpsest upon which history has been written and rewritten by many generations of Minnesotans. Like Joseph Nicollet, each generation has left something behind for those who followed, reminding them that someone has passed this way before.

**“The red men . . . have . . . undisputed control of all those vast prairies.”**

Nicollet’s expedition was not the first to visit the UMore Park area. He was preceded by a series of explorers and adventurers--beginning with Father Louis Hennepin, a French priest of the Recollet order. In 1680, Hennepin made his way up to Mississippi River to its confluence with the St. Pierre [now Minnesota] River, passing through what later became Dakota County in April or May of that year. He was followed over the next century and a half by a veritable *Who’s Who* of early explorers sent by a succession of absentee landlords—the French, the Spanish, the British--to document the dimensions

<sup>2</sup> Ibid.

<sup>3</sup> According to government surveyor Thomas Simpson, the carving was still visible when he reached the site in the summer of 1853. See Bray and Bray, page 133, note 60. Also see Simpson, “The Early Government Land Survey in Minnesota West of the Mississippi River,” in *Collections of the Minnesota Historical Society*, 10:1 (February 1905), 64.

and character of this vast but uncharted territory situated in the middle of a “new” continent.<sup>4</sup>

Exploration activity increased rapidly after the United States acquired the land as part of the Louisiana Purchase in 1803. Zebulon Pike led an expedition through the area during his exploration of the Mississippi valley in 1805-1806. Stephen Long retraced Pike’s journey in 1817, seeking suitable sites for military posts, and revisited the region four years later. Lewis Cass came through in 1820 with a group that included the popular chronicler Henry Schoolcraft. The explorers followed the rivers that served as frontier thoroughfares, but few of them lingered for long until 1819 when the United States Army established a permanent presence at Fort Snelling. By 1826, the American Fur Company was carrying on a brisk trade at its new settlement across the river in Mendota.<sup>5</sup>

The explorers, adventurers and fur traders were not, of course, the first people to occupy this part of the continent. Long before the Europeans arrived, the land had been the exclusive domain of the Mdewakanton band of the Dakota Indians. One tribal elder asserted in 1910 that his ancestors had lived in the area for “three or four hundred years.” The Mdewakanton were largely a migratory people. But by the time the United States acquired title to the land, they had established a number of permanent encampments along the Minnesota and Mississippi Rivers, including a settlement at Pine Bend that consisted of “twenty lodges and about one hundred Indians,” under the leadership of a chieftain known as Medicine Bottle.<sup>6</sup>

Despite their long history on the land near UMore Park, the Mdewakanton people left behind scant physical evidence of their tenure. Except for a few shards of stone implements discovered near the southeast corner of the property, archaeologists have found few tangible signs of Native American occupation. The Mdewakanton band did leave an enduring legacy of another sort, however. When the newly formed Minnesota Territory was divided into nine counties in 1849, the county that would eventually include UMore Park was given the tribal name “Dakotah,” meaning “allied, or joined together in friendly contact.” Within a few years, the final “h” was dropped and the name assumed its present form.<sup>7</sup>

Writing from a distinctly Euro-centric point of view in 1868, historian W.H. Mitchell recalled how the UMore Park region was perceived by the earliest white visitors:

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<sup>4</sup> Early visitors to the area included the French adventurer Pierre Charles le Sueur, who led an expedition up the Mississippi in 1700, and the Connecticut-born Jonathan Carver, who explored the region on behalf of the British in 1766. See Franklyn Curtiss-Wedge, ed., *History of Dakota and Goodhue Counties Minnesota, Volume I* (Chicago: H.C. Cooper, Jr., & Co., 1919), 58-59.

<sup>5</sup> Theodore C. Blegen, *Minnesota: A History of the State* (Minneapolis: University of Minnesota Press, 1975), 52, 97, 108, 110, 132.

<sup>6</sup> Curtiss-Wedge, *History of Dakota and Goodhue*, 23-25.

<sup>7</sup> *Ibid.*, 23. During a survey completed as part of planning for a proposed Dakota County site for the Minneapolis-St. Paul International Airport, archaeologists discovered two chert flakes in Empire Township (T114N R19W S11). See Christina Harrison, “Cultural Resources Survey, Dakota County Airport Study Area Volume I: The Archaeological Resources,” Unpublished cultural resource survey report, prepared for the Metropolitan Airports Commission and Howard, Needles, Tammen, and Bergendoff, September 1993. Site number 21DK0056. On file at the Minnesota State Historic Preservation Office, St. Paul.

No signs of civilization greet the vision; no human habitations save the wigwams of the red men, who have unlimited and undisputed sway and control of all those vast prairies; their trails as they go farther west to their hunting grounds are the only roads that mark the tread of human feet; their bark canoes the only craft that cleave the waters of the rivers and lakes; their council fires lighting up the evening sky, and [their] . . . war whoop breaking the stillness of the otherwise silent prairies.<sup>8</sup>

By the middle of the nineteenth century, however, change was on the horizon.

### **The Treaty of Mendota**

On 29 July 1851, several hundred people assembled outside the American Fur Company warehouse in Mendota. Part of the group was comprised of officials and functionaries representing the United States government, led by commissioner of Indian affairs Luke Lea, and territorial governor Alexander Ramsey--just back from a similar gathering at Traverse des Sioux the week before. Another contingent consisted of more than sixty chiefs and headmen from the Mdewakanton and Wahpekute bands of the Dakota tribe, accompanied by a large cohort of family members.<sup>9</sup>

They had come to negotiate a treaty that would allow white settlement on an enormous triangle of land that lay west of the Mississippi River, east of the Minnesota and Blue Earth Rivers, and north of the Iowa border--including the land that would one day become UMore Park. Although the U.S. had theoretically acquired rights to this land as part of the Louisiana Purchase nearly fifty years earlier, the federal government had conceded to the native dwellers a right to occupy, but not to own the land they lived on. Before conveying the property to white settlers, the government customarily sought to negotiate treaties through which the tribes ceded their right to occupancy in exchange for a nominal financial consideration.<sup>10</sup>

The negotiations at Mendota got off to a shaky start. The Dakota leaders, accustomed to doing business in the open air, found the atmosphere inside the crowded, dark warehouse to be stifling, and requested that the meeting be conducted outdoors. Government representatives, anxious to proceed with the negotiations, agreed to move the discussion to a level area just below nearby Pilot Knob, where the meeting continued beneath a hastily erected arbor that had been lashed together out of saplings and brush.<sup>11</sup>

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<sup>8</sup> W.H. Mitchell, *Dakota County: Its Past and Present, Geographical, Statistical and Historical* (Minneapolis: Tribune Printing Company, 1868), 48-49.

<sup>9</sup> Much of the information in this section is derived from an account of the proceedings that appears in Curtiss-Wedge, *History of Dakota and Goodhue*, 76-88.

<sup>10</sup> Samuel Trask Dana, John H. Allison and Russell N. Cunningham, *Minnesota Lands: Ownership, Use and Management of Forest and Related Lands* (Washington, D.C.: American Forestry Association, 1960), 63, 67.

<sup>11</sup> Curtiss-Wedge, *History of Dakota and Goodhue*, 76-77.

The deliberations did not go smoothly even after the change of venue. The land in question was extraordinarily abundant, bountiful, and desirable, and tribal leaders were understandably reluctant to give it up, as historian Franklyn Curtiss-Wedge explained:

The Dakota Indians were in possession of an empire that the whites urgently demanded, and in possessing ourselves of it, we took from them their means of subsistence, giving them no adequate return. The area . . . consisted of . . . million[s of] acres of the most fertile lands of the Mississippi and Minnesota valleys. Governor Ramsey . . . speaks of the territory . . . : “It is so diversified in natural advantages that its productive powers may be considered almost inexhaustible. Probably no tract on the face of the globe is equally well watered. . . . A large part is rich, arable land; portions are of unsurpassed fertility, and eminently adapted to the production in incalculable quantities of the cereal grains. The boundless plains present inexhaustible fields of pasturage, and the river bottoms are richer than the banks of the Nile.”<sup>12</sup>

Other issues had to be worked out as well. Part of the debate focused on the location and extent of proposed reservation lands. In addition, both sides wanted to settle past accounts before forging any sort of new compact. Dakota leaders complained that they had never received payments promised as part of earlier agreements. And a number of white fur dealers saw the negotiations as an opportunity to extract, “by fair means or foul,” repayment for credit that they had extended to the Indian hunters who provided them with their stock in trade.<sup>13</sup>

After four days of intense discussion, the conversations reached an impasse. Talks were temporarily suspended, and government officials set to work to revise the treaty. At eleven o’clock on the morning of 5 August, the two sides reconvened. After a day of impassioned speeches, Dakota leader Little Crow stood up, stepped to the table and made his mark on the treaty document. He was quickly followed by the other tribal leaders, sixty-five in all. In exchange for approximately \$1.4 million dollars, to be paid out in annuities over the next fifty years, the Mdewakanton and Wahpekute ceded their rights to occupy the land, and agreed to relocate to a reservation on the Minnesota River near present-day Redwood Falls.

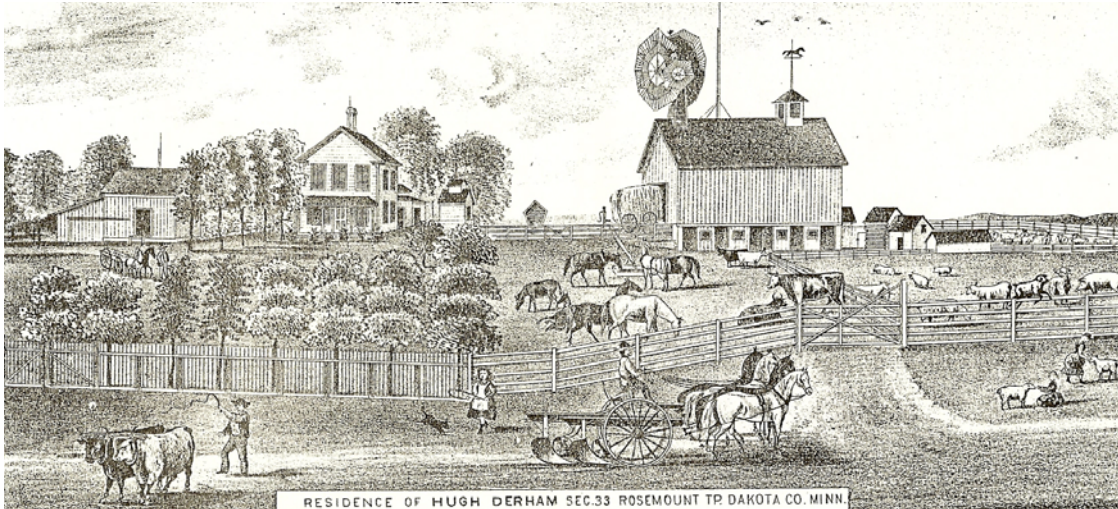
Even though the Treaty of Mendota had been signed by negotiators, it would not go into effect until it had been formally approved by the federal government, and that process dragged on for nearly two more years. Signed copies of the treaty documents were sent to Washington soon after the gathering at Pilot Knob. The U.S. Senate passed an amended version on 23 July 1852, and it was returned to Mendota for approval by Dakota leaders. They reluctantly approved the document on 4 September, and the treaty was finally signed into law by president Millard Fillmore on 24 February 1853.<sup>14</sup>

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<sup>12</sup> Ibid., 40.

<sup>13</sup> Blegen, *Minnesota*, 169.

<sup>14</sup> Curtiss-Wedge, *History of Dakota and Goodhue*, 87.



**Figure 3.** *The Hugh Derham farm in the northwest corner of the UMore property, ca. 1874. From Andreas, Illustrated Historical Atlas of the State of Minnesota.*

### **“The Magic Wand of Civilization Has Been Moved Over the Prairies”**

The Treaty of Mendota had been signed, sealed and delivered by early 1853. But one more step remained before settlement could begin. The newly opened land had to be surveyed and recorded at the Public Land Office. Once this process had been completed, it could be offered for public sale.<sup>15</sup>

The layout of guide meridians and standard parallels through Dakota County began in 1853. The next summer, a survey crew consisting of John Ryan, Jesse Jarrett and E.S. Norris traversed the area that is now UMore Park, measuring it out into precise square mile sections. The original surveyors’ maps depict a landscape predominated by unbroken prairie with a single, gently winding trail extending from north to south along its eastern edge.<sup>16</sup>

The first settlers arrived in the vicinity of present day UMore Park later the same year. Among them were C.R. Rollins and the Amidon brothers, who set up housekeeping on the banks of Vermillion River near the site of present day Farmington, and began preparing the land for cultivation. The big rush began the following summer. By the fall of 1856, nearly all the public land in Dakota County had been spoken for. “The prairie was dotted all over with claim shanties, remembered Mitchell, “and soon some comfortable dwellings were to be seen.”<sup>17</sup>

Most of the new arrivals were Irish—refugees from the potato famine who had arrived in the northeastern part of the American continent and worked their way west to Minnesota, stopping in Ohio, Illinois, and Iowa along the way. Their surnames reflected their point of origin--Fitzgerald, Murphy, Mahoney, Tierney, Derham--and so did the names they assigned to their new surroundings. When Dakota County commissioners were

<sup>15</sup> Dana, Allison, Cunningham, *Minnesota Lands*, 15.

<sup>16</sup> Simpson, “The Early Government Land Survey in Minnesota,” 62. The surveyors’ maps for T114-T115N, R19W, Fifth Meridian, 1854, are available on the web at [www.lmic.state.mn.us/surveydata/dako](http://www.lmic.state.mn.us/surveydata/dako).

<sup>17</sup> Curtiss-Wedge, *History of Dakota and Goodhue*, 131; Mitchell, *Dakota County*, 89.

empowered to establish political subdivisions after Minnesota achieved statehood in 1858, the townships that now contain UMore Park were named “Rosemount”—after “a picturesque village of that name in Ireland;” and “Empire”—after one family’s first American home in upstate New York.<sup>18</sup>

For a few years, the newcomers coexisted side by side with the original occupants of the land. Although the Mdewakanton had been officially relegated to the Lower Sioux reservation on the Minnesota River, their forced move was by one account “intermittent, interrupted, and extended over a period of several years.” Many Mdewakanton simply continued to live in their long established encampments, visiting the reservation only once a year to collect their annuities. “In the early days,” recalled one pioneer, “the Indians were very numerous, and hundreds would frequently make their camping ground on the farms of the settlers.” But by the early 1860s, all but about twenty Dakota families had taken up residence on the reservation, and Dakota County boasted the largest number of rural Irish in the state.<sup>19</sup>

By the mid-1860s, the Mdewakanton people had been displaced, the land had been occupied by new tenants, and the underpinnings of a completely new social order were rapidly being put into place in rural Dakota County. Historian W.H. Mitchell marveled at the transformation that had taken place in just a few short years:

The magic wand of civilization has been moved over the prairies . . . and behold the change. Art and science have combined with the spirit of modern energy and enterprise, and covered the face of the country with cultivated fields and flowering gardens; has made roads and built bridges, and dotted the prairies with pleasant dwellings for homes, and elegant school houses for the education of the rising generation, and has reduced the wilderness to enclosed fields, [and] thriving villages.<sup>20</sup>

### **“There Was Wheat Everywhere”**

As Mitchell suggests, during the early settlement period, there was a dramatic and tangible transformation in the essential character of the land itself. The European-American pioneers who flocked into Dakota County in the late 1850s found themselves surrounded by a vast expanse of virgin prairie—unbroken and virtually untouched. But they had come to farm. In order to realize that goal, they set to work preparing the land for cultivation, using teams of oxen and special “breaking plows” to slowly and laboriously slice through the thick layer of sod, turning it over to expose the rich, dark soil that lay beneath.<sup>21</sup>

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<sup>18</sup> Ann Regan, “The Irish,” in June Drenning Holmquist, ed., *They Chose Minnesota: A Survey of the State’s Ethnic Groups* (St. Paul: Minnesota Historical Society Press, 1981), 130, 133; Curtiss-Wedge, *History of Dakota and Goodhue*, 163, 329, 439.

<sup>19</sup> Curtiss-Wedge, *History of Dakota and Goodhue*, 87; Mitchell, *Dakota County*, 90.

<sup>20</sup> Mitchell, *Dakota County*, 49.

<sup>21</sup> Merrill E. Jarchow, *The Earth Brought Forth: A History of Minnesota Agriculture to 1885* (St. Paul: Minnesota Historical Society, 1949), 124.

The first crop planted by the pioneer farmers of Rosemount and Empire townships was wheat. Dakota County had demonstrated its potential as a wheat producing area as early as 1831 when Joseph R. Brown planted one of Minnesota's first wheat crops on his farm near Hastings. Seed wheat from Iowa arrived with some of the first settlers, and was widely available for about \$2.25 a bushel. Perhaps most important to the new farmers arriving in Dakota County, wheat production required little in the way of equipment or experience. "Wheat," writes agricultural historian David Danbom, "was the premier lazy man's crop, taking little labor to produce."<sup>22</sup>

It was also almost immediately profitable. "Wheat was the great cash crop," observed Merrill Jarchow in his history of early Minnesota agriculture, "It opened the way to fortune." This was particularly true for farmers located near shipping points on major waterways, where wheat was collected and transported to eager markets further east. For the pioneer farmers of Empire and Rosemount Townships, the nearest market town was Hastings, located on the Mississippi just a half day's journey away. One visitor to that village in 1859 reported that "there was wheat everywhere; wheat on the levee, wheat on the streets; wheat in the side-walks; warehouses of wheat; men talking of wheat; and verily, wheat was the one idea of Hastings the afternoon we arrived there."<sup>23</sup>

Blessed with an abundance of fertile soil, a burgeoning number of farms, and easy access to important transportation links and market outlets along the Mississippi and Minnesota Rivers, Dakota County quickly emerged as a major center for wheat production, shipping in excess of 100,000 bushels a year by 1860.<sup>24</sup>

The area's strategic advantage improved even more during the 1860s, with the arrival of two railroads. The Chicago, Milwaukee and St. Paul completed a north-south line through Empire and Rosemount Townships in 1864, erecting a 40,000 bushel grain elevator in Rosemount three years later. The Hastings and Dakota Railroad completed an east-west line through the area in 1869. During this same period, the process of wheat production became significantly more efficient with the advent of mechanical threshing machines. At least one steam powered thresher was operating in the UMore Park vicinity by the end of the decade. These events coincided with a significant spike in wheat prices brought about the Civil War, and with the early development of Minnesota's milling industry, providing an unprecedented market for the grain produced by Dakota County farmers.<sup>25</sup>

Hoping to seize the opportunity presented by the rapidly rising demand for grain, farmers rushed to increase production by putting more and more of their land into cultivation. In 1868 alone, farmers in Empire Township broke 2,800 acres of new land, and farmers in

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<sup>22</sup> David Danbom, *Born in the Country: A History of Rural America* (Baltimore: Johns Hopkins University Press, 1995), 147. Also see Jarchow, *The Earth Brought Forth*, 165, and Mitchell, *Dakota County*, 92.

