

*Fort Snelling 1938*

## Design Guidelines For Minneapolis Park and Recreation Board Development at Fort Snelling

Including Parade Ground, Quartermaster Area,  
Artillery Complex, and Cavalry Drill Hall

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## **Introduction**

The Secretary of the Interior's Standards for the Treatment of Historic Properties describe several possible approaches to historic landscapes: preservation, rehabilitation, restoration, and reconstruction. Preservation entails maintaining an existing, intact, historic landscape. In rehabilitation, an historic landscape is adapted for a new use. Restoration involves returning an altered landscape to its appearance at an earlier period, while reconstruction recreates a landscape that no longer exists.

For the Fort Snelling project, rehabilitation seems the most appropriate approach. The *Standards* define rehabilitation as "the act or process of making possible a compatible use for a property through repair, alterations, and additions while preserving those portions or features which convey its historical, cultural, or architectural values." The full text of the standards for rehabilitation is appended. Essentially, they outline a commonsense respect for the historic cultural landscape, with historic elements retained when practical and sensitively altered when necessary.

## **Applying the Standards to Fort Snelling**

Establishing guidelines for rehabilitation at Fort Snelling presents a challenge. These guidelines should be based on the fort's "character-defining elements." The fort today, however, represents many decades of development. Features from various eras up to 1946, when the post was decommissioned, can claim significance in their own right. To identify a workable group of character-defining elements requires a careful assessment of the fort's dominant design motifs and other physical factors, and also an appreciation of the functional significance of the buildings and other features.

This report provides an assessment of an area that the Minneapolis Park and Recreation Board plans to rehabilitate into a premiere sports facility. The area consists of land northwest of Bloomington Road as well as the artillery and cavalry parade ground, also known as the drill field or polo grounds (hereafter called the "artillery parade ground"). References to specific buildings are followed by the building number in parenthesis. A 1953 map with building numbers is included in Appendix B.

## **Historical Context**

Fort Snelling followed the typical military model: functional units were grouped in distinct areas and were distinguished by design and materials. The area northwest of Bloomington Road was dominated by quartermaster operations, and also contained an artillery complex and a cavalry drill hall. Southeast of Bloomington Road, a portion of a large parade ground shared by the artillery and cavalry survives. The infantry parade ground, located southwest of Minnehaha Avenue, has been subsumed by a golf course. A remnant of Leavenworth Avenue, which served as the field's southwest border, remains in service to provide access to the clubhouse; the road's path can still be traced by a row of trees bisecting the greens.

Fort Snelling was established in the 1820s. Development remained concentrated around the original citadel until the Civil War era, when a number of temporary structures were erected to process recruits. Permanent buildings did not appear in the area now west of Highway 55, however, until the late 1870s, when the fort became headquarters for the Department of Dakota, which oversaw a large territory later divided into North and South Dakota and Montana. A decade later, Fort Snelling grew again as the army consolidated operations and closed other outposts. The Spanish-American War (1898) and World War I (1914-1918) brought additional construction campaigns. The fort subsequently benefited from federal relief programs during the Depression in the 1930s. It hosted a number of important activities during World War II, many housed in temporary structures. Since Fort Snelling was decommissioned in 1946, virtually all of the temporary structures have been removed, and ownership of the property has been split among a variety of state and federal agencies.<sup>1</sup>

### *Artillery Parade Ground*

Of the properties being examined by this report, the artillery parade ground is the oldest. It was apparently established after headquarters for the Department of Dakota was based at the fort in 1878. New buildings rose along Taylor Avenue and Bloomington Road soon thereafter. An 1882 map shows the parade's southwestern border defined by a road extending northwest from the front of the Department of Dakota headquarters building (67). The road, now Minnehaha Avenue, was straightened and its southeast terminus moved slightly to the north by the mid-1890s, creating more of a right angle with Taylor Avenue. Near the northwestern end, a leg angled to the north. This leg survived at least until 1927.

