PRESS RELEASE: Granitoid Pavement  
in Grand Forks, North Dakota

From: Grand Forks Historic Preservation Commission  
Steven R. Hoffbeck, Coordinator

Subject: Public Hearing on the Nomination of Granitoid Streets in  
Grand Forks to the National Register of Historic Places on  
Tuesday, 27 November 1990, Grand Forks City Hall, Room B3, 7:00  
P.M.

Brick streets? Many people think the older streets in Grand  
Forks are made of brick. Instead they are made of granite chips  
embedded in concrete to make a surface called Granitoid. Grooves  
in the pavement provided better footing for horses and gave it a  
brick-like appearance. Clyde and Sally Morris, citizens in the  
neighborhood, are nominating the streets for the National  
Register of Historic Places. It is believed that this is the  
first time in the nation that a pavement is being so nominated.  
The local Historic Preservation Commission will vote on  
accepting, rejecting or modifying the nomination. Mayor of  
Grand Forks, Michael Polovitz, also may accept or reject the  
nomination, either on purely historical merits or by practical  
considerations for the overall good for the city.

BACKGROUND:

As automobile, or "devil wagon," traffic increased in the  
period 1900-1910 there was a corresponding increase in the demand  
for good roads and streets in the United States. High quality  
streets were also necessary to provide a solid base for street  
railways in the larger towns and cities across America. Noisy  
and bumpy cobblestone and brick street surfaces were deemed  
inadequate for the demands of modern vehicular traffic, and  
unpaved roads or gravel roads became muddy quagmires for early  
automobiles. Sloganeers kidded that "mudholes add a third  
dimension to some roads—depth."1 The city of Grand Forks, North  
Dakota, responded to the call for good streets by experimenting  
with various pavements in this time period, seeking a surface  
that could withstand the extremes of temperature found in the  
northern United States. The first effort toward improved streets  
in Grand Forks consisted of "cedar block pavement," which was  
replaced by 1911.2 The city tried five different pavements in  
1910 and 1911, hoping to find one that would provide durability

1American Portland Cement Association, Concrete Facts  
About Concrete Roads (Chicago: Portland Cement Association,  
1916), 5.

2"Grand Forks Progressing," Grand Forks [ND] Daily  
Herald, 19 April 1911: 5.
and beauty. Two of the pavement types were described as "composition" pavements; an "asphalt macadam" type and a mixture of concrete and granite chips called granitoid. The other street materials were called "tar macadam or donnelite;" a combination of broken granite and "bitumen" called Bitulithic paving; and creosoted wood blocks. The city hoped to provide leadership in assessing the merits of the various paving materials, so that other towns and cities in North Dakota might look to them for guidance in the construction of durable streets.

Granitoid

Granitoid pavement was a product of the R. S. Blome Company of Chicago, Illinois. The company had its main office in Chicago, with branch offices in "Winnipeg, Birmingham, Alabama, New Orleans and London, Ontario." The Blome company paved streets in Grand Forks in 1910 and 1911. The company utilized local Grand Forks concrete and gravel companies in completing their projects, as a part of their policy to "patronize home industry whenever possible." Evidently, the Blome granitoid pavement was priced reasonably, for it was the low bid in several of the paving districts in Grand Forks in 1910.

Granitoid pavement was ideally suited for the climatic extremes of North Dakota due to its materials and foundation. The first element was a "bed of gravel and sand to prevent frost heaving" damage to the upper layers. A layer of concrete "reinforced with steel sheets" was then laid to a depth of five and one-half inches. This concrete was described as being "not of the soft or slush variety, but contains but a small amount of moisture and is laid in forms which provide an arch formation, which cannot collapse or settle and supporting itself." On top of the concrete "a wearing surface" consisting of two parts of "granite screenings" mixed with one part "cement." The top layer was of a "thickness of one and one-half or two inches as the occasion demands." The top mixture was brushed on the surface to "prevent slipperyness, and finally scored or marked to give a better footing for horses." The local newspaper described the appearance of the Blome pavement as "one of unusual beauty, being almost pure white, and it is easily kept clean." Keeping the streets clean was important in the days of horse and buggy travel because each horse would produce from 15 to 20 pounds of waste products each day. Cobblestones were banned in most places in the nation by 1840 because it was too hard to clean the garbage and other filth from their uneven surfaces. The Blome company