<sup>23</sup> Jarchow, *The Earth Brought Forth*, 165, 186.

<sup>24</sup> *Ibid.*, 286.

<sup>25</sup> Curtiss-Wedge, *History of Dakota and Goodhue*, 339, 440; Mitchell, *Dakota County*, 105; Jarchow, *The Earth Brought Forth*, 144. According to Jarchow, that machine, owned by Sylvanus Jenkins, who farmed approximately four miles west of UMore Park, was one of the first mechanical threshers in Minnesota.

Rosemount plowed 1,800 acres for the first time. Such rapid increases helped make Dakota County one of the leading wheat producing counties in the state by 1870, with an output of nearly a million and a half bushels a year. A decade later, almost eighty per cent of the land in Dakota County was “under tillage or otherwise improved for agriculture.”<sup>26</sup>

### **“The Queen of Minnesota Counties”**

By 1880, farmers in southeastern Minnesota had been raising wheat for more than twenty years. The one-crop system had begun to deplete the soil and occasionally disastrous years such as 1878, when the plants were afflicted with stem rust, excessive rainfall and unusually high temperatures, had made farmers acutely aware that they needed to abandon their reliance on wheat.<sup>27</sup>

For some families in the area, this meant abandoning their farmsteads and heading further west, where the Homestead Act and the expansion of the railroads were opening vast new areas of fresh land for wheat production. The rural population of Dakota County actually declined during this period, and some of the farmland in Empire and Rosemount Townships that had once been an exclusively Irish enclave, was now occupied by families with surnames like Shaeffer, Klaus, Stapf, Schultz and Schurmeier.<sup>28</sup>

Those who remained in Dakota County sought a scientific solution to the problem of soil exhaustion. Of particular interest was the concept of diversified farming—making each farm into a self-sustaining agricultural ecosystem that yielded products throughout the year, and that could withstand the ravages of weather, infestation and disease that were often catastrophic for a single-crop system. Farmers practicing diversification learned to replenish the soil by planting a carefully selected variety of crops in a planned rotation, and supplementing crop production with livestock--raising hogs, sheep, and the so-called “dual purpose cow.” The animals consumed grain and forage crops and provided milk, meat and manure to feed both the farmer and the fields.<sup>29</sup>

Farmers in the UMore Park area had already demonstrated a longstanding interest in progressive methods of agriculture, forming the Dakota County Agricultural Association in 1858. The Association was regarded as one of the most prominent such organizations in the state, and like other groups, it served a crucial function during the early years of Minnesota farming, bearing, as the prominent agricultural historian Earle Ross observed,

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<sup>26</sup> Ibid., 20, 186; Mitchell, *Dakota County*, 55-56.

<sup>27</sup> Steven J. Keillor, *Cooperative Commonwealth: Co-ops in Rural Minnesota, 1859-1939* (St. Paul: Minnesota Historical Society Press, 2000), 101-102.

<sup>28</sup> Edward Van Dyke Robinson, *Early Economic Conditions and the Development of Agriculture in Minnesota: University of Minnesota Studies in the Social Sciences, Number 3* (Minneapolis: University of Minnesota, 1915), 113. Also see plat maps of Rosemount and Empire Townships published in B.F. Pinkney, *Minnesota: Drawn from Actual Surveys and County Records* (Philadelphia: Union Publishing Company, 1896).

<sup>29</sup> Howard Leigh Dickman, “James Jerome Hill and the Agricultural Development of the Northwest,” Unpublished Ph.D. Dissertation, University of Michigan, Ann Arbor, 1977, 68.



“the whole burden of agricultural experimentation, instruction, extension and recreation.”<sup>30</sup>

During the 1880s, the Dakota County Agricultural Association got some important new allies in the quest to improve farming practices and profitability in southeastern Minnesota. One partner was the railroad baron James J. Hill, who saw diversification, or “permanent farming” as he called it, as the key to prosperity not only for the farmers, but also for his rapidly expanding rail empire, which derived much of its income from the transportation of agricultural commodities. Hill’s advocacy for diversification was not simply an abstraction. For nearly forty years, he applied his own resources to the practice and promulgation of diversification—using his extensive farms to develop and publicize new, more efficient livestock breeds and genetically superior types of feed and forage crops, supporting veterinary research, and creating a system of farm credit.<sup>31</sup>

The other ally was the still-nascent University of Minnesota College of Agriculture. Spawned by passage of the 1862 Morrill Act, but not established until after the Civil War in 1867, the new program had initially struggled to attract students willing to come to St. Paul “to learn farming from books.” Frustrated administrators finally decided to take the program on the road in 1886, offering the first in a series of popular “Farmers Institutes” under the leadership of Oren C. Gregg. A progressive farmer and devout Methodist lay minister, Gregg traveled the state for the University, preaching his own gospel of diversification. Biographer Roy Scott explains:

Somewhat earlier than other farmers, Gregg recognized that over reliance on wheat farming could only lead to soil exhaustion and poverty. Consequently he resolved to break with tradition and to engage in “progressive dairying” with a particular interest in developing ways to keep cows producing milk throughout the winter months.<sup>32</sup>

Farmers in the UMore Park area heard the preaching, and during the 1880s and 1890s, they made significant changes in the way they farmed, replacing a sea of wheat with dairy barns, hog lots, and fields full of fresh vegetables. They were especially well situated to extract full benefit from the practice of diversification. Calling Dakota County “the queen of Minnesota counties,” an admiring newspaper editor noted that the area was

Fortunate in not only having good soil but in being . . . close to the Twin Cities, where more than half a million of the highest wage-earning people in the world are fed. Meat, butter, milk, cream, eggs, potatoes, and all kinds of garden truck produce [are] shipped and hauled in wagons from this county and sold at the highest price anywhere.<sup>33</sup>

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<sup>30</sup> Quoted in Jarchow, *The Earth Brought Forth*, 245. Also see page 248.

<sup>31</sup> Dickman, “James Jerome Hill,” 71.

<sup>32</sup> Roy Vernon Scott, “Pioneering in Agricultural Education, Oren C. Gregg and Farmers’ Institutes,” *Minnesota History* 37:1 (March 1960), 21.

<sup>33</sup> David Schreier, *Picturing the Past: Events that Shaped Dakota County in the Twentieth Century* (South S. Paul, MN: Dakota County Historical Society, 2003), 53. The quotation is attributed to an article written in 1912 by Hamilton Clay, Sr., editor of the *Dakota County Tribune*.

The University of Minnesota continued to play an important role in the life of Dakota County farmers through the early decades of the twentieth century. In 1909 the Minnesota legislature passed the Hackney Bill, phasing out the Farmers' Institutes and mandating the creation of a "division of agricultural extension . . . in the department of agriculture at the University of Minnesota." The new entity continued to provide local farmers with information about the latest advances in scientific agriculture. With passage of the federal Smith-Lever Act in 1914, Dakota County became one of the first counties in the state to hire a full time extension agent as part of the new partnership between the University and the United States Department of Agriculture.<sup>34</sup>

### **Hard Times**

During the second decade of the twentieth century, the precepts of scientific agriculture and diversification were put to a test. In 1917, the United States entered the world war in Europe. In August of that year, Congress passed the Emergency Food Production Act, initiating a new system of price controls, bolstering the Agricultural Extension Service as a means of fostering the use of improved farming methods, and encouraging farmers in Dakota County and elsewhere to "plow to the fence for defense" in order to increase food production to unprecedented levels.<sup>35</sup>

For a few years this policy worked well. In 1918 alone, Minnesota farmers increased wheat production by seventy percent, harvested the state's largest-ever corn crop, and marketed fifteen percent more hogs than ever before. Spurred by continuing high demand from beleaguered foreign consumers, commodity prices soared—with some doubling from pre-war levels. Land values moved steadily upward, and farmers basked in prosperity. "It seemed that nothing could go wrong for the farming community," writes economic historian Willard Cochrane.<sup>36</sup>

But in 1920 the bottom dropped out of the market. "The war," writes University of North Dakota historian D. Jerome Tweton, "had created only short-term demand." Foreign markets shriveled up as European farmers got back on their feet. And there was new competition from Argentina, Canada, and Australia. American farm prices plummeted, and the nation's farmers were plunged into a recession. Dakota County lost more than five per cent of its farms between 1920 and 1930. Still, area farmers were in a better position than some, notes local historian David Schreier, "Diversification and self-sufficiency made that possible."<sup>37</sup>

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<sup>34</sup> Roland H. Abraham, *Helping People Help Themselves: Agricultural Extension in Minnesota, 1870-1979* (St. Paul: University of Minnesota Extension Service, 1986), 235. Also see Schreier, *Picturing the Past*, 59.

<sup>35</sup> David Danbom, *The Resisted Revolution: Urban America and the Urbanization of Agriculture, 1900-1930* (Ames, IA: Iowa State University, 1979), 102; D. Jerome Tweton, "The Business of Agriculture," in Clifford Clark, ed., *Minnesota in a Century of Change: The State and its People since 1900* (St. Paul: Minnesota Historical Society Press, 1989), 262.

<sup>36</sup> Cochrane's quote appears in Susan Granger and Scott Kelly, "Period 4: Industrialization and Prosperity, 1900-1920," *Historic Context Study of Minnesota Farmsteads, Volume I*. Unpublished draft historic context study. Prepared for the Minnesota Department of Transportation, 30 June, 2005, page 4.43.

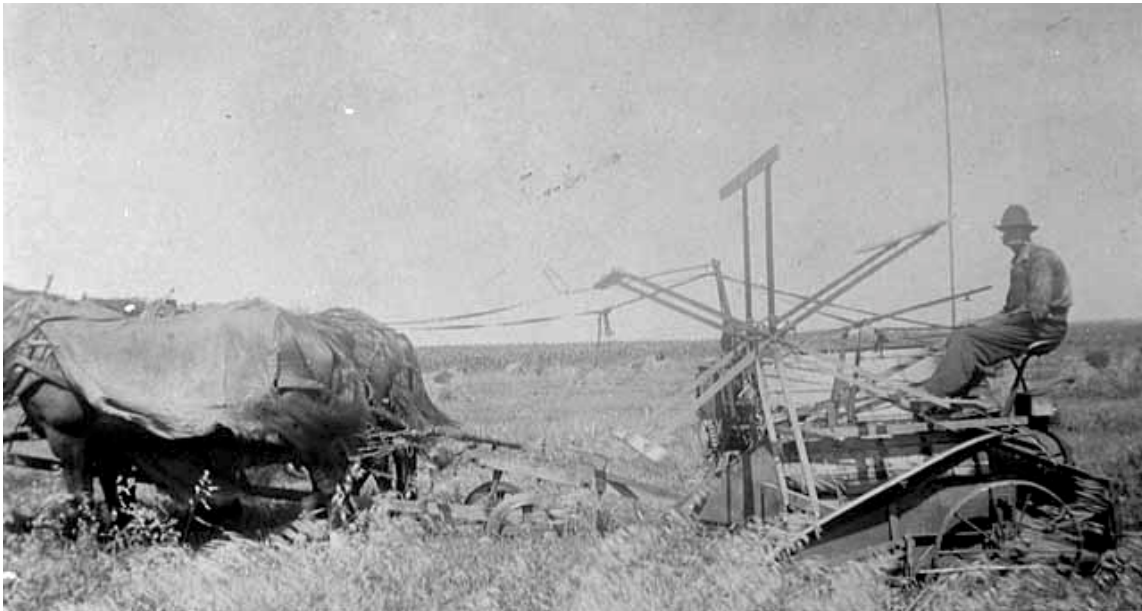
<sup>37</sup> Tweton, "The Business of Agriculture," 262-263; Schreier, *Picturing the Past*, 74-75.

But there was more to come.

On “Black Monday,” 29 October 1929, a meltdown in the stock market plunged the nation into a severe and enduring economic depression. Over the next few years farm income in Dakota County fell by sixty percent and farm bankruptcies reached an all-time high as area farmers were beset by a seemingly endless series of natural calamities. The problems began in 1931 with the onset of a serious drought, writes Schreier.

Intense heat and lack of rain caused a light grain crop, and threshing began at the end of July, weeks earlier than in preceding years. The county corn crop was failing. Having no choice, farmers cut what remained of the corn crop and began filling their silos in late July. The dry spell broke all records. . . . The drought meant disaster. Feed for dairy cattle was exhausted before spring, creating a desperate need for emergency relief. The Extension program and the Farm Bureau extended more than \$30,000 worth of aid to county farmers in 1932, most in the form of feed, flour, seed, and feed loans.<sup>38</sup>

Although every part of the county received aid, farmers in Empire Township were particularly hard hit, receiving 91,300 pounds of feed and \$2,442 in seed loans.



**Figure 4.** *Jim Corrigan cutting grain on his farm in section 33, Roseville Township, 1932. Minnesota Historical Society.*

The situation grew worse in 1932, when a plague of grasshoppers descended on the county. In 1934, an infestation of cutworms decimated the corn crop. The drought returned with a vengeance in the summer of 1936. “Pastures in all parts of the county were dried out,” writes Schreier,

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<sup>38</sup> Schreier, *Picturing the Past*, 74-76.

And farmers had to feed their dairy cattle hay, silage, and grain feeds to keep them in production. New seedlings of clover and alfalfa were all killed out, and no farmers had a second cutting of hay. Some farmers, hoping for rain, disked their old grain fields and planted them with oats or rye to be used as fall pasture.<sup>39</sup>

Beginning in 1933, with passage of the first Agricultural Adjustment Act, the federal government intervened on behalf of farmers, creating a succession of new programs designed to stabilize prices, control production, conserve soil and water, and increase access to credit. By the end of the decade, these measures were helping to bring the depression to a close. But a significant transformation had taken place in agriculture. Farmers in Dakota County, like farmers in other parts of the country, were finding themselves to be increasingly reliant on farm programs provided by the federal government.

### **The Nation Prepares for War**

As the end of the economic depression appeared on the horizon, the federal government was beginning to deal with a crisis of another sort. By the late 1930s much of Europe was already engaged in a rapidly escalating war, and it was beginning to seem increasingly likely that the United States would eventually be drawn into the fray. American military planners realized that the nation was not prepared to fight.

With this in mind, president Franklin Roosevelt initiated a massive mobilization effort. His priorities included a concerted effort to rebuild the nation's arms production capacity, which had diminished greatly through the 1920s and 1930s. "Although the United States constructed an extensive munitions manufacturing network during World War I," explains industrial historian Jeffrey Hess,

Few facilities survived the country's 'return to normalcy' and disarmament of the 1920s. The dismantling of powder and explosives works was particularly thorough. By the mid-1930s, there were only four active plants for manufacturing single-base smokeless powder, which was the primary propellant for American military ammunition.<sup>40</sup>

Two of the facilities, the Army's Picatinny Arsenal in New Jersey, and the Navy's Indian Head Plant in Maryland, were owned and operated by the federal government. The other two, both located in New Jersey, were owned by private corporations—one by the Hercules Powder Company, and the other by E.I. du Pont de Nemours and Company. The combined capacity of the four plants was barely equal to the task of supplying the nation's peacetime needs. Commenting on this predicament a few years later, Secretary of War Henry L. Stimson recalled "We didn't have enough powder in the whole United States to last . . . for anything like a day's fighting." To remedy the situation, the

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<sup>39</sup> Ibid., 77.

<sup>40</sup> Jeffrey A. Hess for MacDonald and Mack Partnership, "Historic Properties Report, Indiana Army Ammunition Plant, Charlestown, Indiana. Unpublished draft Historic American Buildings Survey/Historic American Engineering Record report, April 1984, page 15. Copy on file at MacDonald and Mack Architects, Minneapolis, MN.

government in 1937-1938 asked Hercules and du Pont to prepare engineering specifications for a series of new ordnance production plants.<sup>41</sup>

Two years later, with the specifications in hand, the War Department launched an ambitious program to rebuild and expand the nation's defense capabilities. According to the new plan, the government would finance and own the nation's armament manufacturing plants, but they would be designed, built, and operated by some of the nation's largest industrial companies. It was hoped that these plants, dubbed "Government Owned, Contractor Operated" (GOCO) facilities would put the buildup of the nation's arms production capacity on the fast track

As the nation's defense mobilization got under way, many Minnesotans remained steadfastly opposed to U.S. involvement in the war. But with the beginning of the new decade, the tide of public opinion was beginning to change—in part for economic reasons. The federal government was spending tens of billions of dollars preparing for war, and some Minnesota leaders wanted a piece of the pie. One of them was governor Harold Stassen, elected by disgruntled voters in 1938 to replace Elmer Benson, who had presided over the state through most of the Great Depression. Concerned that Minnesota was "not securing her full share of defense contracts," Stassen appointed a full-time lobbyist to plead the state's case in Washington, D.C. The governor wanted the new advocate to focus primarily on convincing the War Department to select Minnesota locations for some of the GOCO plants.<sup>42</sup>

That effort quickly bore fruit. Between mid-1940 and March, 1941, the value of federal defense contracts in Minnesota increased from about \$500,000 to almost \$40 million. On 28 August 1941, ground was broken for Minnesota's first GOCO plant—the Twin Cities Ordnance Plant at New Brighton. By the end of the year, the War Department was spending more than half a billion dollars on defense contracts in the state, and the number of manufacturing jobs had increased by nearly one-third.<sup>43</sup>

### **Acquiring the Land for a Second Defense Plant: "We didn't think the government had that kind of power."**

Although the New Brighton Ordnance Plant had been a hard-won prize for Minnesota, its location conformed almost perfectly to a set of site selection criteria that the War Department had established for the new GOCO facilities. It was situated in the middle of the country, far away from any danger of enemy attack. It occupied a vast expanse of level, open former farmland. It was near a large potential labor force. It had an abundant supply of water--a critical component in the manufacturing process--and transportation systems and other industrial infrastructure were already in place. New Brighton was just the kind of place the War Department had been seeking. What's more, the Twin Cities

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<sup>41</sup> Patricia L. Dooley, "Gopher Ordnance Works: Condemnation, Construction and Community Response," *Minnesota History* 49:6 (Summer 1985), 217; Hess, "Indiana Army Ammunition Plant," 15.