After World War I, the parade ground was transformed into a sports complex. A 1927 map shows an oval polo field stretching along Bloomington Road, with a polo practice field adjacent to the southeast. A single-story viewing or concession stand was apparently erected along Bloomington Road opposite Building 211. Assuming that this is the structure visible in photographs in a program for a 1925 polo tournament, the stand



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<sup>1</sup> A number of sources offer information on the fort's history. A good summary is contained in Robert A. Clouse and Elizabeth Knudson Steiner, "All That Remains: A Study of Historic Structures at Fort Snelling, Minnesota," draft, 1998, prepared by the Archaeology Department, Minnesota Historical Society, for the Minnesota Department of Natural Resources. The author wishes to express appreciation to Mr. Clouse for providing her with a copy of the report and other information.

Detailed information on specific buildings is included in a series of inventories prepared by the quartermaster and retained at the Minnesota Historical Society Reference Library in St. Paul as "U.S. Army Quartermaster Corps Building Records 1901-1969." Information about specific buildings that is not footnoted in the following report is attributable to this source. Map references are also not footnoted; a list of maps used to prepare this report is provided in the bibliography.

had lattice railings instead of walls and was topped by a gable roof with exposed rafters. A smaller oval track occupied the south corner of the parade ground. Northeast of the track along Taylor Avenue was a baseball diamond. Baseball diamonds also appeared on the east and north corners of the parade ground. A periodical published in 1919 shows the back corner of tall, wood-frame bleachers, perhaps situated in front of the gymnasium (53) at what is now the northeastern end of Taylor Avenue. It was in this location that a federal relief program built a substantial concrete stadium, which was dedicated in June 1939. The V-shaped stadium was oriented to the north. Some of the outfield, along with the entire northeastern edge of the parade ground, were consumed by Highway 55 in the 1950s. This project demolished two large, early twentieth-century artillery barracks fronting on the parade ground. The stadium was torn down in about 1979.

Another change to the parade ground in the 1930s was the installation of lighting by the Works Progress Administration.<sup>2</sup>



The parade ground sometimes hosted temporary structures, particularly during wartime to handle the large volume of troops passing through the fort. All in all, however, the parade ground has remained relatively uncluttered throughout its history, regardless of the various purposes it has served.<sup>3</sup>

### *Quartermaster Area*

The quartermaster was responsible for supplying troops with clothing, equipment, food, tack (saddles, bridles, etc.), and transport—in other words, virtually everything except munitions. Up until the late nineteenth century, quartermasters were organized by army departments. By the 1890s, however, they were based at permanent posts, such as Fort Snelling, and were responsible for provisioning all troops at that post.<sup>4</sup>

At Fort Snelling, the quartermaster area was originally situated near the 1820s citadel. When the area to the west began being developed in the late nineteenth century, the quartermaster moved northwest of Bloomington Road. The complex initially consisted of a few buildings paralleling the road, with stables forming a square paddock at the northern corner of the road's intersection

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<sup>2</sup> *Official Program: Fourth International Polo Tournament, Fort Snelling, Minnesota; August 30 to September 6, 1925* (N.p.: [Fort Snelling Polo Association], 1925), 33; *Reveille: The Call to a New Life—Centennial Memorial of Fort Snelling 15* (1919): 36, published by U.S. General Hospital No. 29, Fort Snelling; Dale F. Becker, "Fort Snelling 1938-1945" (B.A. paper, University of Minnesota, 1983), 6, 10.

<sup>3</sup> *Official Polo Program: Fourth International Polo Tournament.*

<sup>4</sup> Clouse, 31; *Military Show Fort Snelling September 20, 21, 22, 1929: Program and Guide to Exhibits* (N.p., 1929), 16.

with what is now Minnehaha Avenue. Building 217, across the road to the southwest, is apparently the only building to survive from this period. Fenced corrals and large gardens edged the complex. A few buildings (218, 219, 239) were added in the mid-1890s as the army consolidated posts, increasing Fort Snelling's responsibilities.

The quartermaster area was largely rebuilt in the early twentieth century as the federal government, in the aftermath of the Spanish-American War, allocated significant funds to improve the country's military facilities. The stables (211, 214) and shops (210) remain from this time. Barracks for quartermaster personnel (212) fronting on Bloomington Road and a garage (216) extending northwest from the north corner of Bloomington Road and Minnehaha Avenue have been demolished. The area also expanded during the First World War and again in the 1930s, when it supplied units of the Civilian Conservation Corps. A warehouse (223) and oil station (215) are products of the latter period.