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embedded numerous bronze plates in the pavement identifying themselves as the construction company from Chicago and divulging the fact that granitoid was a patented process dating from June 4, 1907. One of the markers still in place that is relatively easy to find is located on the East-Northeast corner of the United Lutheran Church parking lot. Proponents of granitoid claimed that it got stronger with age, which has been borne out by its survival in Grand Forks since 1910.\footnote{Information On Paving,\textsuperscript{5}: 6. "Paving Meeting Is Interesting," 6. Information concerning the Blome Company plaques and the patent date is from a telephone interview of Steven Hoffbeck with Mr. Tim Schulte of the City of Grand Forks Engineering Department on 19 January 1990.}

The Blome company hired a local firm, the Grand Forks Concrete Company, to do the foundation work for the granitoid paving in 1911. The granite screenings material was shipped in from the "upper Michigan peninsula, where a fine grade of paving granite" was being quarried. The McNicol sand pit near Crookston was the source of the gravel for the concrete used in Grand Forks.\footnote{Begins Paving Today," \textit{Grand Forks Daily Herald}, 7 May 1911: 7. "Start Paving In Ten Days," 6.}

Granitoid pavement was laid in Paving District #13 in the city of Grand Forks in 1910. This district included 4th Avenue South from "5th Street to the western boundary at the alley between 5th and 6th streets." Woodlawn avenue "from 4th to 5th streets;" "Franklin Avenue from the east boundary between 3rd and 4th streets to 5th street;" also Gertrude and Minnesota Avenues; as well as "4th Street from Belmont avenue to Woodland avenue," and "5th Street from Belmont avenue to 4th avenue." The granitoid pavement served "a portion of the fashionable district of the city," having been supported by petitions of the local homeowners in the paving district. The other four paving districts chose other types of road surfaces. In 1911, the Blome Company landed two of the three districts being bid by the city. The first was Paving District # 18 consisting of Lewis Boulevard and Hospital Drive in Riverside Park. The second was Paving District # 15 which consisted of "First, Second, Third and Fourth Avenues, and Chestnut, Walnut and Cottonwood Streets." \footnote{City Council Held Important Meeting," \textit{Grand Forks Daily Herald}, 8 March 1910: 6. "Information on Paving," 6. "Paving Contracts Were Awarded By City," \textit{Grand Forks Daily Herald}, 19 April 1911: 10. A petition for Paving District # 15 led to granitoid being placed there in 1911, \textit{Grand Forks City Records, University of North Dakota Special Collections Library, Collection #778, Box 16, Folder 15, "Paving District No. 15, 1909-1933," page 1 of petition.}
Initially the granitoid paving was said to have a "slight advantage" over the other pavements because of its "wearing qualities." One observer stated that "the Blome pavement was the best of all and was the only paving that would give the citizens some paving after it was paid for." It was believed that the gravel base of the granitoid layering would prevent the cracking of the concrete. The Blome representative openly conceded that granitoid paving was "slightly more noisy than some other paving" but noted that a resident soon would become "accustomed to it and [he or she] never thinks of it." To some of the participants in the debate over pavements it seemed clear that granitoid was "not so easy on the horses," but this soon became a minor point owing to the growing use of automobiles. As the granitoid surface has worn slightly through the years, the streets have a reddish tinge as the whitish concrete has eroded to expose the granite chips.  

Granitoid pavement was utilized in a number of localities in Canada and the United States. It is clear that granitoid was not used in other locations in North Dakota. It is known that the Blome Company was awarded a $25,000 contract for street paving in Eveleth, Minnesota, in 1910. The granitoid in Eveleth has been covered with asphalt, according to a local official there. The Blome manager in Grand Forks, Mr. O. F. Olson, had been involved in paving work "in perhaps 30 cities" in the United States by the year 1910. Granitoid pavement was used in Pierce County in the state of Washington in 1913, but it is known that this was not a Blome project, instead his patented process was used, under his supervision.