<sup>42</sup> Dooley, "Gopher Ordnance Works," 218.

<sup>43</sup> Ibid. Dave Kenney, *Minnesota Goes to War: The Home Front during World War II* (St. Paul: Minnesota Historical Society Press, 2005), 5-6.

area had a number of such places--something that was apparently not lost on defense plant planners.

“In March 1942,” writes war historian Dave Kenney,

Dozens of farmers just south of Rosemount . . . started noticing lines of strange cars ‘poking their way along the gravel roads.’ The cars drove slowly back and forth, stopping occasionally as the people inside gazed out their windows at the flat farmland. Rumors started spreading. The country was at war, the government must be looking over land for a military airfield.<sup>44</sup>

The scuttlebutt, as it turned out, was wrong. On the last day of March, federal officials called a public meeting in Farmington to announce that 11,500 acres of prime farmland in Empire and Rosemount Townships were about to be acquired by the War Department as the site of Minnesota’s second government-owned, contractor-operated defense plant. The new facility would be called the Gopher Ordnance Works. This is the area now occupied by UMore Park.<sup>45</sup>

In early April, a federal district court gave the government authority to take immediate possession of the land, a move that would require eviction of the eighty-four families whose farms lay within the project boundaries. Included in this group was one family that had settled in Dakota County after being displaced by construction of the New Brighton Ordnance Plant just a few months earlier. Appraisals began almost immediately. The first group of farmers was to vacate their property by 6 May, and the last group was to be off the land by the first of June. Herman Ratzlaff, who drove a milk truck for the Twin City Milk Producers Association, reported that the move would affect all but three of the customers on his route.<sup>46</sup>

A few weeks after the initial announcement, a soon-to-be-displaced farmer named Thomas Corrigan described the character of the land and its people this way:

The site selected by the United States War Department for the Gopher Ordnance plant can truly be called ‘the Garden Spot of Minnesota.’ This site consists of a rectangular area near Rosemount, embracing approximately 11,500 acres of rich, level well drained black loam soil. This area is probably one of the most versatile farming areas to be found in the entire Northwest. Wisconsin is known for its grass and dairy farms; Iowa, its bumper corn crops and feedlots; North Dakota has its wheat and flax fields and its elevators, while other states are adapted to vegetable farming, yet within these 18 sections of land all of these enterprises flourish. Much of the milk produced from the splendid dairy herds is sold in the

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<sup>44</sup> Ibid., 183. Kenney quotes from “Many Farms Change Hands,” *Dakota County Tribune*, 10 April 1942.

<sup>45</sup> Dooley, “Gopher Ordnance Works,” 215; 218-219.

<sup>46</sup> Gerald Mattson, Maureen Geraghty Bouchard, and Russ Withrow, “A History of the Gopher Ordnance Works: Dawning of a War-Boom Community,” *Over the Years* (Dakota County Historical Society) 41:1 (July 2001), 6-7. Also see “16,000 Workers to Build New Arms Plant,” Unattributed newspaper clipping dated 3 April 1942. On file at the Dakota County Historical Society, South St. Paul, MN. Subsequent references to unattributed materials included in this collection will be cited as “DCHS.”

Twin Cities as bottle milk. . . . Feedlots exist throughout the entire area, some farms having in excess of 150 head of fattening cattle while hogs are produced in droves. . . . Flax is a major crop on this land. Over 800 of these acres are set aside for the raising of peas. . . . About 50% of the farms of this area raise sweet corn for a nearby canning factory [the Minnesota Valley Canning Company], some farms as much as 40 and 50 acres. The average size of the farms is 160 acres of which every acre is farmed intensively. Yields of 100 bushels of corn per acre are not uncommon to these farms. The huge barns, the tall silos, the large granaries and corn cribs stand as monuments to the productive capacity of the fertile soil. Much of this land has been in families for years, passing on from one generation to another; it has not been for sale. Its present operators regard it as a heritage to conserve. Is it any wonder then that these people are disheartened when they are asked to leave the land they love so dearly? Yet their patriotism rises . . . manifested by not a single tone of bitterness nor a single act of resentment but rather the universal sentiment of willingness to make the sacrifice if it will help to win the war.”<sup>47</sup>

Not everyone shared Corrigan’s sense of wistful resignation, however. Although the War Department required property owners to vacate their land almost immediately, it provided nothing that would help them move or get established in a new location. Meanwhile, land prices on the few Dakota County farms that were available for sale soared out of sight, and many farmers quickly discovered that the compensation offered by the government would not enable them to purchase new farms. In early May, a large contingent of local property owners joined forces to challenge the low prices being offered for their land. This challenge eventually evolved into a round of bitter and protracted litigation that lasted almost as long as the war itself.<sup>48</sup>

More than half a century after the fact, feelings of pain and betrayal were still fresh in the minds of some of the people who had been given just six weeks to abandon their farms. “We didn’t think the government had that kind of power” said one. Another recalled simply, “it was a raw deal.”<sup>49</sup>

### **Building the Gopher Ordnance Works: “All the Familiar Landmarks Are Gone”**

Site preparation for the Gopher Ordnance Works began in early May of 1942, as soon as the first farm families had vacated their homes. The government started to work in the same way the first white settlers had nearly a century earlier—by clearing the land. Most of the farm buildings that dotted the landscape within the project area were removed to make way for the new plant. Some were simply demolished. Eighty-nine others,

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<sup>47</sup> Thomas L. Corrigan, “A Tribute to the Land Selected for the Gopher Ordnance Plant,” 17 April 1942, DCHS.

<sup>48</sup> Mattson, *et al.*, “A History of the Gopher Ordnance Works,” 7. For a detailed account of the impact on local landowners, see Dooley, “Gopher Ordnance Works,” 214-228.

<sup>49</sup> The first comment is attributed to 78 year-old Marie Jensen. See Joe Carlson, “U-Owned Property Spawns Debate,” *Minnesota Daily*, 2 February 1998. The second comment, attributed to Margaret Peine, appears in Kenney, *Minnesota Goes to War*, 185.

including nine houses and eleven barns, were sold at auction and hauled to new locations.<sup>50</sup>

Final contracts with du Pont were signed in mid-June, and powder production was scheduled to begin in January 1943. It would require enormous amounts of labor to meet this ambitious timeline. By September nearly 20,000 construction workers were busy at the site, placing an enormous burden on the nearby village of Rosemount. Mary Hynes, a member of one of the dislocated families, recalled in a 1988 interview that “after they started work on the plant, the roads were black with cars going to and from work mornings. Rosemount was just an entirely different community. It’s never been the same since.” Another former resident of the area recalled that “The only thing that really prospered was the liquor store, I guess.”<sup>51</sup>

The impact on the landscape within the Gopher site was immediate and dramatic. “Great changes have taken place [in the project area] and nearly all of the familiar landmarks are gone,” wrote Rural Electric Association manager C.H. Gelder in July.

No more are the fine dairy farms and beautiful acres of crop lands. Instead, the ground has nearly everywhere been torn up with huge holes and excavations for buildings. Even the roads which we have known for so long are being torn up and soon not even a trace of them will remain. In place of them there will be streets connecting hundreds of buildings and railroad tracks everywhere are being laid to provide for the transportation of raw materials and manufactured goods. The electric lines we only recently constructed and serving many of the farms within the area are almost gone. The other day a section of our line was being dismantled by a group of workmen and I stopped awhile to watch the work. At one place the line had been left hanging over one of the poles near a road so that the traffic could pass under and thus avoid damage. I noticed a few birds resting on the sagging wires as though they realized this was their last chance. Soon there will not even be any birds left there and all other wild life will have to move to different quarters. Instead of the familiar farm noises there is now only the noise of trucks, excavating machinery, the saw and the hammer. Even the trees will soon be all gone and the ground leveled off without a trace of what was only a few days ago one of the finest farming communities in the state.<sup>52</sup>

As the sitework progressed, one of the first new features to be completed was a graveled patrol road that defined the perimeter of the new plant. Adjacent to the road was a barbed

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<sup>50</sup> Dooley, “Gopher Ordnance Works,” 224-225; Mattson, *et al*, “A History of the Gopher Ordnance Works,” 8.

<sup>51</sup> Wayne Wangstad, “Powder Plant Now Monument to War-Torn Past,” *St. Paul Pioneer Press-Dispatch*, 26 October 1988; Dooley, “Gopher Ordnance Works, 224-225. While du Pont had primary responsibility for designing the production lines and structures at the Gopher Ordnance Works, the company also worked on the plans with Tolz, King and Day of St. Paul, a local architectural and engineering firm. The U.S. Army Corps of Engineers, Omaha District, was placed in charge of the construction of the plant. See “U.S. to Buy Land Near Rosemount,” n.d., DCHS.

<sup>52</sup> “C.H. Gelder, R.E.A. Manager, Tells How Farm Land Has Changed Into Big Project,” *Dakota County Tribune*, 31 July 1942. Subsequent references to the *Tribune* will be cited as “DCT.”



wire security fence punctuated at regular intervals by a series of thirty-one elevated guard towers. Within this perimeter, workers built a transportation network that included sixty miles of new roads and seventy-five miles of railroad track.<sup>53</sup>



Laid out according to standard plans, the plant was to have six linear production lines—three for rifle powder (lines A, B, C), and three for cannon powder (lines D, E, F)—as well as facilities for producing oleum (pyrosulfuric acid) and nitric acid, which were essential to the powder manufacturing process. Raw materials were to enter at one end, and finished powder would emerge from the other. Buildings were to be spaced far apart to prevent a chain reaction from occurring in the event that any individual building

caught fire or exploded.

The copious amount of water needed for steam power and powder processing would be piped in from a series of four innovative “Ranney wells” located near Pine Bend on the Mississippi River, and stored in concrete reservoirs “so big they would serve to test speedboats or be giant swimming pools for any town or city.”<sup>54</sup>

Supporting the manufacturing facilities would be a large number of ancillary structures, including two steam power plants, an administration building, laboratories, maintenance shops, warehouses, a hospital, cafeterias, guard quarters, a ballistics range and housing for plant supervisors.

Actual construction of these facilities began with the pouring of enormous amounts of concrete for footings, foundations, floor slabs, and fire and blast walls. Many of these elements were, in the words of an engineer who surveyed the site 35 years later, “overstructured and footings were of a depth and size larger than necessary.”<sup>55</sup>

But if the underpinnings of the GOW buildings were overbuilt, the plant superstructure was intentionally underbuilt. Facilities at earlier ordnance works were designed as so-called “permanent structures,” intended to have a useful lifespan of twenty-five years.

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<sup>53</sup> Mattson, *et al.*, “A History of the Gopher Ordnance Works,” 8-9.

<sup>54</sup> “8,000 Acres Comprise Project,” *DCT*, 23 December 1949. Named for Canadian engineer Leo Ranney, who developed the technology for petroleum applications in the 1920s, each Ranney well consisted of a large central caisson filled by a series of horizontal collection pipes extending into the surrounding aquifer. This configuration maximized the surface area of the subterranean collection system, and helped to provide the enormous quantities of water required for smokeless powder production. See Hess, “Indiana Army Ammunition Plant,” 36-37.

<sup>55</sup> University of Minnesota Office of Physical Planning, “The University of Minnesota Rosemount Property Long-Range Planning Framework,” 78. Unpublished planning report, February 1977. On file at the Minnesota Legislative Reference Library, St. Paul.

The Gopher Ordnance Works, however, was to be the last and largest of the powder production facilities authorized during World War II. By the time construction got under way, urgent construction schedules and shortages of money and material had caused military planners to utilize “temporary construction,” designed to serve for only five years.<sup>56</sup>

In practical terms this meant that wherever possible, wood would be substituted for steel framing in buildings. Brick, concrete, and cement asbestos would replace steel in smokestacks, pipes and water towers. Waterproofing would be provided by roofing felt. Shortly after construction began at Gopher, further restrictions were imposed, requiring the use of sheet metal instead of clay tile for fireproof exterior walls, gypsum wallboard instead of plywood for interior partition walls, and single-story construction to cut down on the use of lumber. Thus, as the Gopher Ordnance Works began to appear on the landscape, it took on the aspect of an enormous industrial shantytown, with hundreds of unpainted tarpaper shacks set in a forest of above-ground pipes.<sup>57</sup>

Despite temporary construction and poor quality materials, the Gopher Ordnance Works, eventually became the third most expensive GOCO Ordnance plant erected during the Second World War, with a price tag in excess of \$115 million.<sup>58</sup>

### **From Cotton Bolls to Cannon Balls**

The purpose of this enormous investment was to help increase the nation’s production of “smokeless powder,” the basic propellant for American military ordnance. “The term smokeless powder is a double misnomer,” observes Hess

The material is actually a granulated substance, smokeless chiefly in comparison to black powder, which it replaced as the standard military propellant during the late nineteenth century. . . . [It derives] its propellant qualities from nitrocellulose. The modern manufacture . . . still resembles the pioneering method developed by the French chemist Vielle in 1886. Vielle treated cotton with nitric acid to form nitrocellulose, gelatinized it with ether or alcohol, and then dried and cut the resulting material into ‘grains.’ Subsequent improvements on Vielle’s method led to the perforation of powder grains to increase surface area and burning rate, and the use of chemical additives as stabilizers and flash retardants.<sup>59</sup>

This, in a nutshell, was the process that was to take place at the Gopher Ordnance Works. It was a process that was accomplished in two main stages, required production lines

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<sup>56</sup> Kimberly L. Lane, “Historic Context for the World War II Ordnance Department’s Government-Owned, Contractor-Operated (GOCO) Industrial Facilities, 1939-1945,” 95. U.S. Army Materiel Command Historic Context Series, Report of Investigations Number 1. Unpublished historic context study, produced for the U.S. Army Corps of Engineers, Fort Worth District, October 1995. Copy on file at the Minnesota State Historic Preservation Office, St. Paul. Subsequent references to this document will be cited as “Kane, ‘GOCO Context.’”

<sup>57</sup> *Ibid.*, 85-86.

<sup>58</sup> *Ibid.*, 13.

<sup>59</sup> See Hess, “Indiana Army Ammunition Plant,” 30.

more than a mile long, and used huge amounts of hot water, as well as an assortment of powerful acids, neutralizers and solvents.

In the first stage cotton lint or wood pulp was dried, mixed with nitric acid and water, then purified through a series of acid boils interspersed with water rinses. The resulting nitrocellulose slurry was then run through shredders that cut the material into particles that could be processed in the powder line. The particles were neutralized with alkaline boils and water rinses, and were combined with other batches to ensure uniformity of composition. The material was then spun in centrifugal wringers where most of the water was removed.<sup>60</sup>

In the second stage of the process, the purified nitrocellulose particles were converted into smokeless powder. The particles were first dehydrated with alcohol and pressed into cylindrical blocks. The blocks were then mixed with solvents to form a gel, and once again pressed into blocks. The new blocks were placed into huge vertical presses where they were extruded through dies to form long, perforated strands. The strands were cut into specified lengths and sent to solvent recovery houses, where hot inert gases were blown through the raw powder to remove excess solvent. From there, the material was dried and mixed with additives designed to control its burn rate. After further drying, the particles were mixed with graphite stabilizers, cleaned in a sieve house and sent off for testing in the ballistics laboratory. If the batch was acceptable, it was blended with other batches to ensure consistency, then moved to a warehouse to await shipping to an arms manufacturing facility.<sup>61</sup>

### **From Cannon Balls to Mothballs and Back Again**

Powder production at the Gopher Ordnance Works was originally slated to begin in January 1943, but construction was hindered by torrential rains during the summer of 1942, as well as by difficulty obtaining needed materials and equipment. These problems delayed the projected opening date to 12 October 1943. By March of that year, when plant construction was about three-quarters complete, a rumor began to circulate that the facility would be shut down. That rumor was confirmed in mid-April, when the War Department, citing a glut of smokeless powder production at other facilities, announced that only three of the six production lines at Gopher would be finished and that the Rosemount plant, along with several others around the country, would “be used only when the need arises.” Following the announcement, nearly 5,000 acres of land in the project area were leased back to Dakota County farmers.<sup>62</sup>

In July 1943, the Gopher Ordnance Works was officially placed on standby status. Construction work came to an abrupt halt, and thousands of workers were laid off, with

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<sup>60</sup> This overview of the production process is based on Mattson, *et al*, “A History of the Gopher Ordnance Works,” 16-19. For a more thorough description, see R.E. Hardy, “Producing Smokeless Powder by 1942 Methods,” *Chemical and Metallurgical Engineering* 49 (April 1942), 77-79.

<sup>61</sup> The concrete spines of the Solvent Recovery Houses, known to area residents at “T-walls,” line County Highway 46, and are among the most prominent remnants of the GOW production lines.