Most of the small frame houses along Minnehaha Avenue were apparently moved to the site in about 1910 to house civilian workers. The quartermaster area acts, in effect, as a barrier between the civilian and military worlds. It also partially shields the fort from more recent construction, including the Fort Snelling Club (89) and parking lot and, across the road to the north, a massive parking lot and the multistory federal building.

Minnehaha Avenue, it should be noted, follows a corridor well-established by the late nineteenth century. By the 1880s, it connected with a network of roads linked to Minneapolis and the Coldspring waterworks. A road extending northwest from the angle in Minnehaha near the mineral oil house (239) has long since disappeared.

### *Artillery Complex and Cavalry Drill Hall*

Like the quartermaster area, the artillery complex and cavalry drill hall are the legacy of increased government spending in the early twentieth century. Minnesota's notorious winters make the need for a drill hall obvious. Cavalry barracks (17, 18) and stables (only Building 30 survives from the original four) were to the northeast, now separated from the drill hall by Highway 55. The interior of the drill hall, built in 1907, has experienced a few alterations, including the addition of a gallery in 1922 and a concrete floor and stage in 1941.<sup>5</sup> The exterior remains largely unchanged.

Artillery is comprised of large guns, such as cannon, requiring more than one person to position and fire. Well into the early twentieth century, horses and other animals were relied on to propel these heavy weapons, so artillery companies needed stables to house the animals. An artillery complex also contained buildings to store the weapons, and shops where damaged parts could be repaired.

At Fort Snelling, the artillery complex contained the standard cohort of stables, workshops, and storage sheds. Artillery troops were housed in barracks (demolished) just across Bloomington Road. The layout of the complex was dictated by function. The gun sheds fronted on Bloomington Road for easy access to the parade ground and transportation. Workshops to repair

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<sup>5</sup> Clouse, 104; Becker, 18.

the weapons were between the sheds. Stables paralleled the gun sheds to the northwest. Several buildings in the complex have been destroyed by windstorms or fire since the early 1900s. Replacement structures have maintained the same orientation and similar form, with some adaptations to the area's later use as a motor pool. Building T-203 was inserted between Buildings 202 and T-203A in 1939.

### **Spatial Organization and Land Patterns**

Highway 55 has made a jarring change in the fort's spatial organization, slicing across the northeast end of the post. Highway 5 and the intersection between the two highways further bifurcates the fort. To the southwest and west, the Minneapolis-Saint Paul International Airport occupies land once an active part of the fort, and cuts off roads that carried traffic through the fort between western communities and major crossings of the Mississippi and Minnesota Rivers.

Despite these alterations, the parade ground continues to be a prominent feature around which functional elements of the fort are arranged. Although the roads no longer serve as important arteries, the road pattern in the area southwest of Highway 55 has remained essentially unchanged for over a century. (More detailed information on the roads is provided in the "Circulation" section below.)

### **Topography**

Fort Snelling is situated on a relatively flat bluff. During the 1930s, the level of the parade ground was raised one to two feet with dirt fill.<sup>6</sup> Otherwise, the area's topography is essentially unaltered.

### **Vegetation**

Photographs from the 1880s depict the area as largely prairie, with a few deciduous trees along Minnehaha Avenue. The lack of trees is confirmed by a 1885 map of the fort, which shows large gardens northwest of Bloomington Road and southwest of Minnehaha Avenue in the area now occupied by quartermasters' buildings.

Early twentieth-century photographs reveal that the fort's lawns held coarse grass and weeds, grew patchily, and were not mowed, growing to well over ankle height. A row of deciduous trees, perhaps elms, edged the infantry parade ground (now the northeast end of the golf course) along Taylor and Leavenworth Avenues. By the 1930s, the artillery parade ground was ringed by deciduous trees. The roads encircling the parade ground were sometimes, but not always, lined on both sides with trees.<sup>7</sup>

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<sup>6</sup> Clouse, 37.