Granitoid pavement existed in Birmingham, Alabama (1910); New Haven, Connecticut (1908, 1909, 1910); Jacksonville, Florida (1913); Pensacola, Florida (1912); Chicago, Illinois (1903, 1904, 1905, 1906, 1907); New Orleans, Louisiana (1908 to 1912); Hancock, Michigan (1907); Kalamazoo, Michigan (1907); Marquette, Michigan (?); Meridian, Mississippi (1910); Vicksburg, Mississippi (1908); New Brunswick, New Jersey (1908, 1911); Knoxville, Tennessee (1908, 1909, 1911, 1912); Ft. Worth, Texas (1912); Spokane, Washington (1911); Walla Walla, Washington (1909); Oshkosh, Wisconsin (1909, 1912); Hot Springs, Arkansas (1908); Duluth, Minnesota (1909); Grand Rapids, Minnesota (1909). According to the authors of the granitoid nomination, Clyde and Sally Morris, only Duluth and Grand Forks have surviving patches.

8"Paving Meeting Is Interesting," 6.

of the pavement.  

One of the questions to be considered by the Grand Forks Historic Preservation Commission is the integrity of the pavement, in other words, does it exist in the same place that it was laid or has patching made it lose its integrity of materials. Through the years, inferior materials have been used to patch the street when new sewer or water pipes and repairs have been made. The granitoid itself is as good as the day it was put down in 1910 and 1911, but cracks have appeared where the granitoid meets the tar or concrete patching material. Another question involves the potential increase in traffic if 4th Avenue South is repaved with asphalt or concrete, will the historic neighborhoods of Reeves, Belmont and the other streets be damaged by increased traffic? On the other hand, with a limited number of bridges across the Red River, can the city continue to have traffic slow down for the current rough, patched streets? A little bit of granitoid pavement is now preserved at the Myra Museum, how many blocks of Granitoid should be protected? All thirty-some blocks of it, or selected streets here and there off the main 4th Avenue South arterial road? Because a street surface has never been nominated to the National Register on its own, how does such a status affect future road projects. The North Dakota State Highway Department is currently examining the impact of the proposed 4th Avenue South project for its impact on the historic resources of the neighborhood. One of the possible options is to restore the areas of damaged granitoid with new materials, laid down in accordance with the methods of 1910. Critics believe the cost would be too high, but supporters of this idea claim that the higher expense would be justified and, indeed, cheaper in the long run because the pavement would last for 80 or 90 years rather than 15-20 years. The issue is complicated, and public input is essential to help the mayor and the Historic Preservation Commission reach their decision on the National Register nomination.

Citizens are invited to present their comments at the public hearing on the Granitoid nomination at 7:00 p.m. in Room B3 of the Grand Forks City Hall on Tuesday, November 27, 1990. Individuals will be allotted 5 minutes for comments. Preregistered representatives and public officials will be

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allocated 10 minutes for comments. If commenting, you also may submit a written copy of your statement for the meeting record. Written and oral comments will receive equal consideration in the decision of the Grand Forks Historic Preservation Commission on the Granitoid nomination. Requests to speak at the granitoid public hearing may be arranged by calling Mr. Steven R. Hoffbeck, Coordinator for Historic Preservation in Grand Forks at 775-7355. Your comments are welcome and they make a difference.

No, the granitoid pavement is not made of brick, but should it be preserved as a reminder of the change from horse to auto traffic? Should it be kept because it is a superior pavement that outlasts the best of the modern-day paving techniques? (Engineering advances like bridges are eligible for the National Register.) And finally, if L. Frank Baum's "Yellow Brick Road" of The Wizard of Oz fame really existed, would citizens nominate the pavement for the National Register of Historic Places?
Bronze Marker Embedded in the Granitoid Street near the United Lutheran Church, Grand Forks, North Dakota. The Granite Chips and Concrete formed the wearing Surface of the Pavement.
WHEN
MAN
DRIVES
853. FOUNDATION: The usual and best foundation is constructed by spreading a layer of coarse sand, about 6 inches thick, upon the prepared sub-grade. Boards, 1 inch thick and 8 to 12 inches wide, are then laid and sometimes upon a layer of sand, upon the native soil, after it has been properly shaped and rolled.

Fig. 143—Wood-block pavement.

This form of pavement is as possible. Fig. 143 shows a cross section and a perspective of blocks set with the grain vertical, side by side as close together as possible.
Bricks are stronger and more durable than any material that can

FIG. 132.—HERRING-BONE BRICK INTERSECTION.
in Fig. 132 is weak along the middle line of each street. Fig. 133 two other arrangements that have occasionally been used. Slight