<sup>62</sup> Dooley, “Gopher Ordnance Works,” 227; “Rosemount Project Closing? Reports Differ,” *DCT*, 16 April 1943; “Dismantling Powder Plant,” *DCT*, 28 January 1944; Mattson, *et al*, “A History of the Gopher Ordnance Works,” 11.

only a skeleton crew remaining on site to complete administrative tasks and maintain the buildings. The plant languished for the next six months. Then, on 28 January 1944, the *Dakota County Tribune* reported that the Gopher plant had been declared to be “in excess of needs,” and would be abandoned. The du Pont Company had been ordered to cease all activities on the site, including security and maintenance. The facility was turned over to the Army Corps of Engineers, which hired the Fegles Construction Company of St. Paul to dismantle and salvage equipment and buildings. Over the next several months, Fegles shipped 175 railcar loads of salvaged material to other defense installations around the country. The Gopher plant’s contribution to the war effort seemed to have ended before it began.<sup>63</sup>

But the saga of the Gopher Ordnance Works was not over. By the early summer of 1944, U.S. forces were deeply engaged in a two-front war, fighting the Axis powers in Europe and the Japanese in the Pacific. Unexpectedly heavy use of artillery had created a desperate need to replenish the nation’s powder supply. Just ten days after the D-Day invasion in June 1944, the War Department ordered that the Gopher plant be brought out of mothballs. The du Pont Company was put in charge of the project, which was initially estimated to cost \$6 million.<sup>64</sup>

On 8 December 1944, the *St. Paul Dispatch* reported that the reactivation of the GOW would be expanded by an additional \$60 million in an effort to double the plant’s production capacity. The A, B, and C lines would be reopened and three additional production lines would be constructed. Colonel R.E. Russell, commanding officer at the facility, explained the change in plans this way: “Hell, the war is far from over. The hard fighting is still to come and Eisenhower is crying for ammunition.”<sup>65</sup>

Operations at the plant finally got under way in January 1945, nearly two years after the original target date. Initially, the facility was used to rework powder salvaged from battle areas. On 9 February production of new powder began on the “C” line. The “B” line started up in March, and by the end of the month more than three thousand people were employed at the plant. The “A” line began production in early April, but was only about fifty percent staffed. In fact, persistent and serious labor shortages consistently made it impossible for the plant to operate at full capacity. By the middle of April, the facility had fallen nearly two million pounds short of its production quotas. At the end of the month, the War Production Board announced that the partially-completed “D, E, and F” lines at the plant would not be finished.<sup>66</sup>

The Allied forces declared victory in the European war on 8 May 1945. Within four days, authorities had shut down Gopher’s “A” line. By July, only the “C” line remained

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<sup>63</sup> Ibid. “Rosemount Plant Gets Army Standby Order,” *DCT*, 23 July 1943.

<sup>64</sup> “Gopher Plant to be Shut Down,” *DCT*, 17 August 1945; “War Department Asks Du Pont to Prepare to Open Rosemount Plant,” *DCT*, 8 July 1944; “Rosemount Expansion Costs Huge,” *DCT*, 13 October 1944.

<sup>65</sup> “Plan 60 Million-Dollar Expansion, Rosemount,” *DCT*, 8 December 1944.

<sup>66</sup> Mattson, *et al.*, “A History of the Gopher Ordnance Works,” 12-13; “3<sup>rd</sup> Line Operates at Gopher Ord.,” *West St. Paul Booster and Dakota County Globe*, 6 April 1945; “Gopher Plant Output Cut by Labor Scarcity,” *South St. Paul Daily Reporter*, 19 April 1945; Gustaf A. Nordin, “WPB Plans Cutbacks; Plants Here on List,” *St. Paul Pioneer Press*, 26 April 1945.

in operation due to reduced demand for powder and the ongoing difficulty in finding workers. The plant functioned at greatly diminished capacity through much of that summer. Then, in early August, the United States dropped atomic bombs on the Japanese cities of Hiroshima and Nagasaki. A week later, the *Dakota County Tribune* reported that “sudden peace moves on the part of Japan caused the closing of Gopher Ordnance Works at Rosemount, where half of the 1,800 workers were dismissed on orders from the war department.” The closure was to be phased in slowly to allow for the completion of powder that was already in the process of production, and to enable workers to undertake an orderly decontamination of production lines and equipment. But within a few months it was over. The final batch of powder came off the production line at the Gopher Ordnance Works on 10 October 1945. The machinery ground to a halt, and the workers punched out for the last time.<sup>67</sup>

### **Surplus Property**

As operations at the Gopher plant wound down in the fall of 1945, the War Department announced that the facility would not be retained on standby status, but would instead be put up for sale. The news touched off a flurry of speculation about what would become of the now idle ordnance plant. According to one rumor, du Pont had plans to convert the entire facility into a nylon stocking factory. A group called the Rainbow Veterans sought to remodel portions of the plant into housing for convalescing military personnel. Another veterans’ group wanted to transform the site into a sort of collective farm for returning soldiers. According to this scenario, staff residences in the northwest corner of the property would provide housing; buildings and warehouses in the industrial core would be converted into barns; and the vast acreage elsewhere on the site would be used as cropland.<sup>68</sup>

Although these and other ideas may have had their merits, the future of the Gopher site would be determined in part by a piece of legislation that had made its way through Congress two years earlier. The Surplus Property Act of 1944 had established a rigid order of succession for the disposition of government installations. Under its rules, the Gopher facilities would be offered first to federal agencies or departments. If the U.S. government had no further use for the property, it would be offered, in descending order of priority, to state and local governments, former owners, former tenants, and finally, to World War II veterans.<sup>69</sup>

Regardless of who the new owner might ultimately be, a number of things had to happen before any portion of the property could change hands. The Army had to transfer control of the site to the War Assets Administration (WAA), which would be in charge of the sale. Appraisals had to be completed, salvageable materials had to be removed from the site, and hazardous substances had to be abated. The process would take several months.

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<sup>67</sup> “Gopher Plant to be Shut Down,” *DCT*, 17 August 1945; Dooley, “Gopher Ordnance Works,” 228.

<sup>68</sup> “Gopher Ordnance Works to be Sold,” *West St. Paul Booster and Dakota County Globe*, 7 September 1945; “8,000 Acres Comprise Project,” *DCT*, 23 December 1949; “Rosemount Plant Urged as Home for Veterans,” DCHS; “Seek Rosemount Plant as a Veterans Co-Op Farm Project,” *DCT*, 18 January 1946.

<sup>69</sup> “Will Offer GOW Land for Sale,” *DCT*, 19 April 1946.

The transfer from the Army to the War Assets Administration went into effect at midnight on 15 May 1946, and the appraisal process began later that month. The sale of surplus buildings began at about the same time. Structures were sold “as is” and had to be either dismantled by the buyers or moved off site.<sup>70</sup>

It wasn't just entire buildings that were in demand, however. In the first year following the Second World War, persistent shortages of basic construction materials, combined with the return of hundreds of thousands of recently-discharged GIs eager to set up housekeeping, created a housing shortage of unprecedented proportions. In July, 1946, the War Assets Administration announced that “the lumber and other scarce materials at the Gopher Ordnance project [have] been set aside . . . for temporary housing programs, and then to holders of veterans' home building priorities.”<sup>71</sup>

In August, \$1.8 million dollars in contracts were awarded to three local firms who were to oversee the process of deconstructing and recycling as much of the Gopher plant as possible. The amount of raw material at the facility was substantial, including an estimated twenty million board feet of lumber, “miles of overhead pipe,” and “a considerable number of steel girders.” The lumber alone, said one official, would be sufficient to build 2,000 two-bedroom houses.<sup>72</sup>

Unfortunately, not all of these components were useful. Although the plant had been in operation for only nine months, much of the building material had been contaminated by the volatile chemicals used in the production process. “What looked like a pile of nice new lumber lay in an out-of-the-way corner of the huge Gopher Ordnance works at Rosemount,” noted one journalist who toured the site:

It appeared to be just the stuff for building a house or a barn. But the builder who started pounding nails into it would probably be the world's worst insurance risk. The betting odds would be sky high he'd be blown into the next county.<sup>73</sup>

In addition to the tainted construction materials, there was also a huge stockpile of smokeless powder remaining at the plant—much of it contaminated and unusable, but still extremely dangerous. Through the summer and fall of 1946, government disposal crews undertook the work of destroying the powder—an estimated four million pounds of it—in a series of controlled burns. The process was simple: “The powder is poured in a narrow strip along a section of land, then ignited.” But it was exceedingly slow, as each burn neutralized only a few hundred pounds of the powder.<sup>74</sup>

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<sup>70</sup> “Gopher Project Will Be Torn Down,” *DCT*, 17 May 1946.

<sup>71</sup> “Vets to Get G.O.W. Material,” *DCT*, 26 July 1946.

<sup>72</sup> “Survey Lumber at Rosemount,” *DCT*, 13 September 1946.

<sup>73</sup> Lawrence Boardman, “Toil to End Rosemount Blast Peril,” *DCHS*.

<sup>74</sup> “Burn Powder at Rosemount,” *DCT*, 7 June 1946.

## The University of Minnesota's Vision: "A Gigantic Research Center"

While all of these recycling activities were taking place at Rosemount, the University of Minnesota was laying the groundwork for the biggest salvage project of all. It began in March 1946, when Alfred Cronk, an assistant professor in the University's Aeronautical Engineering Department, appeared in the office of department head John D. Akerman. Cronk had been assigned to help the department build a new state-of-the-art wind tunnel on the Minneapolis campus, and was hoping Akerman could help him find a pair of air compressors big enough to power it. The two professors began a search that started at the Minnesota State Fair Grounds and eventually led them to the oleum production facility at the defunct Gopher plant. There they found, as the *Pioneer Press* put it, "not just two, but nine fine compressors:

Those compressors, they saw, could make the terrific wind needed for pioneering experiments in the whole new field of flying at speeds faster than sound. But to move the machines would be very costly. So the scientists studied the possibilities of their use on the spot. They saw that the Rosemount building could provide the University with a marvelous aerodynamics laboratory.<sup>75</sup>



**Figure 6.** Aeronautical engineering professor John Akerman, ca. 1936. *Hinding, Common Bonds.*

Akerman's investigations into the availability of the compressors ultimately took him to Washington, D.C. for a meeting with the War Assets Administration. Upon presenting his department's request for the Rosemount machinery to a WAA official, he was told that "there was no limit to the amount of property a state educational institution could acquire . . . under the Surplus Property Act." It was a well-timed revelation. In the first postwar academic year, enrollment at the "U" was booming as young ex-soldiers signed up for courses under the provisions of the GI Bill. Space for classrooms and laboratories was in short supply, and construction of new facilities was hindered by lingering materials shortages and high labor costs. Tantalized by Akerman's news, officials began to search for other opportunities at Rosemount.<sup>76</sup>

They proceeded cautiously at first, daunted by the facility's \$9.7 million market value, and the presumed high costs of acquiring, operating, and maintaining a new off-campus facility. But as University officials conferred with each other and met with Assets Administration staff in Washington, they quickly realized that the dormant facilities at the Gopher plant could satisfy a wide range of unmet academic needs, and that the "U" as

<sup>75</sup> Alfred D. Stedman and Reuben Monson, "From Scrap Heap to Treasure Trove," *St. Paul Pioneer Press*, 15 February 1948.

<sup>76</sup> *Ibid.* "\$125 Million Rosemount War Plant Comes Down," *DCT*, 4 May 1961; "Proposal from the University of Minnesota regarding the acquisition of facilities at the Gopher Ordnance Works, Rosemount, Minnesota," 43. Unpublished typescript, July 1946. On file at the University of Minnesota Facilities Management Office, Donhowe Building, Minneapolis.

a major educational institution, was likely to be able to acquire these facilities at a bargain price.<sup>77</sup>

During the spring and early summer of 1946, Professor Akerman's original desire for nine compressors and a single building at Rosemount grew into an all-encompassing institutional vision which imagined the empty ordnance plant being transformed into "a gigantic research center." In July, the University outlined its ambitions for the Gopher site in a formal proposal to the War Assets Administration:

The University of Minnesota has developed a comprehensive plan for enlarging its educational and research facilities, public health, agriculture, medicine, and military training (ROTC) fields, utilizing 7200 acres (11¼ sections) of the Gopher Ordnance Works and certain buildings and equipment thereon. We have detailed plans for establishing a new supersonic research center for aeronautical engineering, and for supplementing our present inadequate laboratory and research facilities for Mechanical Engineering, Agricultural Engineering, Civil Engineering, Physics, School of Public Health, Army and Navy ROTC Units, Physiological Medicine, Aviation Medicine, Animal Husbandry, Agricultural Experimental Station, Engineering Experiment Station, Medical School (Cancer and Infantile Paralysis Research), University Hospital and Botany Department.<sup>78</sup>

The plan called for the creation of two separate research units at Rosemount. The larger of the two, to be designated as the "Rosemount Research Center," would occupy the built-up portion of the GOW site, utilizing 168 remaining buildings or structures as well as a great deal of surplus equipment, including machinery, tools, furniture, and an assortment of vehicles ranging from fire trucks to locomotives. The primary users of this area would be the University's Institute of Technology and the University of Minnesota Medical School. The other unit, occupying 1,450 acres of vacant land to the west of the Gopher plant's security fence, was to be used for agricultural research, providing much-needed field space to augment the University Farm in St. Paul, which was rapidly being surrounded by suburban development.

The University had already begun seeking contracts and grants that would fund operation of the Research Center. Money for cancer and polio research was "already available," and a number of defense-related contracts were in the works, including a two-year Navy contract for research into supersonic aircraft. The Agricultural Research unit would take longer to get off the ground, because of its dependence on state appropriations, but the College of Agriculture had enough money on hand "to make a start toward the preliminary land survey, a seeding, and the movement of some livestock."<sup>79</sup>

The Surplus Property Act, which governed the disposition of the property, offered significant economic incentives to institutions that would use it for "educational purposes and research in the fields of science, public health, agriculture and national defense."

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<sup>77</sup> Stedman and Monson, "From Scrap Heap to Treasure Trove."

<sup>78</sup> "Proposal," 1.

<sup>79</sup> *Ibid.*, 23.



Addressing this provision in the concluding paragraph of their proposal, University officials noted that

The public purposes to which the facilities requested will be dedicated are so patently in the interests of public benefit that the University of Minnesota is prompted to ask that the land, buildings, and equipment . . . [specified in the proposal] be sold to the University at a fair value price less a discount to be determined by the administrator, but it must be evident that this discount for purposes of insuring the fulfillment of this project should be 100 per cent.<sup>80</sup>

### **The University Takes Command**

The University submitted its proposal to the War Assets Administration in July, 1946. Although prospects for a property transfer appeared favorable, formal action on the University's request for land and buildings was still several months away. If the federal government agreed to the terms presented in the proposal, it would constitute the largest single expansion in the University's history.

Word of the pending transaction leaked to the press in August, when the *Dakota County Tribune* reported that "the University Farm School" was seeking "about 1500 acres of land" at Rosemount. In October, University president J.L. Morrill announced that the institution had been awarded a two-year Navy contract to study the aerodynamics of guided missiles, with most of the work to be completed "in the proposed new supersonic laboratory to be set up in the former Gopher Ordnance Works." While the deliberations went on, the University had already begun to make a mark on the facilities at Rosemount, stenciling each of the buildings it hoped to acquire with a large black "UM."<sup>81</sup>

On 5 December 1946, president Morrill announced that the WAA had granted the University an interim permit, which would allow it to take possession of nineteen buildings at the site on 1 January 1947, pending the outcome of the discussions. The permit, issued in exchange for a payment of one dollar, required the University to maintain plant security and to pay for any alterations or repairs to the buildings. In fact the first adaptive reuse project was already under way. Faced with an acute shortage of beds brought about by a severe epidemic of poliomyelitis in 1946, the Medical School

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<sup>80</sup> Ibid., 47. Letter from UM comptroller L.R. Lundeen to Robert F. Long, director of audits, U.S. General Accounting Office, dated 25 November 1953. UM Archives, Minneapolis. University President's Office, Papers, 1911-1979. Rosemount Research Center, 1947-1969. Box 242, Collection 841.

<sup>81</sup> "U. of M. Seeks Gopher Acreage," *DCT*, 2 August 1946; Jerry Kloss, "U Gets Navy Contract for Supersonic Bomb Research," *Minnesota Daily*, 22 October 1946; Robert T. Johnson, "Rosemount Not Too Bad, After Looking Twice," *Minnesota Daily*, 22 January 1947. While negotiations between the University of Minnesota and the War Assets Administration were taking place during the fall of 1946, a number of area farmers reclaimed property that had been taken from them by the federal government four years earlier. When the priority period expired on 7 November 1946, some 3,590 acres of the Gopher site had been repurchased by the original owners. See "Former Owners Redeem Property," n.d., DCHS; also Albert C. Heine, *Agricultural Experiment Station, Rosemount, 1947-1965* (Minneapolis: University of Minnesota, 1971), 3.

had begun to convert the former GOW infirmary into a new 100-bed long-term care hospital for polio patients who were being temporarily housed at Fort Snelling.<sup>82</sup>

The transfer of the 168 GOW buildings and 7,200 acres of land to the University was formally approved by the WAA in early January, although the legal work required to transfer the title would not be completed for many more months. Morrill declared in a statement that the action offered the University “a great opportunity to increase its service to the state and to help advance the wealth and welfare of our people.”<sup>83</sup>

A few weeks later, a reporter from the *Minnesota Daily* visited the newly acquired facility. “Two things catch one’s eye on first viewing the University’s new property at Rosemount,” he wrote, “its extreme size and its even more extreme lack of beauty. The place has about as much aesthetic value as an overflowing garbage can on the front lawn.” Marveling that the University’s main campus would fit into Rosemount’s 7,200 acre expanse “an even fifty times,” the reporter described site’s physical attributes:

Even more striking than the immense size of the place is its extreme ugliness. The buildings, originally built to serve as temporary housing for the du Pont powder factory, have been constructed with utilitarian considerations only. Most of them lack even the minor embellishments provided by eaves and rain gutters. Out of the 170 wooden buildings the University is buying, not more than two or three of them have had even so much as one coat of paint. The rest, quite grey from three or four years of exposure to the weather, sit dismally on the prairie like rusty nails in a board. And prairie it is. The land is almost flat, and with the exception of a few scrawny trees, has almost no trees on it.<sup>84</sup>

The reporter had a somewhat better opinion of the facility after walking through the newly remodeled GOW infirmary, however. “The new polio hospital,” he wrote:

Is a good example of what can be done with the various Rosemount structures. It has been painted on the outside and the outside appearance has been greatly improved, although the plainness of construction prevents it from ever being any great work of architectural beauty. Inside, however, the hospital is quite attractive. The walls all have been covered with varnished plyboard in almost all of the rooms and hallways. A large number of windows admit plenty of light. The floor has been covered with composition flooring. While not a mansion, the building certainly is usable and far from an eyesore.<sup>85</sup>

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<sup>82</sup> “Rosemount Occupation Authorized,” *Minnesota Daily*, 6 December 1946; David Dreiman, “Polio Hospital at Rosemount to Close July 1,” *Minneapolis Star*, 10 June 1948.