<sup>7</sup> *Reveille: The Call to a New Life*: 36, 40, 58, 59, 92; 1937 photograph in collection of Mark Hurd aerial photographs, Borchert Library, University of Minnesota, Minneapolis.

## Circulation

### *Roads and Walkways*

The pattern of roads has remained relatively consistent over the past century. Although now terminating at the airport to the southwest, Bloomington Road continues to serve as a major internal arterial for the fort southwest of Highway 55. Likewise, Minnehaha Avenue and Taylor Avenue still form the southwest and southeast boundaries of the artillery parade grounds.

Bloomington Road was not paved before June 1916, when a wagon shed (216) was erected on the northern corner of that street's intersection with Minnehaha Avenue. In an undated photograph of the wagon shed, presumably taken shortly after the building's completion, Bloomington Road appears to have a macadam surface. No curbs are visible. A parallel walkway to the northwest is separated from the road by a broad grassy boulevard.

The surface of Bloomington Road had been upgraded to concrete by 1940 according to quartermaster records. At that time, the 2,625-foot section along the artillery and infantry parade grounds measured 37 feet in width. The remaining 11,030 feet of Bloomington Road to the southwest was 27 feet wide. The road was edged by 2,715 feet of 4-foot-wide concrete walkways and 362 feet of 4-foot-wide brick walkways. About one-quarter of Minnehaha Avenue's 3,620-foot length was 16 feet wide; the rest was 18 feet. No sidewalks edged that street, which, like Bloomington Road, was paved with concrete. Gravel stable roads were 15 feet wide.

This can be viewed in the context of a broader survey of the fort's roads completed the following year. (Discrepancies between the 1940 and 1941 data might indicate that some construction was completed between the surveys; it is also possible that the scope and accuracy of the surveys varied.) By 1941 a majority of the fort's roads—39,773 feet of a total of 72,952 feet—were concrete-surfaced. Another 23,469 feet had a bituminous coating, and the rest were covered with gravel. Roadway widths ranged from 40 to 15 feet. As is apparent from the chart below, roadways were most often 27 feet or less in width.

<i>Roadway width</i>	<i>Concrete</i>	<i>Bituminous</i>	<i>Gravel</i>
40	950	4,600	
36	5,375	1,300	
30		3,514	
27	14,720		
26			4,685
25		1,155	
22		1,100	
20	4,386	5,955	
18	4,617	740	2,825
15-16	9,725	5,105	2,220
<i>Total roadways</i>	<i>39,773</i>	<i>23,469</i>	<i>9,710</i>

According to the 1941 inventory, most of the fort's 43,447 feet of walkways were concrete, with over half (24,737 feet) being 4 or 5 feet wide. A total of 7,418 feet measured 6 feet wide, with

the remainder between 2 and 3.5 feet wide. The 362-foot brick walkway along Bloomington Road was apparently the only walkway made of that material at the fort. While walkways often appeared on the side of the street opposite the parade ground, they never crossed or edged the parade ground.

## **Water Features**

The parade ground, quartermaster area, and artillery complex contain no natural water features. Drain tile had been installed on the artillery parade ground by 1903. Sprinklers were added in the 1930s. Also during that decade, drainage trenches were cut through part of the quartermaster area by federal relief program workers.

## **Structures and Objects**

### *Structures*

Extant and demolished buildings in the quartermaster and artillery complexes fall into four basic types: one- to two-story brick structures (1894-1910), single-story stone structures (1890s), one- to two-story clapboard-sided wood-frame structures (ca. 1879-1917), and single-story concrete and concrete-block structures (1930s). Building types reflect a hierarchy of function. Brick is used for the buildings housing the most important activities: the main storehouse (222), drill hall (201), non-commissioned officers' quarters (227, 229), stables (211, 214), and shops (205, 206, 210, 218). Wood-frame buildings, including a cluster of civilian residences, typically play a secondary and often more temporary role. Stone was a special-purpose material, used when a building's function had a high potential to cause fires. Finally, concrete was the material of choice in the 1930s, the area's last phase of construction.