<sup>83</sup> “GOW Given to U of Minnesota,” *West St. Paul Booster and Dakota County Globe*, 17 January 1947.

<sup>84</sup> Robert T. Johnson, “Rosemount Not Too Bad, After Looking Twice,” *Minnesota Daily*, 22 January 1947.

<sup>85</sup> *Ibid.*



**Figure 7.** Building 703A was pressed into service as a polio hospital following the University's acquisition of the Rosemount property. It later housed geriatric patients from the Hastings State Hospital. The structure was demolished in 1978 to make way for an expansion of the Dakota County Vocational Technical Institute. U.S. Army Corps of Engineers.

The title for the Gopher property was transferred from the federal government to the University in two stages. In August 1947, the *Dakota County Tribune* reported that “the Federal Farm Mortgage Corporation [acting as the agent for the WAA] set legal machinery in motion Wednesday for the actual transfer of 4,000 acres of Gopher Project land to the University of Minnesota Research Laboratories at Rosemount. Included in the 4,000 acres is farm land and residences, also the Gopher Village, consisting of 25 staff houses.” The second transaction took place in March of 1948, when the government transferred “2,325 acres of land, almost 200 buildings and a sizeable quantity of machinery, equipment and incidentals to the University.” The exchange represented the War Assets Administration's largest single transfer of property to an educational institution.<sup>86</sup>

### **“A Great Arsenal for Research and Scientific Advancement”**

By the summer of 1948 the Rosemount Research Center was bustling with activity. A large contingent of non-farm livestock had taken up residence on the site. The newcomers, protégés of Dr. John Bittner, included 10,000 pedigreed white mice, guinea pigs, rabbits and monkeys that were being deployed “in the war of science on human ills.” Housed in a converted employee locker room, a garage, and a former cafeteria building, these colonies of meticulously bred laboratory animals were intended to help researchers at the University of Minnesota Medical School find cures for cancer and other diseases.<sup>87</sup>

<sup>86</sup> “Transfer of 4,000 Acres to ‘U’ Under Way,” *DCT*, 29 August 1947; “‘U’ Takes Over Gov’t Property,” *DCT*, 26 March 1948; Amy Elizabeth Foster, “Aeronautical Science 101: The Development of Engineering Science in Aeronautical Engineering Education at the University of Minnesota,” 54. Unpublished M.A. Thesis, University of Minnesota, Minneapolis, June 2000. According to a University of Minnesota Real Estate Inventory dated 30 June 2003, the first transfer was recorded on 1 August 1947, and comprised 4,616 acres. The second transfer, recorded on 17 March 1948, comprised 2,841 acres.

<sup>87</sup> Stedman and Monson, “From Scrap Heap to Treasure Trove.”

The Civil Engineering department had organized a summer surveying camp for 100 students. And the University's Reserve Officer Training Programs routinely practiced combat maneuvers in the concrete ruins of the Ordnance Works' partially-dismantled production lines.<sup>88</sup>

But the epicenter of early activity at Rosemount was located near the northeast corner of the industrial area, where a handful of buildings had been converted into an unparalleled facility for aeronautical research. Supported by hundreds of thousands of dollars in federal defense research grants, Professor Akerman and his colleagues had taken over the oleum production building, an enormous machine shop, three huge cotton warehouses, one of the steam power plants, and the ballistics laboratory, and had transformed these structures into a venue for top-secret research into supersonic flight.

One of the most important facilities in this cluster was the well-equipped machine shop, known simply as "Building 717." Akerman explained how the shop would help advance the cause of aeronautical research:

Every operation in the [Rosemount Research] Center is fundamentally dependent on machines, special jigs and fixtures and equipment all of which must be designed, maintained and repaired. Any one piece out of operation for lack of repair facilities becomes a liability instead of an asset. . . . As a special service shop for the research project, [this building] is absolutely essential. All of the aeronautical supersonic research is basic; therefore, none of the equipment is standardized or even designed. Large scale airplane models being tested require huge supporting frames and instrument carriages. Guided missiles must be launched from various types of racks, stands and carriages. All of these things must be designed and built under the immediate supervision of the project scientists. The very nature of this work classifies it as secret; hence it cannot be subcontracted out indiscriminately to machine shops in the northwest.<sup>89</sup>

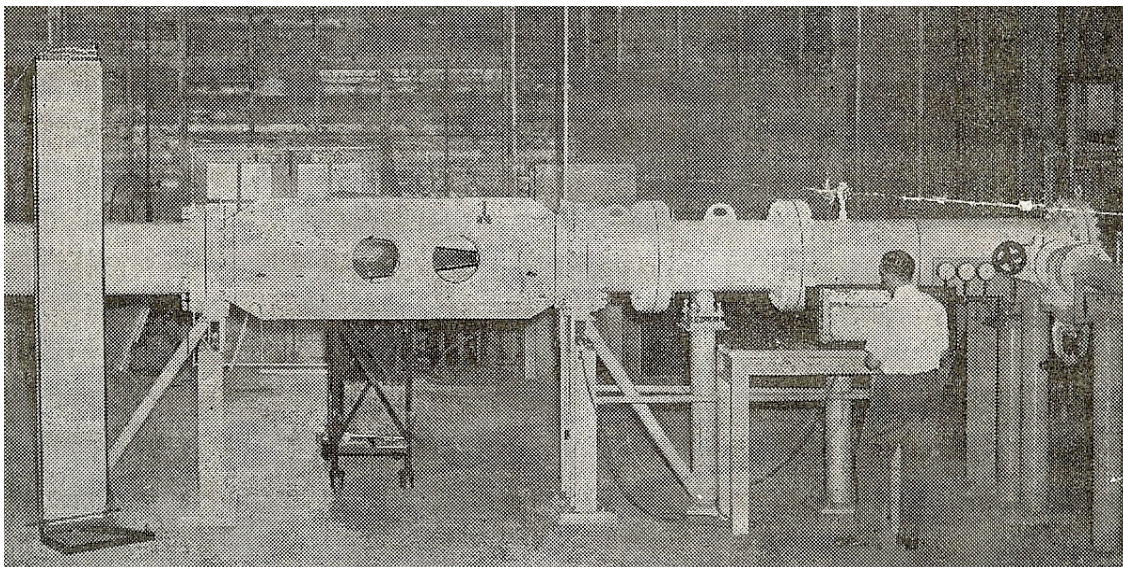
The windowless cotton warehouses were large enough to serve as a secure storage and assembly area for top-secret components. The ballistics laboratory, with its tunnel-like firing ranges, provided a place where models could be test fired and where their aerodynamic performance in flight could be recorded by high-speed cameras. The real focus of the Research Center, however, was the supersonic wind tunnel that had been built inside the oleum facility. Assembled in Rube Goldberg fashion from a hodge-podge of pipes, valves, and other materials salvaged from the site; powered by five surplus GOW compressors; and using an enormous steel sphere at the site as a storage tank for compressed air, the tunnel was capable of achieving velocities of up to 1,140 miles an hour—twice the speed of sound. Observation ports and smoke generators enabled engineers to monitor the performance of scale model aircraft components. The *Dakota County Tribune* described the device's operation:

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<sup>88</sup> *The Rosemount Research Center of the University of Minnesota* (Minneapolis: University of Minnesota, 1948), 7. Rosemount capabilities brochure, DCHS. The brochure text was reproduced verbatim in "U' Explains Rosemount Research Set-Up," *DCT*, 11 June 1948.

<sup>89</sup> "Proposal," 12.

Square and only 16 inches across, the tunnel's length varies as to what type of air model is being tested. . . Sections are added or removed for particular experiments. . . Operated by a compressed air system, the machinery pulls air through a nozzle at the tunnel's outlet end, which creates a vacuum that sucks new air in at terrific force. . . . The new tunnel is exceeded in performance only by a few run by the military in aeronautical research.<sup>90</sup>



**Figure 8.** *An early wind tunnel at Rosemount. Dakota County Tribune, 23 December 1949.*

### **Beating Swords into Plowshares**

Things progressed considerably more slowly on the other part of the Rosemount property. The 1,450 acre section of the Gopher site that had been appended to the University farm was an enormous windfall for the College of Agriculture, promising, as one observer put it to “strike . . . off shackles that have handicapped agricultural experimental work for decades.”<sup>91</sup>

The new farm property was not immediately useful, however. “Much of the land,” recalled station superintendent Albert Heine in a 1971 history of the site, “had been rendered unfit for agricultural purposes during the construction and operation of the Gopher Ordnance Works.” All but a handful of farm structures from the pre-Gopher days had been removed from the site when construction on the Ordnance plant began in 1942. The land had not been plowed or cultivated in nearly five years, and large areas were overgrown with brush and weeds. The ground was strewn with construction detritus and there were virtually no trees to break the wind and control erosion.<sup>92</sup>

There were less obvious obstacles as well. The College of Agriculture had limited financial resources for the development of the site, and unlike the Aeronautics and

<sup>90</sup> “Rosemount Wind Tunnel Tests New Aircraft, Faster Than Sound,” *DCT*, 31 October 1947.

<sup>91</sup> Stedman and Monson, “From Scrap Heap to Treasure Trove.”

<sup>92</sup> Heine, *Agricultural Experiment Station*, 3.

Medical research programs, there were no lucrative grants or government research contracts to fund necessary improvements. Faced with these challenges, the University borrowed three tractors, hired three farm workers and set to work to turn the erstwhile industrial site back into a farm. The workers began by removing debris, leveling the land and “trying to get a most energetic growth of weeds under control.”<sup>93</sup>

In the fall of 1947, a twenty-acre plot on the west side of the property was planted with the University’s experimental “Minter” variety of winter wheat, and a small number of sheep and hogs were moved to the site from the St. Paul campus, taking up residence in makeshift shelters assembled out of salvaged GOW materials. Plans were also made to establish herds of dairy and beef cattle at the new facility, and to begin research with turkeys the following spring.<sup>94</sup>

In 1948, U of M forestry students began planting thousands of pine, cedar, spruce and ash trees to form shelterbelts around the fields and building sites “with the objective of determining the best combination of tree species and the best arrangement of trees within and between rows, to provide protection from wind and snow.” At the same time, University foresters turned their attention to the rubble filled “waste areas” in sections of the demolished industrial site, planting thousands of caragana bushes intended to conceal concrete ruins and provide habitat for birds.<sup>95</sup>

The new farm property reached an important milestone in 1949. The College of Agriculture had intended from the beginning to operate the Rosemount unit as a branch of the University of Minnesota Agricultural Experiment Station, but for the first two years, the property was administered from the St. Paul campus, and operated essentially as a field annex to the University Farm. In 1949, however, the facility officially became the sixth and largest of Minnesota’s Ag Experiment Stations, expanding a network that already included units at Waseca, Morris, Crookston, Grand Rapids and Duluth. Professor A.C. Heine, assistant director of the West Central School of Agriculture at Morris, was appointed superintendent of the Rosemount Station, taking up residence in one of the GOW staff houses in the northwest corner of the site.<sup>96</sup>

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<sup>93</sup> “Agriculture Research is Booming at Rosemount,” *DCT*, 18 December 1953.

<sup>94</sup> “First Crop is Planted at ‘U’ Research Area,” *DCT*, n.d., DCHS.

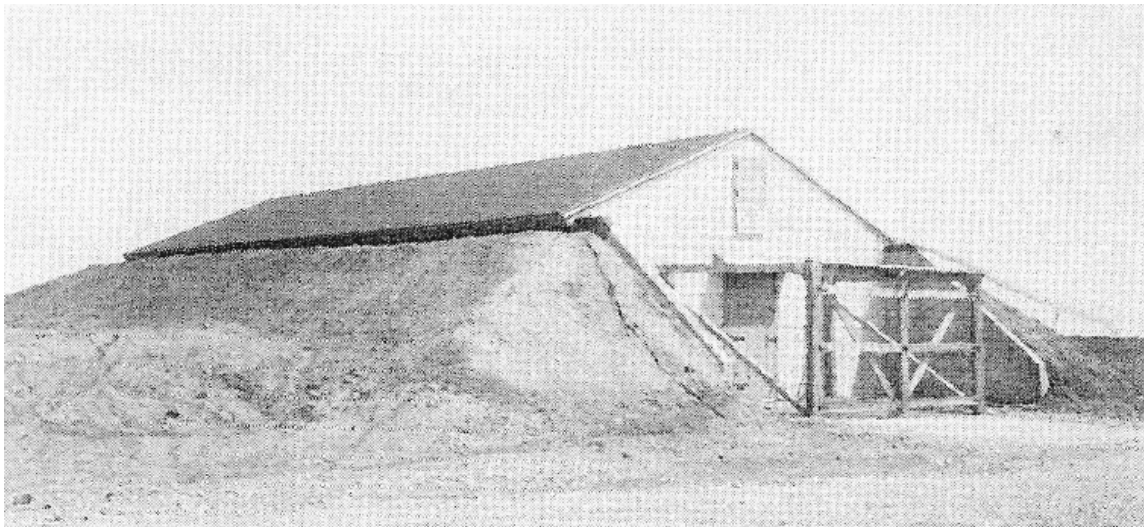
<sup>95</sup> Clifford L. Wilcox, *Meeting an Agricultural Research Mission: The Rosemount Branch of the Minnesota Agricultural Experiment Station, 1965-1990*, Miscellaneous Publication 68-1990 (St. Paul: University of Minnesota, 1990), 27. Letter from Frank L. Fuller to W.T. Middlebrook, dated 17 May 1949. University of Minnesota Archives, Minneapolis. University President’s Office. Papers 1911-1978. Rosemount Research Center, 1947-1969. Box 242, Collection 841.

<sup>96</sup> “Proposal,” 40; Wilcox, *Meeting an Agricultural Research Mission*, 2; T.H. Fenske, “New Agricultural Experiment Station Branch at Rosemount Sets Stage for Expanded Research,” *Minnesota Farm and Home Science* 8:1 (October 1949), 8. According to agricultural historian Susan Granger, Minnesota was one of the first states in the nation to establish an agricultural research facility. The College of Agriculture was operating a working farm within a few years of the program’s beginning in 1867. In 1885, the state legislature designated the University’s 166-acre farm in St. Paul as the Minnesota Agricultural Experiment Station. With passage of the federal Hatch Act in 1887, the Agricultural Experiment Station became a partnership between the University and the United States Department of Agriculture—an arrangement that continues to the present day. The first off-campus substation was established in 1893 when the University began to conduct agricultural research on a portion of Oren C. Gregg’s Coteau Farm in Lyon County. For

The University established an office for the new Experiment Station in one of the eight earth-sheltered “powder rest buildings” located near a road that cut through the center of the site. An adjacent structure was used as a machine shed.<sup>97</sup>

Reporting on the progress that had taken place at the new farm in just a few short years, field director Theodore H. Fenske referred to an ancient text:

“They shall beat their swords into plowshares, and their spears into pruning hooks,” says a verse in the Song of Solomon. The Agricultural Experiment Station Branch at Rosemount had no swords or spears to begin with, but a transformation has taken place at the site of the Gopher Ordnance Works at Rosemount which very well demonstrates the idea expressed by Solomon. A part of the former war plant has been transformed into a branch of the Minnesota Agricultural Experiment Station and plows and other agricultural equipment are very much in evidence there.<sup>98</sup>



**Figure 9.** *The original office at the Rosemount Agricultural Experiment Station occupied a converted powder storage igloo, like this one, shown during its GOW days in 1944.. U.S. Army Corps of Engineers.*

### **“We must have structures”**

During its first few years of ownership, the University’s College of Agriculture had made significant improvements in the land at the former ordnance works site, working to restore the fertility of the soil, establishing a four-year crop rotation plan, and inaugurating careful soil conservation practices. Nine specialty areas within the ag school had claimed portions of the site for their own work, and hundreds of experimental plots, testing new varieties of corn, soybeans, potatoes, small grains, grass and forage crops, had been planted by UM researchers. The unit had been formally designated as

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more on the history of the Experiment Stations, see Granger and Kelly , “Appendix H: Minnesota Agricultural Experiment Stations,” *Historic Context Study of Minnesota Farmsteads, Volume 3*, page 15.6.

Also see Scott, “Oren C. Gregg,” 25.

<sup>97</sup> “8,000 Acres Comprise Project,” *DCT*, 23 December 1949.

<sup>98</sup> Fenske, “New Agricultural Experiment Station Branch,” 8.

the newest of Minnesota's Agricultural Experiment Stations. Still, something crucial was missing.<sup>99</sup>

"Land alone doesn't make an experiment station," observed an editor for *Minnesota Farm and Home Science* in the spring of 1948. For despite all the progress that had been made at Rosemount, the new farm property was still almost entirely devoid of buildings. "In order to activate that rather magnificent agricultural land area," wrote agriculture dean C.H. Bailey in a letter to president Morrill a year later, "we must have structures."<sup>100</sup>

The dearth of structures was due in large part to a clause that had been included in the original purchase agreement between the University and the United States government. That clause gave federal authorities the right to reclaim the former Gopher site for twenty years, if the site were deemed necessary for national defense. The Minnesota legislature steadfastly refused to appropriate capital funds for buildings that might have to be handed over to the federal government. In the absence of appropriations, Experiment Station staff became adept at "making do."<sup>101</sup>

Farm managers solved the problem by recycling buildings and materials that already existed elsewhere on the site. An abandoned guard tower was converted into a weather station. Two warehouses from the Research Center were moved in and combined to create a "loose housing" facility for dairy cattle; and a 30 by 150-foot industrial building was turned into a swine barn. From the point of view of experiment station staff, this creative reuse did not always produce the best possible building for their projects: "Our experience with moving buildings," wrote field director Theodore Fenske in 1949, "has not been an especially happy one. It is true we do get the shell of a building which, of course, does reduce somewhat the cost of construction. However, our experience with the dairy barn showed that so much remodeling was necessary to make the building suitable for agricultural purposes that the original saving was almost wiped out by the remodeling that was done."<sup>102</sup>

Experiment station staff members were not the only individuals who found the makeshift buildings to be less than optimal. "Most of these buildings did not meet the rigid construction specifications of the Plant Services Department of the University," recalled Superintendent Albert Heine,

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<sup>99</sup> Leonard Frame, "Progress is Shown at Rosemount "U" Center," *DCT*, 29 December 1950; Fenske, "New Agricultural Experiment Station Branch," 8.

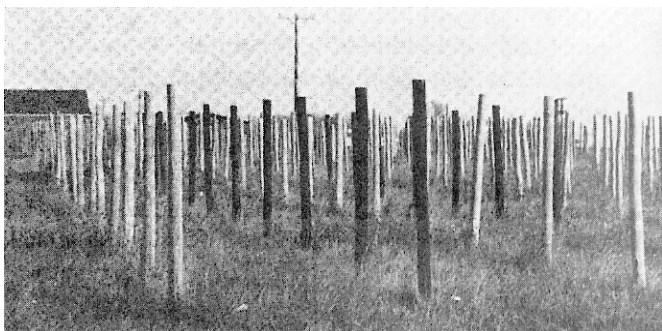
<sup>100</sup> The quotation appears in Fenske, "New Agricultural Experiment Station Branch," 9; Letter from UM Department of Agriculture dean C.H. Bailey to UM president J.L. Morrill, dated 20 April 1949. University of Minnesota Archives, Minneapolis. University President's Office Papers, 1911-1978. Rosemount Research Center, Box 242, Collection 841.

<sup>101</sup> Fenske, "New Agricultural Experiment Station Branch," 9.

<sup>102</sup> "8,000 Acres Comprise Project," *DCT*, 23 December 1949; Letter from Rosemount Field Director Theodore H. Fenske to UM vice president W.T. Middlebrook, dated 23 May 1949; Letter from Fenske to Middlebrook, dated 17 May 1949, both in University of Minnesota Archives, Minneapolis. University President's Office Papers, 1911-1978. Rosemount Research Center, Box 242, Collection 841.



[So] the wisdom of moving any of them was questioned. The Physical Plant supervising engineer, only after being convinced that there was no other visible alternative, reluctantly gave his consent to proceed. He expressed the hope that after a few years, funds would be found to replace these structures with others more in keeping with approved engineering practice. Most of the earlier buildings on the station resulted from expediency rather than sound engineering.<sup>103</sup>



The need to economize through salvage led to the prevalence of a particular type of building at the Rosemount farm. There was an enormous number of pressure-treated utility poles at the Gopher site, and many of them were “logged off” and converted into pole-type buildings. Inexpensive to build and adequate for many types

of agricultural use, these structures proliferated at the Experiment Station during the early 1950s. Their utility and ease of construction led the Agricultural Engineering Department to plant “pole farms” to test the rot resistance of various types of wood preservatives.<sup>104</sup>

In the spring of 1950, the superintendent’s office was relocated from the underground ammunition bunker and into a small wood-frame building which had been moved onto the site. That summer construction began on the only completely new building on the property—an “ultra-modern” hog farrowing barn erected without a single piece of salvaged material.<sup>105</sup>

Two years later, University farm crews began to build a permanent residence for the Experiment Station superintendent on an abandoned farmstead near the center of the site. Working on the home as a “rainy day project” over a period of many months, carpenters erected a thoroughly modern looking ranch-style home on the site. But even this building had been assembled largely from recycled materials, using framing lumber, sheathing, and sub-flooring salvaged from two former GOW shipping sheds.<sup>106</sup>

### **Rosemount’s Amazing Cash Cow**

There were a few growing pains on the Research Center side of the Rosemount operation as well. Programs sponsored by the University of Minnesota Medical School and the School of Public Health dwindled as construction of the long-delayed Mayo Memorial Medical Building got under way on the Minneapolis campus. The Rosemount polio

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<sup>103</sup> Heine, *Agricultural Experiment Station*, 19.

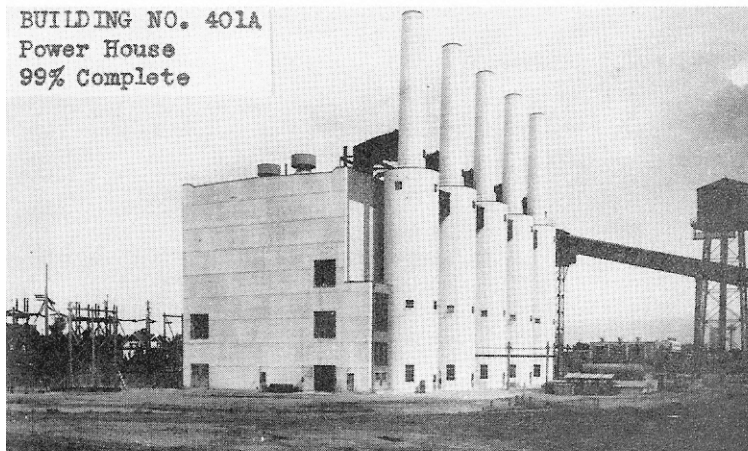
<sup>104</sup> *Ibid.*, 18; “Agriculture Research is Booming at Rosemount,” *DCT*, 18 December 1953.

<sup>105</sup> Heine, *Agricultural Experiment Station*, 7; Leonard Frame, “Progress is Shown at Rosemount “U” Center,” *DCT*, 29 December 1950.

<sup>106</sup> Heine, *Agricultural Experiment Station*, 19.

hospital closed on 1 July 1948, and was temporarily pressed into service to house elderly patients from the Hastings State Hospital while a new geriatrics unit was under construction there. But by the fall of 1949, the facility was empty.<sup>107</sup>

The Medical School continued to house laboratory animals at Rosemount for many years. And in 1950, research animals of another kind found a home at the research center as the University's newly established veterinary medicine program began to use the site as an isolation hospital for researching infectious diseases in large animals. By the mid-1950s, the School of Veterinary Medicine had established a major presence at Rosemount, occupying one of the few remaining original farmsteads and approximately 130 acres of land near the center of the industrial area.<sup>108</sup>



**Figure 11.** The steam plant, shown here in 1944, reverted to federal ownership during the Korean conflict. U.S. Army Corps of Engineers.

In September 1951, during the thick of the Korean War, the federal government exercised its legal right to reclaim portions of the Gopher Ordnance Works, when it appropriated the Research Center's steam plant and invested seventy thousand dollars to restore it to standby status, apparently believing that the facility might once again be needed for powder production.<sup>109</sup>

Military planners and elected officials kept a close and jealous eye on the Gopher site throughout the remainder of the decade, suggesting, among other things, that the property be returned to federal service as the location for the new U.S. Air Force Academy, an ammunition depot, "the world's biggest atom smasher," and as home to a new United States Department of Agriculture National Animal Disease Laboratory.<sup>110</sup>

<sup>107</sup> David Dreiman, "Polio Hospital at Rosemount to Close July 1," *Minneapolis Star*, 10 June 1948; "8,000 Acres Comprise Project," *DCT*, 23 December 1949.

<sup>108</sup> Stedman and Monson, "From Scrap Heap to Treasure Trove;" "University of Minnesota Rosemount Research Center Land, Buildings and Facilities, 2 June 1958. Unpublished typescript. University of Minnesota Archives, Minneapolis. University President's Office Papers, 1911-1978. Rosemount Research Center, 1947-1969. Box 242, Collection 841.

<sup>109</sup> The steam plant, ten adjacent buildings and approximately 27 acres of land were returned to federal ownership on 29 September 1951 and transferred back to the University in 1958. Letter from University vice president W.T. Middlebrook to T.L. O'Hearn, real estate manager, dated 16 October 1951; Letter from University president J.L. Morrill to Department of Business Research and Development commissioner J.W. Clark, dated 18 December 1951; "UM Rosemount Research Center Land, Buildings, and Facilities." All three documents are located in University of Minnesota Archives, Minneapolis. University President's Office Papers, 1911-1978. Rosemount Research Center. Box 242, Collection 841.

<sup>110</sup> For more on these ideas, see "Rosemount Site Suggested for AF Academy," *West St. Paul Booster and Dakota County Globe*, 26 February 1954; "Ammo to Return to Rosemount," *DCT*, 16 April 1954;

While these events were unfolding, the Rosemount Research Center was becoming an important cash cow for the University. John Akerman had launched aeronautical research activities at Rosemount in 1946 with the help of a \$400,000 research contract from the U.S. Navy. As early as 1951, Professor Akerman was able to boast that “the Rosemount Research Laboratories performed forty-three percent of the sponsored research conducted in the Institute of Technology.” By 1954, the facility was generating revenue at the rate of nearly a million dollars a year—enough to make the aeronautical laboratory completely self-supporting.<sup>111</sup>

The Rosemount Aeronautical Laboratory quickly became the Aeronautical Engineering Department’s primary wind tunnel facility, notes departmental historian Amy Foster. At Rosemount the University assembled a succession of wind tunnels, each capable of achieving higher speeds than the last. The culmination of this initial construction boom came in 1949, when researchers devised a tunnel capable of achieving speeds of “Mach 7”--seven times the speed of sound. “A wind seven times the speed of sound is hardly imaginable,” marveled one local reporter,

But it has been accomplished at the University of Minnesota Research Center near Rosemount . . . According to the United Press, experts said the accomplishment represents for American science a triumph over German researchers who during the war claimed to have perfected a tunnel capable of handling blasts of that speed, never before attained.<sup>112</sup>

The facility became even more crucial to departmental research in 1953, when the University’s Engineering Experiment Station was destroyed by fire. After that, says Foster, “the majority” of the Aeronautical Engineering Department’s work had to take place away from the Twin Cities campus.<sup>113</sup>

### **Winds of Change**

The University continued to invest in the aeronautical research labs through the 1950s, opening a new wind tunnel capable of achieving “Mach 11”—eleven times the speed of sound—in the fall of 1957, a two-year project that made the University facility “one of the best equipped in the country.” By the 1957-1958 biennium, the Rosemount Research Center had aeronautical contracts in excess of \$1 million. Business was so brisk, in fact, that the Board of Regents voted on 2 July 1958 to relieve professor Akerman of his duties as head of the Department of Aeronautics and Engineering Mechanics in the Institute of

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“World’s Biggest Atom Smasher for Rosemount?” *DCT*, 8 June 1956; and “‘U’ Seeks Lab at Rosemount, Cost \$18 Million,” *DCT*, 29 June 1956.

<sup>111</sup> Letter from Professor John D. Akerman to UM president J.L. Morrill, dated 8 June 1951. University of Minnesota Archives, Minneapolis. University President’s Office Papers, 1911-1978. Rosemount Research Center. Box 242, Collection 841; “U Research Center Was Big Bargain,” *DCT*, 1 November 1956.

<sup>112</sup> Foster, “Aeronautical Science 101,” 53; “‘U’ Develops [*sic*] Wind Seven Times the Speed of Sound,” *DCT*, 17 June 1949.

<sup>113</sup> Foster, “Aeronautical Science 101,” 53.

Technology and create a semi-autonomous unit called the Rosemount Aeronautical Laboratories, with Akerman in charge.<sup>114</sup>



**Figure 12.** *The Rosemount Research Center as it appeared in 1957. The long building in the center of the photograph is the machine shop, which played a central role in the facility's operation. University of Minnesota Archives.*

But before long winds of change were blowing at the Research Center. Akerman had presided over the creation of facilities for both subsonic and supersonic testing at Rosemount. But by the early 1960s, technological advancements in aircraft design had shifted the focus of aeronautical engineering from high speed piston-driven aircraft toward the jets, rockets and missiles achieving hypersonic speeds. As this shift took place, contracts for lower velocity projects dwindled from over a million dollars a year in 1958 to a mere \$93,000 in 1961. In addition, by 1959, officials in the University's business office were expressing concern that under Akerman's direction, the facility was expending inordinate and increasing amounts of money on overhead. There were also allegations that he was hiring unqualified personnel, accepting research projects with little or no scientific merit, and allowing lapses in quality control at the laboratory. Meanwhile, a new "hypersonic" facility, under the direction of Professor Rudolf

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<sup>114</sup> "U Builds Wind Study Tunnel," *DCT*, 25 July 1957.

Hermann, was on a steep trajectory of success, with contracts valued in excess of \$320,000.<sup>115</sup>

In an effort to solve the financial and management problems at the low velocity laboratory, the Board of Regents voted on 12 January 1962 to phase out Akerman's low-velocity Rosemount Aeronautical Laboratories, return him to his position at the Minneapolis campus, and put Hermann in charge of the new hypersonic facility. Both Akerman and Hermann promptly resigned. An ad hoc committee of aeronautical engineering professors convened to study the needs of the program for the foreseeable future, and recommended that the Rosemount Hypersonic Laboratory be operated on an interim basis for no more than three years, while efforts were under way to create a new laboratory on the Minneapolis campus.<sup>116</sup>

Professor Akerman completed his long tenure at the University of Minnesota on 30 June 1962. With his retirement, the era of aeronautics at Rosemount had come to an end.

### **Space for Rent**

The closure of the Aeronautical Laboratory slowed the pace of life at Rosemount considerably. The giant cotton warehouses that had once concealed top-secret aircraft components now became repositories for reams of paper, obsolete laboratory equipment, discarded furniture and other mundane items of University surplus. The Minnesota Highway Patrol took over a portion of the site for the training of new recruits. Cadets practiced marksmanship in the former Ballistics Laboratory and honed their high-speed driving skills on the Research Center's nearly empty roadways. The Research Center's Real Estate Office also began to lease unused space at the site to private businesses for a variety of warehousing and manufacturing operations—a practice that has continued to the present day.

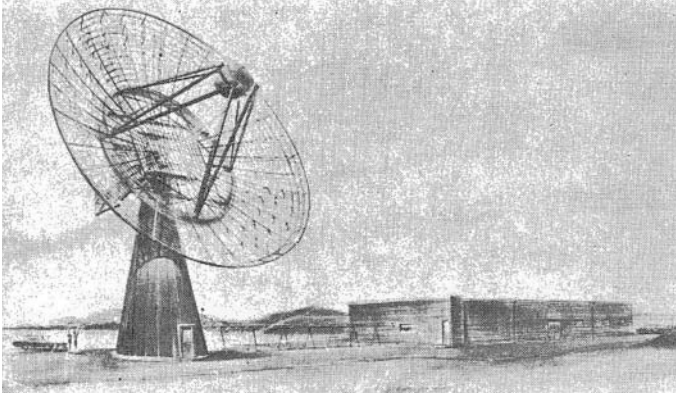
One new leaseholder during this period, however, needed space for a much more exotic project. In December 1962, the University's Board of Regents announced that it would lease an eighteen-acre plot on the edge of the industrial area to the United States Navy for construction of a state-of-the-art satellite tracking station. "Although Rosemount is a good thousand miles from the nearest ocean, before long it will play a vital role in guiding ships on the high seas throughout the world," boasted the *Dakota County Tribune*.<sup>117</sup>

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<sup>115</sup> Letter from UM president O. Meredith Wilson to Minnesota governor Elmer L. Andersen, dated 2 May 1962. University of Minnesota Archives, Minneapolis. University President's Office Papers, 1911-19787. Rosemount Research Center, 1947-1969. Box 242, Collection 841.

<sup>116</sup> Letter from Professor John D. Akerman to UM president O. Meredith Wilson, dated 12 January 1962; Memorandum from B.J. Lazan, head of the Department of Aeronautics and Engineering Mechanics to Professors Blackshear, Eckert, Hanson, Heinrich, Hermann, Jordan, Lambert and Meecham, dated 24 January 1962; "General Observations, Conclusions and Recommendations Regarding Future Aerodynamic Research Facilities at the University," Unpublished typescript, February 1962. All three documents are located in the University of Minnesota Archives, Minneapolis. University President's Office Papers, 1911-19787. Rosemount Research Center, 1947-1969. Box 242, Collection 841

<sup>117</sup> "\_\_\_\_\_ to Aid Sailors,": *DCT*, 6 December 1962, DCHS.



The new installation, part of a pioneer global positioning system called “TRANSIT” that had been developed by Johns Hopkins University, would be one of only four such facilities built in the United States, joining similar stations in Maine, California, and Hawaii. It would operate by broadcasting a continuous signal to satellites moving in polar orbit around the earth. The signal

included the exact time as well as orbital information about the satellites. Ships could measure this signal and use computers to calculate their position with an accuracy of 80-100 meters. The system was intended primarily for the Polaris-Poseidon missile submarines, but was also used by civilian and military surface ships. Groundbreaking ceremonies for the station took place on 27 March 1963. Personnel from the new station eventually moved into several of the GOW residences located in the northwest corner of the property<sup>118</sup>

### **Room to Grow**

Activity at the Agricultural Experiment Station through the 1950s and early 1960s had been a bit more down to earth. Despite a chronic shortage of capital funding, the station had enjoyed some quiet successes, completing important research into the viability of loose housing for dairy cattle; developing new types of confinement housing and new market-friendly breeds of turkeys; exploring the use of a wide range of chemical pesticides and herbicides; breeding the genetically superior “Number 3 Minnesota Hog;” and testing the utility of pole-type structures for farm use.<sup>119</sup>

A “grassland project” initiated in 1953 attracted nationwide interest. In this experiment one-hundred and sixty acres of land were planted with grasses and other forage crops in an effort to determine the best possible uses of pasture and roughage in the production of beef. Rosemount also played a central role in the production of “Foundation Seed,” genetically pure seed stock that was carefully bred to be high yielding and disease resistant; and that was processed to be true to variety, free of disease, and uncontaminated by weed or other rogue seeds. Many of the seed varieties that were tested at Rosemount were exported to other states and even overseas.<sup>120</sup>

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<sup>118</sup> “Rosemount Property Long Range Planning Framework,” 77; Rosemount Navy Satellite Unit to List 49 Personnel,” *DCT*, 23 May 1963; Graham, John F. “Navigation Satellites.” In *Space Exploration: From Talisman of the Past to Gateway for the Future*. On the web at [www.space.edu/projects/book/chapter26.html](http://www.space.edu/projects/book/chapter26.html). The TRANSIT system remained in use until 1996. The Rosemount installation was then converted to a Navy intelligence training center and remained in use until ca. 2003.

<sup>119</sup> “\$125 Million Rosemount War Plant Comes Down,” *DCT*, 4 May 1961.

<sup>120</sup> Schreier, *Picturing the Past*, 91; A.C. Heine, “Research Importance Told,” *DCT*, 19 December 1963.