In terms of both function and visual character, the early twentieth-century red-brick buildings dominate the area. Their understated Colonial Revival style should serve as the inspiration for the architectural form of major new construction northwest of Bloomington Road. The design of new ancillary structures could also be based on the red-brick buildings or could be influenced by the more modest wood-frame structures. Both structural types share a number of design elements—gable roofs, multiple-light double-hung sash windows, simple trim, rectangular forms—that should be considered for any new construction. Although slate or wood shingles may be prohibitively expensive or impractical, the color of modern roof materials should be related to slate (for brick buildings) or wood shingles (for wood-frame buildings).

An analysis of the primary building designs northwest of Bloomington Road follows.

#### *1. One- to two-story brick buildings.*

Walls of the early twentieth-century structures are red face brick. Brick walls of the 1894 forage house (218) are buff colored. Limestone ashlar foundations edge low to relatively high basements. Most of these buildings have gable roofs; in some cases, the original slate sheathing has been replaced by asphalt shingles. Building 201 had a tile roof, and Building 218 wood shingles. The gable roofs of the former barns (211, 214) are topped by monitors;

the monitors originally held pairs of louvered shutters alternating with pairs of windows, perhaps casements. Parapet walls with a semicircular apex trim the gable ends of the drill hall (201).



The designs of these buildings are utilitarian, and presumably follow standard army plans. A few details hint at the influence of a popular early twentieth-century style, the Colonial Revival: the buildings fronting on Bloomington Road (205, 206, 222, 227, 227) have boxed eaves above a plain fascia, with returns on the gable ends. A fanlight pierces each gable end of the two-family non-

commissioned officers' quarters (227). The Colonial Revival style was further expressed by the original colonnaded open porches of the quarters (212 [demolished], 227, 229), which were replaced by the current enclosed porches during the 1930s. A large addition to Building 222 also dates to the 1930s; while built of brick, its flat roof and streamlined design departs from the Colonial Revival spirit of the earlier structures.

Windows are mostly 6/6 or 8/8 wood sash. Sills are stone. Window and door lintels are segmental-arched or flat.

## 2. *Single-story stone buildings.*

Stone, a durable but cumbersome building material, was used for two structures where the threat of fire was a major consideration. Building 239, dating from 1892, held the highly flammable oil that powered the post's lanterns, the major source of light before electricity was introduced. Building 219 was erected in 1895 as a sawmill and was later used as a wheelwright shop. The stone walls were not enough to prevent a fire in 1913, which partially demolished the structure; it was subsequently repaired.

The gable roof of Building 239 continues to be sheathed with corrugated metal as it has been since at least 1905. One window has been cut into each of the side walls, which were originally unbroken.

The metal roof of Building 219 has been replaced by modern asphalt shingles; the roof's hipped configuration has been retained. Windows were originally 4/4 wood sash. The doorway in the southwest end was once wider and held double doors.

### 3. *Wood-frame buildings.*

Wood was used to construct a complex of stables and gun sheds for the artillery in 1903. Only two of these buildings survive (207, 209), but structures that replaced 1903-vintage buildings in 1914 (202) and 1940 (T-203) are similar in character to the earlier structures. Another construction campaign in 1916-1917 produced several one- and two-story



utilitarian service buildings in the quartermaster area, including two garages (216, T-228), an office building (221), and a paint shop (225). Of this cohort, only the paint shop, now a storehouse, and one of the garages (T-228) survive. These buildings look very similar to a wood-frame storehouse (217), which property records claim was built in 1879. Wood also framed and clad a group of houses moved from an unknown location to the periphery of the quartermaster area between 1910 and 1913. These modest structures, which were used to lodge civilian workers, stand in contrast to the more substantial and prominent brick military quarters along Bloomington Road. Even more humble is the 1933 garage (T-213, demolished), a simple rectangle with a nearly flat, single-slope roof. The powder magazine (237), with walls and a roof of corrugated metal, matches the scale and form of the other wood-frame buildings but is otherwise an anomaly.

The wood-frame structures northwest of Bloomington Road, regardless of their function, share similar attributes. All except the shed-roofed garage have gable roofs. The roofs, originally covered with slate, tile, or wood shingles, are now protected by asphalt shingles. Exterior walls are sheathed in clapboard; windows are typically multiple-light double-hung sash. Ornamentation is virtually nonexistent.

### 4. *Concrete and concrete-block structures.*

Fort Snelling was the focus of a number of federal relief projects during the Depression, and several buildings were produced as a result. The quartermaster oil station (215) is a small cast-concrete structure. The post exchange oil and gas house (220) is of rusticated concrete-block construction, while the CCC commissary warehouse (223) features smooth-faced concrete block. The latter building has a hipped roof; both oil stations have gable roofs. Concrete was also used for the stadium (demolished) on the parade grounds, a massive monolith with some Streamline Moderne detailing.

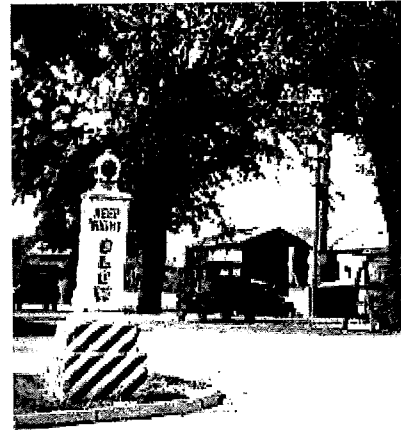
The design of these structures, particularly the CCC commissary warehouse and the stadium, is not sympathetic to the relatively homogeneous character of the other buildings developed

in this area over a number of decades. Therefore, while the buildings produced during the Depression represent an important phase in Fort Snelling's history, these structures are less appropriate as models for new construction.

### *Objects*

The 1941 quartermaster survey listed a steel fence 1,370 long and 4 feet 2 inches high with two double gates.

Signage at the fort was minimal. Buildings were identified by numbers painted on the walls. Photographs from around 1940 show street signs similar to those typically found on street corners in Minneapolis and St. Paul. A circa 1930s photograph includes a traffic monument at the west corner of Minnehaha Avenue and Bloomington Road. The cast-concrete structure has a stepped base painted with white and dark (black?) diagonal stripes. This supports a square-section post with the admonition "Keep Right—Slow" painted on its sides. A signal, perhaps a blinking light, caps the post.



### **Historical Record of Utilities**

The following provides some historical information on utilities at the fort. This is not a definitive study, but contains materials compiled in the course of preparing the design guidelines.

#### *Water and Sewer*

According to a memorandum prepared in December 1938, "A new water line was installed during the Fiscal Year 1937, a new sewer is now under construction and will be completed during the current fiscal year." A 1939 survey noted that water was purchased from St. Paul and was supplied by an 8-inch main carried by the Seventh Street Bridge. By this time, a sprinkler system had been installed on the artillery parade ground containing 2,500 feet of welded steel pipe and 1,200 feet of heavy-duty sprinkler hose. Sewer lines emptied into the Minneapolis system and/or directly into the Minnesota River.<sup>8</sup>

#### *Electrical/Gas*

A 1940 appraisal noted that the fort's aerial electrical distribution system dated from 1923 and consisted of 468 cedar poles with 813 fir cross arms supporting 2,394 glass and porcelain insulators. Utility poles, however, appear along one side of most streets in a 1903 map, and are a prominent feature in twentieth-century photographs of the fort. Exterior lighting fixtures installed in 1923 were suspended from brackets and/or mast arms bolted to poles. According to a 1931 inventory, the post had forty-seven streetlights. In 1940, eighteen electric streetlight standards

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<sup>8</sup> John R. Holt, Major, Q.M.C. Quartermaster, "Memorandum for the Historical Record," typed memo, December 1, 1938, in U.S. Army Quartermaster Corps Building Records 1901-1969, Minnesota Historical Society, St. Paul.

were installed at a cost of \$55.20 per standard. Power was supplied by Northern States Power Company, Saint Paul. The Minneapolis Gas Light Company provided 950 BTUs of natural gas under 160 pounds of pressure through 16-inch mains. The point of delivery was “west of Highway #100 [Bloomington Road], 100 ft. south of Bldg. No. 230.” Distribution lines within the fort were apparently installed in 1939. The lines ranged from 1-1/4-inch tin-coated pipe to 6-inch pipe wrapped in paper, cloth, and asphalt. All lines were laid at a depth of 3 feet.<sup>9</sup>

### **Accessibility Considerations/Health and Safety Considerations**

Accessibility, along with health and safety issues, is of prime concern in any development. In a recreation complex, these subjects merit especially careful scrutiny. While these considerations must take precedence when there are conflicts with historic issues, the Park Board should seek to find ways that accessibility, health, and safety issues can be addressed in a manner sympathetic to the property's historic character.