Conducted at the height of the Cold War, these research activities acquired a new importance. “Our greatest bulwark against the aggression of the Communist countries,” wrote station superintendent Alfred Heine in 1963,

Is our agricultural productivity. Khrushchev boasts about burying us. So long as this country maintains the lead in agricultural productivity over the Soviet Union, there is little danger of our being buried. In the past World Wars we often heard the expression: “Food will win the war.” That is as true in the Cold War as it was in the recent shooting wars. With three-fourths of the world’s population perpetually hungry, our ability to produce food is the best weapon we have.<sup>121</sup>

The level of activity at the Agricultural Experiment Station increased significantly at about the same time activity at the Research Center was beginning to dwindle. The work got off to a symbolic start in 1958, when a new headquarters building was erected adjacent to a county road near the center of the site.<sup>122</sup>

There were steady increases in farm acreage throughout this period as underutilized land elsewhere on the former GOW site was pressed into use for agriculture. Fields not used for experimental work were used to raise feed and forage crops to support herds and flocks at both Rosemount and on the St. Paul campus farm. By the mid-1960s, the Rosemount Agricultural Experiment Station had grown to 2700 acres.<sup>123</sup>

The Experiment Station’s long financial drought finally came to an end in 1967 with expiration of the federal government’s right to reclaim the land. “This,” recalled former Superintendent Clifford Wilcox, “cleared the way for extensive development of the physical plant without fear of disruption or loss of the entire site.” With a clear title in hand, the legislature began to provide regular and significant appropriations for buildings at Rosemount. This infusion spawned a sustained burst of construction activity that eventually provided more than fifty new buildings at the station.<sup>124</sup>

By the late 1960s, tangible signs of the site’s brief but intense history as an industrial site were rapidly receding into memory. The hard edges of the concrete ruins from the GOW days were hidden behind thick stands of trees and concealed by lush overgrowth. The once-bare land surrounding the industrial site was dotted with clusters of neatly-maintained farm buildings. A rich assortment of grain, forage and cash crops grew in thousands of acres of well-tended fields. And the noise of air compressors and jet engines had been replaced by the soothing sounds of the Station’s thriving herds and flocks.

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<sup>121</sup> Ibid.

<sup>122</sup> Heine, *Agricultural Experiment Station*, 13.

<sup>123</sup> Ibid.; Wilcox, *Meeting an Agricultural Research Mission*, 6.

<sup>124</sup> Ibid.

## Concern for the Environment

In May 1971, a crew from the Minnesota Lumber and Wrecking Company began to dismantle the four-story steam plant that had served the Ordnance Works' three active production lines, and had later provided power for the University's aeronautical laboratory. All that would remain of this local landmark were its five cylindrical smokestacks and a concrete foundation. "Who knows," mused one longtime local resident, "this could be utilized some day for a huge incinerating plant for metro rubbish."<sup>125</sup>

As it turned out, this self-described "old-timer" wasn't too far from the truth. Just two years later, the University announced that it was about to embark upon an experiment to study the use of sewage sludge from metro-area processing plants as fertilizer for crop production at Rosemount. Prompted in part by passage of the 1972 Clean Water Act, the project would test the viability of this new approach to the growing problem of waste disposal, measuring the value of the effluent for plant nutrition, while gauging its impact on soil, water and people. Conducted on an isolated sixty-acre site near the southern edge of the Rosemount property, the project required the construction of a substantial earthen infrastructure, including lagoons, crop terraces, and a reservoir for water runoff.<sup>126</sup>

Another environmental project at Rosemount during this period was prompted by the nationwide energy crisis in the mid-1970s. In 1975, UM architecture students in Professor Dennis Holloway's environmental design classes began to plan and build the "Ouroboros House" an innovative, energy-conserving, single-family residence located on a wooded lot on the east side of the property. Trapezoidal in plan, with its longest side facing south, the super-insulated, earth-sheltered structure used solar energy for hot water and heat, natural ventilation for cooling, and was equipped with a composting toilet. More than 160 students participated in the two year construction project, which received widespread publicity in the national press.<sup>127</sup>

Inspired in part by the success of the Ouroboros project, a solar energy task force assembled by Minnesota governor Wendell Anderson sought to have the federal government's Environmental Research and Development Administration establish its national solar energy research institute at Rosemount in 1976. Despite enthusiastic

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<sup>125</sup> "Landmark is Going Down," *DCT*, 12 May 1971.

<sup>126</sup> Helyn Duff, "Sewage to be Used in Fertilizer Test," *DCT*, 17 May 1973. The sludge study was a twenty-year project. According to a bulletin issued at its conclusion, the experiment demonstrated that agricultural applications could provide an efficient and environmentally safe means of disposing of municipal waste, and that the sludge had significant potential as a crop nutrient. The Rosemount facility, noted the report, represented "a unique and valuable site, possibly the only one in the United States with such a detailed database." See D.R. Linden, W.E. Larson, R.H. Dowdy, and C.E. Clapp, *Agricultural Utilization of Sewage Sludge: A Twenty Year Study at the Rosemount Agricultural Experiment Station, University of Minnesota*, Station Bulletin 606-1995 (St. Paul: University of Minnesota, 1995), 1-3.

<sup>127</sup> *Project Ouroboros, University of Minnesota School of Architecture and Landscape Architecture, 1973-1976* on the web at [www.dennisrhollowayarchitect.com/html/Ouroboros1.html](http://www.dennisrhollowayarchitect.com/html/Ouroboros1.html); "Rosemount Property Long Range Planning Framework," 68. In Greek mythology, Ouroboros was the name of a serpent that survived by devouring itself. The house remains in use today as a private residence.



support from both the University and local officials, the facility was eventually built in Golden, Colorado.<sup>128</sup>

In the late 1970s, however, Rosemount suddenly emerged on the other side of the environmental debate. The issue first surfaced in 1978, when a reporter for the *Minnesota Daily* charged that the University was warehousing chemical and low-level radioactive waste from its hospitals and health science units at the Research Center until arrangements could be made to transfer it out of state for disposal. According to the report, “a huge gouged-out stretch of land near one of the storage buildings” also served as a “dumping ground” for an assortment of less hazardous materials, including empty propane cylinders and tissue samples that included preserved fish, pig fetuses, and a variety of medical specimens from humans.<sup>129</sup>

The issue arose again on 3 February 1981, when the *St. Paul Dispatch* reported that a New York legislative task force investigating toxic waste had discovered federal documents citing “potential problems at Rosemount.” News of the discovery immediately prompted the Minnesota Pollution Control Agency to begin its own investigation into the history of hazardous waste disposal at the site. A week later, the MnPCA said it had concluded that no hazardous waste was dumped on the site. “We’re basically viewing [it] as a closed case,” said a spokesperson for the agency. “We’re not worried at all.”<sup>130</sup>

But three years later, water samples from residential wells near the Research Center began to show elevated levels of chloroform, polychlorinated biphenyls, nitrates and other toxic chemicals. The contamination eventually appeared in twenty-eight wells in the area, prompting the University to begin providing bottled water to homeowners while it sought a solution to the problem. The *Dakota County Tribune* attributed the contamination to “the burning of hazardous waste by the University, PCB-laden oils, buried pesticides, and compression dumps during the decommissioning of the Gopher Ordnance plant.” One local resident was more succinct: “There’s just a whole lot going on down here,” he said, “and most of it’s bad.”<sup>131</sup>

The U.S. Environmental Protection Agency designated the Rosemount Research Center as a Superfund site in 1984. Cleanup began the following year and continued until 2001, when the site was removed from the Agency’s National Priorities List. “The land,” said Dr. Fay Thompson, director of the UM Department of Environmental Health and Safety, “is not environmentally pristine, but it’s unlikely anyone will find undiscovered contaminated areas.”<sup>132</sup>

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<sup>128</sup> “Group Backs Rosemount for ERDA Headquarters,” *St. Paul Dispatch*, 27 January 1976; Helyn Duff, “Rosemount Research Center Has Interesting Post-War History,” *DCT*, 21 December 1978.

<sup>129</sup> Lisa Schroepfer, “U Stores Radioactive Waste at Rosemount,” *Minnesota Daily*, 1 June 1978.

<sup>130</sup> “Contamination is Hinted,” *St. Paul Dispatch*, 3 February 1981; Mike Sweeney, “No Rosemount Hazard Found,” *St. Paul Pioneer Press*, 10 February 1981.

<sup>131</sup> Sanra Forsman, “Search for Groundwater Pollutants Spreads to U of M Research Center,” *DCT*, 21 June 1984; Thomas B. Koetting, “Homeowners Seek Relief from Contamination Woes,” *St. Paul Pioneer Press*, 10 April 1985.

<sup>132</sup> Amy Sherman, “University Ponders Land Use Options on Rosemount Site,” *St. Paul Pioneer Press*, 14

## Reviewing the Vision

### The University Ponders the Future

By the early 1970s, the environment around the Rosemount site was changing rapidly as new suburban development spilled out from the Twin Cities. Dakota County was projected to be a major growth area during the next several decades. The University's Rosemount preserve had become one of the largest remaining contiguous rural landholdings in the metropolitan area.

Meanwhile, the property that the University had once envisioned as a "gigantic center of research," seemed to be languishing. Although the Agricultural Experiment Station continued to quietly carry out its work, the demise of the highly-touted aeronautical laboratory had brought the level of activity at the Research Center to a virtual standstill, giving much of the facility, as one reporter put it "the appearance of a ghost town."<sup>133</sup>

The situation eventually caught the attention of state legislators, who began to wonder if the University still had a clear vision for the site. "They basically wanted to know what we were doing with the land," said a member of the University's Board of Regents. "Some of them questioned why the University was holding land in the metropolitan area, thinking we should move what facilities were there to [the Agricultural Experiment Station in] Waseca and sell the land."<sup>134</sup>

In 1974 the legislature asked the University to prepare a long-range planning study to determine whether or not the institution still needed the land and, if so, how it could best be utilized in the future. After examining a host of factors affecting the future of the property, ranging from proposed transportation and infrastructure development in the area to physical characteristics of the site itself and marketability of the land, the three year study concluded that "there [is] no current development pressure" on the Rosemount site, and that, in fact, there would be "no significant development pressure or potential until the 1990-2000 decade." Furthermore, the report stated that University did have a need for the site, and "that the land should remain with the University unless financial or land-use situations change drastically."<sup>135</sup>

The planning report seemed to settle the question for the moment. But the investigation had opened a door for discussion about the site's future. One of the more interesting visions came from Alice Anderson of Rosemount, who in 1974 developed a plan for converting portions of the former Gopher Ordnance Works into a 200-acre regional park.

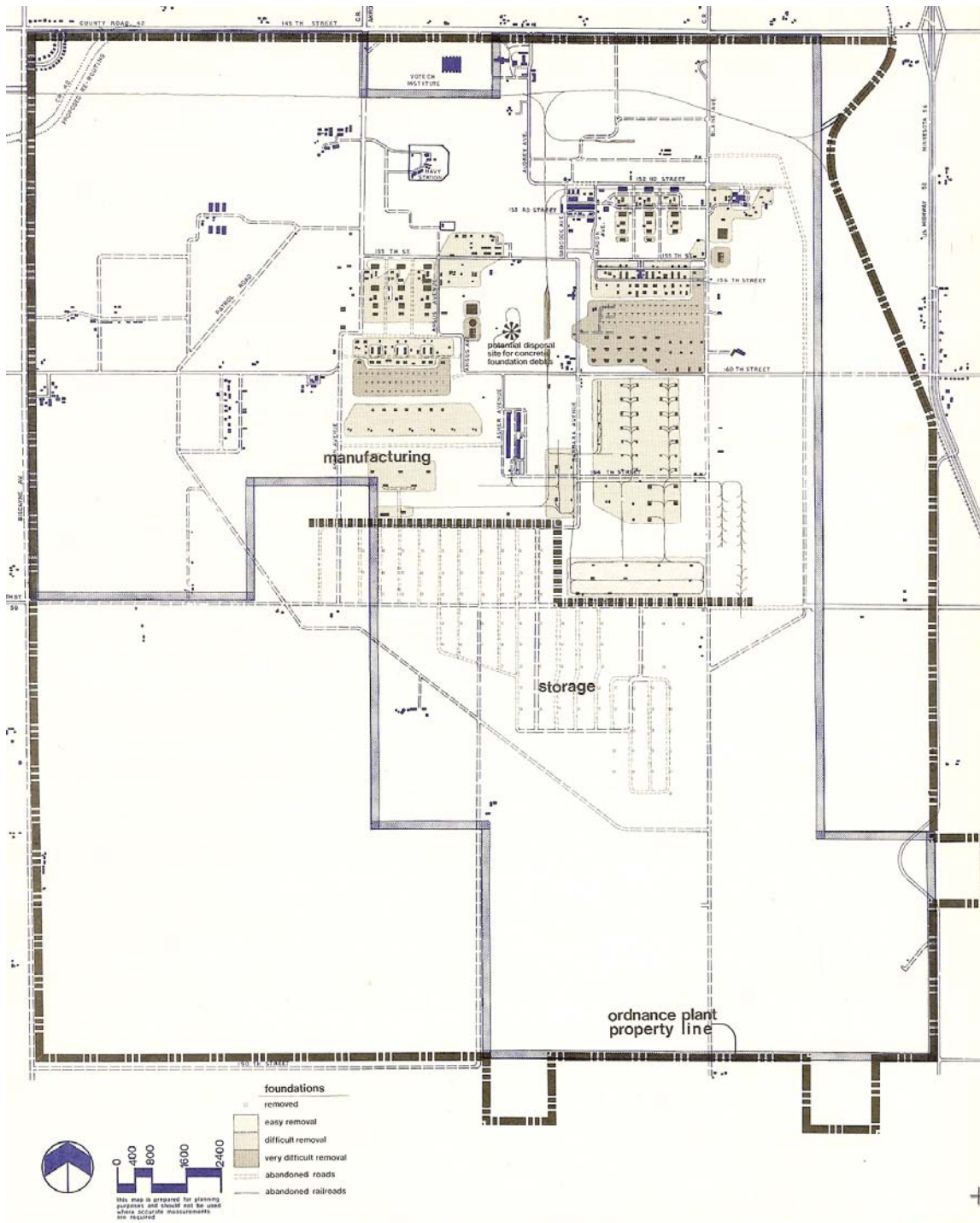
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July 1998; The Rosemount Research Center was removed from the EPA's Priorities List on 6 February 2001. "Notice of Direct Federal Action: University of Minnesota (Rosemount Research Center)." *Federal Register* 65:237 (8 December 2000), 76945-76947. On the web at <http://www.epa.gov/superfund/sites/npl/d010206.htm>

<sup>133</sup> Helyn Duff, "Peaceful Research, Industry Utilize \$123 Million Ordnance Works," *DCT*, 5 August 1971.

<sup>134</sup> Robert Ashenmacher, "Regents Unit Urges U to Retain Rosemount Property," *DCT*, 10 February 1977.

<sup>135</sup> *Ibid.*; "Long-Range Planning Framework," 35.



**University of Minnesota** **rosemount** physical facilities/buildings **23**

**Figure 14.** This map from the 1977 University of Minnesota Rosemount Long-Range Planning Framework shows the locations of existing concrete ruins at the site, as well as the expected difficulty of removing them.

Among the site's most important assets, she suggested, were the concrete ruins of the Ordnance plant itself. The tank stands, smoke stacks, and other structures, she told the *St. Paul Dispatch*, looked "almost like the remains of an earlier civilization," and "would lend themselves to a fantasy-type contemporary park."<sup>136</sup>

Anderson envisioned reuse of the power plant stacks as "a unique fast food stop, gift shop or historic display," and pergola-like concrete tank frames as a "picturesque and stately setting for music concerts, art shows, programs or for botanical gardens." She also recommended that a forty- to eighty-acre portion of the property surrounding Lone Rock be incorporated into the park project. Anderson submitted a proposal for the project to the Dakota County board, which formally approved the idea in September. She then presented the concept to the University's Board of Regents, stating that "Everything has been done that I can do; the rest is up to the Board . . . and the University."<sup>137</sup>

The Regents apparently did not share Anderson's enthusiasm for the theme park idea, as her proposal never reached fruition. But while the smokestacks were not transformed into a root-beer stand, there were some other notable changes in the landscape at Rosemount during this time.<sup>138</sup>

In May 1971 the University sold a ninety-four-acre parcel of land near the northern edge of the site to serve as a campus for the new Dakota County Area Vocational Technical Institute. In 1977 the institute purchased another small parcel in the area, and a year later the postwar polio hospital and several other structures that had housed public health and medical school programs at the original Rosemount Research Center were demolished to make way for expanded educational facilities on the campus.<sup>139</sup>

Another change took place in 1981, when the University sold the twenty-five GOW staff houses and fifty-nine acres of land in the northwest corner of the site, deeming the property "academically unnecessary." The action was intended to help offset the loss of some fourteen million dollars in University appropriations due to budget cuts ordered by governor Al Quie.<sup>140</sup>

The future of the Rosemount property emerged as an issue again in the late 1980s, when the Metropolitan Airports Commission and the Metropolitan Council began seeking potential sites for a possible new Twin Cities International Airport. In 1989, the

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<sup>136</sup> "Dakota County Interested in U Land for Park," *St. Paul Dispatch*, 3 September 1974.

<sup>137</sup> Helyn Duff, "Proposed Gopher Park Plan Goes to University Regents," *DCT*, 5 September 1974.

<sup>138</sup> Although Anderson's vision was not implemented as she envisioned it, her ideas may have helped shape a partnership formed between Dakota County, UMore Park, the Minnesota Department of Natural Resources and other local agencies and municipalities in 2004 to collaboratively develop a new regional park in Empire Township. See "Empire Wetlands Acquisition Master Plan, Draft," 25-26. Unpublished planning report, August 2004. On file at the UMore Park Administrative Offices, Rosemount.

<sup>139</sup> According to UM real estate director Susan C. Weinberg, the Dakota County VTI purchased 91.19 acres from the University on 30 May 1971, and an additional 12.76 acres on 18 May 1977. This information was provided in a personal communication with John Lauber, 10 March 2006. Duff, "Peaceful Research;" "Dismantling at Gopher Ordnance," *DCT*, 3 August 1978.

<sup>140</sup> Sanra Forsman, "Proposed Land Sale Will Create Hardship for Navy Personnel," *DCT*, 19 March 1981.

legislature ordered the agencies to undertake a comprehensive study of regional aviation needs, weighing the relative costs and benefits of expanding the existing airport versus building in a new location. Six sites within rural Dakota County were evaluated, including portions of the UMore Park area, in a series of planning studies that stretched on for nearly six years.<sup>141</sup>

While the airport studies were getting under way, Dakota County announced a plan to buy a 300-acre parcel on the east side of the Rosemount property as the site for a new solid waste processing plant. Then, in October of the following year, the city of Rosemount passed a resolution proposing to purchase 1200 acres in the Northeast corner of the Research Center for commercial and industrial development.” Gus Donhowe, the University’s senior vice president for finance and operations, told the *St. Paul Pioneer Press* that the University would be willing to sell the property “if the price is right. We don’t have any plans for the land.” No property was to change hands, however, until the airport issue was resolved.<sup>142</sup>

By the mid-1990s, airport planners had decided to expand facilities on the existing site rather than building a new terminal in Dakota County. This decision put the Rosemount property into play once again.

#### **“Ask Your Neighbors for Input”**

The opportunity afforded by the Rosemount site was clear: “The property is a piece of undeveloped land bigger than St. Louis Park” noted UM College of Agriculture dean Mike Martin in an interview with the *Minnesota Daily*. The paper went on to catalog some of the site’s other advantages:

It is a 45-minute car ride from the Twin Cities. . . . No other land grant university has a piece of land of this size this close to the city. . . . The University uses less than half the land for academic purposes. . . . The excess of unused land caused the

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<sup>141</sup> Charlene Roise, Cynthia de Miranda, Shawn Rounds and Christina Harrison, “Intensive-Level Cultural Resources Survey, Dakota County Airport Site 3: Archaeology and the Built Environment,” 1. Unpublished survey report, prepared for the Metropolitan Airports Commission and HNTB, Inc., December 1994. On file at the State Historic Preservation Office, St. Paul. The idea of relocating the airport to Dakota County was eventually abandoned for a variety of reasons, not the least of which was, according to one observer, “resident resistance.” See Joe Carlson, “U Mulls Uses for Rural Land,” *Minnesota Daily*, 11 November 1996. Interestingly, the Rosemount property, which had been the subject of airport rumors since the GOW era, did become the site of two small airfields during the 1980s. A model airplane club began to lease a five-acre parcel in the northeastern portion of the property in 1980 to serve as a flying area for radio-controlled models. Jensen Field, a private 8-acre landing strip for small planes was developed on the northern edge of the industrial area beginning in 1982. The facility operates under a lease arrangement with UMore Park, and includes thirteen small hangars. This information was included in a personal communication from UMore real estate manager Kathy Boudreau to John Lauber, 29 December 2005.

<sup>142</sup> Richard Chin, “Rosemount May Purchase U of M Land,” *St. Paul Pioneer Press*, 31 October 1990. The solid waste proposal was strongly opposed by local residents and eventually failed to win approval from the Minnesota Pollution Control Agency.

property to fall under the microscope of the University's central administration as an unused asset that could be sold for much needed cash.<sup>143</sup>

Well aware of the potential value of the site, the University hired the Minneapolis-based planning and engineering firm BRW in June 1996 to "analyze the Rosemount property as part of a . . . project to divest the University of property it is not using." The firm was asked to explore a range of options for the site, including the potential sale and development of some portions, and to prepare a master plan for land use.<sup>144</sup>

The firm's initial recommendations were made public in November. The preliminary land-use plan called for the University to retain 2,000 to 3,000 acres of the land for agricultural research. The remainder would be made available for suburban-style residential and commercial development that could accommodate as many as 30,000 people.<sup>145</sup>

The recommendations were immediately assailed from all directions.

Local residents, recalling the heavy-handed government acquisition of the land for the Gopher Ordnance Works in the 1940s, expressed concerns about both the planning process and the proposal itself. Many felt that the planning had been carried out in secret, with little effort to engage local citizens and officials in the process. Others voiced concern about the proposed new development's adverse effect on the area's historically rural character. "This is the best farmland in the state," said State Representative Dennis Ozment of Rosemount. "If the University develops its land, there is nothing to stop urban development from continuing. . . . They're talking about putting houses where no one has ever talked about putting houses."<sup>146</sup>

A broadbased coalition of advocates for sustainable development opposed the recommendations on the grounds that development in the area would expose "one of the largest pieces of contiguous real estate in the Twin Cities" to the ravages of suburban sprawl.<sup>147</sup>

The proposal to sell portions of the site also elicited a strong response from the College of Agricultural, Food and Environmental Sciences, which undertook a year-long study of its own, challenging its faculty to carefully consider and define what role the Rosemount facility should play in the College's future. The faculty compiled an impressive list of ways that the facility served existing research and education needs; outlined a number of important types of new research that could be carried out on the site, and voiced overwhelming support for retaining the entire Rosemount property as a permanent part of

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<sup>143</sup> Joe Carlson, "U-Owned Property Spawns Debate," *Minnesota Daily*, 2 February 1998.

<sup>144</sup> Dennis Cassano, "Future of 'U' Land Disputed in Rosemount," *Minneapolis Star-Tribune*, 10 November 1996; Carlson, "U Mulls Uses."

<sup>145</sup> Joe Carlson, "Agricultural Site is Grounds for a Debate," *Minnesota Daily*, 4 December 1996.

<sup>146</sup> Cassano, "Future of 'U' Land Disputed."

<sup>147</sup> "Is it Time for a Sustainable Ag Experiment Station?" *The Land Stewardship Letter* 15:6 (December 1997), 4; Michael Koehler, "Groups Raise Concerns About Future Use of U of M Land," *Hastings Star-Gazette*, 5 December 1996.

the University: “The College strongly encourages that any short-term financial gains from selling Rosemount be balanced against its long-term value to agriculture in Minnesota,” said a faculty report. “We feel that these long-term benefits far outweigh any advantages from land sales.”<sup>148</sup>

There were also objections to an earlier proposal to develop a Turf and Grounds Research and Education Center at Rosemount that would include two golf courses developed in collaboration with the Minnesota Golf Association. The Center was to occupy hilly land in the Lone Rock area. DNR officials were opposed to placing the facility in this location due to its potential impact on sensitive ecosystems in the area. “If you want to design the ultimate environmentally friendly golf course, you start on a piece that’s already been trashed,” posited DNR ecologist Bill Penning. When BRW suggested moving the golf courses to the proposed new residential areas, a University urban planning professor cautioned that the Rosemount property provided a crucial buffer between urban and rural parts of the metro area, and that “golf courses, in our culture, tend to be magnets for development.”<sup>149</sup>

Stunned by the criticism, the University realized that it would need to revamp its planning efforts and more actively engage the public in the process. “The clash with residents taught the University an important lesson,” recalled a reporter for the *St. Paul Pioneer Press* a few years later. “Ask your neighbors for input before plans are in place.”<sup>150</sup>

In the summer of 1997, University president Mark Yudof announced that the U was “not interested in selling the land.” Yudof then appointed a “Rosemount Task Force” and commissioned the newly established Center for Rural Design (CRD) to help develop an integrated land use and management plan for the site. The Urban Strategies Group, a Toronto-based consulting company, was retained to assist with the process.<sup>151</sup>

The newly formed coalition was expected to work with a broad base of constituents from both inside and outside the University to conduct a systematic, thorough, and inclusive planning process for the Rosemount property. “This is a real critical site,” said CRD Director Dewey Thorbeck. “We want to make the property a good fit for the University as well as for the surrounding community.”<sup>152</sup>

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<sup>148</sup> “Agricultural Research and Education at Rosemount,” 14. Unpublished report prepared by Dr. Richard A. Levins on behalf of the College of Agricultural, Food and Environmental Sciences, University of Minnesota, July 1997. On file at the UMore Park Administrative Offices, Rosemount.

<sup>149</sup> Tony Kennedy, “Group Proposes Golf Research Complex with ‘U’ Near Rosemount,” *Minneapolis Star-Tribune*, 1 May 1996; Carlson, “Agricultural Site is Grounds for a Debate;” Dennis Lien, “U Weighs Rosemount Plan,” *St. Paul Pioneer Press*, 27 October 1998. After years of discussion and controversy, the Minnesota Golf Association voted on 16 September 1998 to opt out of the project.

<sup>150</sup> Amy Sherman, “University Ponders Land-Use Options on Rosemount Site,” *St. Paul Pioneer Press*, 14 July 1998.

<sup>151</sup> *Ibid.*

<sup>152</sup> Sara Peterson, “U of M Decides Not to Sell Rosemount Property,” *This Week*, 12 July 1998.

Over the next several years, the Rosemount Task Force convened a series of public meetings to present ideas for the use of the property, and to solicit feedback from stakeholders both inside and outside the University. Preliminary plans were unveiled in 1999 and a final report was issued in December 2000.

The Task Force report articulated a vision describing the creation of a “Research Village” at Rosemount--a place where students, faculty and industry partners would come together to share knowledge and where the general public would be invited to explore the site’s rich history and landscape, as well as learn about the research activities taking place there. The Research Village would be home to the “Vermillion Institute,” a new “landmark institute” and interpretive center that would support the study of current issues in the agricultural, health and environmental sciences.<sup>153</sup>



**Figure 15.** *Conceptual landscape plan for the UMore Park Research Village and the Vermillion Institute.* UMore Park: Cultivating a Landscape for Knowledge.

The group’s report also outlined a set of principles for future operation and development of the Rosemount property, recommending that the University retain ownership of the entire acreage, create new opportunities for research and education linked directly to academic departments at the U, actively seek partnerships with outside organizations, encourage land uses that protect and enhance the area’s natural systems, and provide opportunities for public involvement in long-term planning at the site

<sup>153</sup> “UMore Park: Cultivating a Landscape for Knowledge,” 4-6, 14. Unpublished management plan, prepared by Urban Strategies, Inc., Toronto, for the Rosemount Task Force, December 2000. On file at the UMore Park Administrative Offices, Rosemount.



The Task Force urged the University to merge the Rosemount Research Center and the University of Minnesota Agricultural Research Station into a single management entity, to hire a single director to oversee activities at the site, and to give the property a new name, “befitting the vision of its future.” Although acknowledging that implementation of all the ideas was likely to take “many years, even decades,” the report noted that one change was already in the works. The Rosemount Task Force had proposed that the property be called the University of Minnesota Outreach, Research, and Education Park, or simply “UMore Park.”<sup>154</sup>

On 9 February 2001, the University of Minnesota’s Board of Regents adopted the Task Force recommendations, and formally changed the name of the Rosemount property to UMore Park. The Regents also approved a new management structure for the facility and called for development of a comprehensive master plan for the property. Work on that plan began in 2003 under the direction of the Center for Rural Design, and was substantially complete by mid-2004.<sup>155</sup>

### **“At the Eye of the Needle”**

By the time the Master Plan was in place, the development pressure on rural Dakota County that had been forecast nearly thirty years earlier had accelerated tremendously. And UMore Park stood squarely at the epicenter of the activity. “Once just another plot of land in a sea of farm fields,” wrote a reporter for the *Minneapolis Star-Tribune*, “UMore Park is now at ‘the eye of the needle’ as development expands to the southeast.”<sup>156</sup>

There was new pressure from within the University as well. Under the leadership of president Robert Bruininks, the University of Minnesota had embarked on an ambitious journey to become “one of the top three public research institutions in the world.” At the same time a series of meager legislative appropriations for higher education was exerting new financial pressure on the University. There was a growing consensus that if the U intended to attain its goal of becoming an internationally renowned research center, it would have to “maximize the value of all of its assets.” And it was clear that UMore Park could play an important part in the process.

In June 2004, University president Robert Bruininks appointed an executive committee of senior administrators to once again study “the academic and economic potential” of UMore Park. “Five years after University officials thought they had a plan for the site,” wrote the *Star-Tribune*, “rapid development nearby is sending them back to the drawing board.”<sup>157</sup>

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<sup>154</sup> Ibid., 5, 28.

<sup>155</sup> “Master Plan for UMore Park,” 5-6. Prepared by the UMore Park Management Team as a Component of Their Strategic Planning Process, July 2004. Unpublished planning report, on file at the UMore Park Administrative Offices, Rosemount.

<sup>156</sup> Mary Jane Smetanka, “U Goes Slowly in Deciding Use of Valuable Land,” *Minneapolis Star-Tribune*, 10 November 2005.

<sup>157</sup> Ibid.

In September, 2005, the committee issued a report recommending that the University retain a “world-class” consulting organization to oversee a process of preparing a long-range plan for UMore Park that would enable the University of Minnesota to seize the “once-ever” opportunity afforded by the Rosemount property.<sup>158</sup>

Acting on the committee’s recommendation, the Board of Regents issued a Request for Proposals for Strategic Planning work at UMore Park in November 2005. On 10 February 2006 the Board announced that it had awarded a planning contract to Sasaki Associates, Inc., of Watertown, Massachusetts. According to committee chair Charles Muscoplat, the firm would help the University “formulate a long-term vision for this unique property on the suburban-rural edge of the metro area. . . . We need to lay a plan for twenty-five years of possibilities,” he said. And we need to “do it right.”<sup>159</sup>

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<sup>158</sup> “Creating a Lasting Legacy for UMore Park: Advancing the University of Minnesota’s Academic Mission,” 2-3. Unpublished executive committee report to UM president Robert Bruininks, September 2005. On file at the UMore Park Administrative Offices, Rosemount.

<sup>159</sup> “Request for Proposal for UMore Park Strategic Planning Services,” University of Minnesota RFP #571-2005-0074, 18 October 2005. “U of M Engages Strategic Planners for UMore Park’s Future,” University of Minnesota Press Release, 10 February 2006.



**Left side.** Looking west from water tower in administration area on northern edge of the site.



**Center.** Looking toward the north and east at production lines A, B, and C. Smokestacks for power plant are visible on horizon. Long building at right is the machine shop.



**Right side.** Looking east toward the partially completed D, E, and F production lines.

## Panoramic View of the Gopher Ordnance Works, 1944.

U.S. Army Corps of Engineers

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## ARCHIVAL SOURCES

### **Minnesota State Historic Preservation Office**

St. Paul, MN

Portions of the UMore Park property have been evaluated for potential historical significance as part of previous cultural resource surveys. Existing surveys have examined the potential of both archaeological sites and standing structures at the site. Lone Rock was also inventoried as part of a 1989 study of Minnesota Geographic Features of Cultural and Historic Significance.

The Preservation Office also has a copy of Kimberly Lane's 1995 historic context study of the Army Materiel Command's Government-Owned, Contractor Operated (GOCO) plants. See bibliography for a complete citation.

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### **Dakota County Historical Society**

South St Paul, MN

The Dakota County Historical Society maintains an extensive collection of newspaper clippings and maps pertaining to the history of the UMore Park property. The project team examined the following collections:

- Rosemount, Gopher Ordnance Works
- Rosemount, Gopher Ordnance Works—community effects
- Rosemount, Gopher Ordnance Works--postwar
- Rosemount, Agricultural Experiment Station

Plat maps and Farmers' Atlases of the Rosemount Ag Experiment Station site

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### **Minnesota Historical Society**

St. Paul, MN

The collection of the Minnesota Historical Society Library in St. Paul includes materials on the following topics:

- Reports of the Minnesota Legislative Building Commission, containing information about capital appropriations and building projects at UMore Park.
- Transcripts from an oral history project recording the recollections of Gopher Ordnance Works employees. The project was completed as a bicentennial project in 1976.
- Copies of *The Powder Keg* and *The Propellant*, newsletters produced by and for employees of the Gopher Ordnance Works.

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**University of Minnesota Archives**

Minneapolis, MN

The University Archives maintains extensive correspondence files and other records relating to the acquisition and operation of the former Gopher Ordnance Works by the University of Minnesota. Collections examined included:

*-The Bulletin of the University of Minnesota, The Biennial Report of the President of the University of Minnesota to the Board of Regents, 1948-1968*

-Minnesota University School of Agriculture, Study of Ag. Schools, 1948-1950. Box 4, Collection 344

-Rosemount Research Center, 1947-69. Box 242, Collection 841.

-Rosemount Research Center, 1947-69. Buildings. Box 80, Collection 841

-Minnesota University President's Office. Papers, 1911-1978

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**University of Minnesota Facilities Management Office**

Minneapolis, MN

The Facilities Management Office, located in the Donhowe Building on the Minneapolis Campus, maintains an extensive collection of documents relating to buildings at UMore Park. Materials examined included:

-Contract documents

-Specifications

-Site Plans and Architectural Drawings.

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**UMore Park Administrative Offices**

Rosemount, MN

The Administrative Offices maintain a complete collection of UM-commissioned planning documents for the UMore Park property, as well as an extensive collection of photographs documenting activity at the Rosemount Agricultural Experiment Station.

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**U-More Park Real Estate Office**

Rosemount, MN

The Real Estate Office maintains an extensive collection of records relating to the Gopher Ordnance Works, including an Industrial Facilities Inventory prepared by the U.S. Army Corps of Engineers in 1944. The Office also has information about the acquisition, sale and leasing of buildings and land at Rosemount.

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**University of Minnesota Center for Rural Design**  
St. Paul, MN

The Center for Rural Design's Geographic Information Systems staff has compiled a number of large format maps of the Rosemount site, depicting the locations of farmsteads prior to construction of GOW; depicting locations of GOW buildings and structures; and depicting the site as it stands today.

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**MacDonald and Mack Architects, LTD**  
Minneapolis, MN

In 1984, the MacDonald and Mack Partnership of Minneapolis completed a series of historic properties surveys for the United States Army Materiel Development and Readiness Command (DARCOM). Included in that project were three surveys of WWII era smokeless powder production facilities similar to the Gopher Ordnance Works. Each study includes a historic context narrative, footnotes and a bibliography, descriptions of specific buildings and structures associated with each site, and an outline of registration criteria for evaluating the historical significance of resources at each location. The project team copied the following reports from the DARCOM study to help develop the historical context for the Gopher Ordnance Works:

- Sunflower Army Ammunition Plant, Desoto, KS
- Radford Army Ammunition Plant, Radford, VA
- Indiana Army Ammunition Plant, Charlestown, IN