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United States. Army. Quartermaster Corps Building Records 1901-1969. Minnesota Historical Society, St. Paul. Contains inventory forms for buildings at Fort Snelling as well as a number of associated documents including John R. Holt, Major, Q.M.C. Quartermaster, “Memorandum for the Historical Record,” typed, December 1, 1938, and Office of the

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<sup>9</sup> Holt; Office of the Quartermaster, Fort Snelling, to Quartermaster, Seventh Corps Area, Omaha, carbon copy of memorandum, December 2, 1931, in U.S. Army Quartermaster Corps Building Records 1901-1969, Minnesota Historical Society, St. Paul.

Quartermaster, Fort Snelling, to Quartermaster, Seventh Corps Area, Omaha, carbon copy of memorandum, December 2, 1931.

United States. Department of the Interior. *The Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for the Treatment of Cultural Landscapes*. Charles A. Birnbaum, ed. Washington, D.C.: National Park Service, 1966.

### *Maps*

For the sake of convenience, the following maps are arranged chronologically. All are in the possession of the Minnesota Historical Society, St. Paul, unless otherwise indicated.

- 1882 Map of Fort Snelling Reservation. Surveyed by E. B. Summers.
- 1885 Map of Fort Snelling Reservation. Copy; original in National Archives, Washington, D.C.
- 1903 Topographical Map of the Military Reservation Fort Snelling, Minn. Prepared under the direction of Col. Jacob Kline by R. H. Van Deman.
- 1904 Fort Snelling, Minn.
- 1912 Revised Map of Fort Snelling, Minn. Prepared in the Office of Constructing Quartermaster.
- 1938 Fort Snelling, Minn. Buildings and Utilities.
- 1953 Reservation Map. Minneapolis, Minn. Drawn by Orville P. Clark.

### *Photographs*

Fort Snelling photographs at reference library, Minnesota Historical Society, St. Paul.

Hurd, Mark. Aerial photograph collection. Borchert Library, University of Minnesota, Minneapolis.

United States. Army. Quartermaster Corps Building Records 1901-1969: photographs accompany building inventories.

## Appendix A: Standards for Rehabilitation<sup>10</sup>

1. A property will be used as it was historically or be given a new use that requires minimal change to its distinctive materials, features, spaces, and spatial relationships.
2. The historic character of a property will be retained and preserved. The removal of distinctive materials or alteration of features, spaces, and spatial relationships that characterize a property will be avoided.
3. Each property will be recognized as a physical record of its time, place, and use. Changes that create a false sense of historical development, such as adding conjectural features or elements from other historic properties, will not be undertaken.
4. Changes to a property that have acquired historic significance in their own right shall be retained and preserved.
5. Distinctive materials, features, finishes, and construction techniques or examples of craftsmanship that characterize a property will be preserved.
6. Deteriorated historic features will be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new feature will match the old in design, color, texture, and, where possible, materials. Replacement of missing features will be substantiated by documentary and physical evidence.
7. Chemical or physical treatments, if appropriate, will be undertaken using the gentlest means possible. Treatments that cause damage to historic materials will not be used.
8. Archeological resources will be protected and preserved in place. If such resources must be disturbed, mitigation measures will be undertaken.
9. New additions, exterior alterations, or related new construction will not destroy historic materials, features, and spatial relationships that characterize the property. The new work will be differentiated from the old and will be compatible with the historic materials, features, size, scale and proportion, and massing to protect the integrity of the property and its environment.
10. New additions and adjacent or related new construction will be undertaken in such a manner that, if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.

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<sup>10</sup> United States Department of the Interior, *The Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for the Treatment of Cultural Landscapes*, Charles A. Birnbaum, ed., 1966.

## Appendix B: Site Map (1953)

