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June 26, 2006

Mr. Ross Fefercorn
Sheridan Development Company
1221 W. Lake St. #209
Minneapolis, MN 55408

Re: *Archaeological Investigation of the Foundations of the John Orth Brewing Company (21HE0318) for the Grain Belt Premium Lofts Project, Hennepin County, Minnesota (Archaeological License Number: 06-023)*

Dear Ross,

In May of 2006, Two Pines Resource Group (Two Pines) completed an archaeological investigation at the location of the former John Orth Brewing Company (1850-1890) in preparation for the development of the Grain Belt Premium Lofts. The Orth Brewery was the second brewery established in Minnesota, which was then a territory, and the first to produce beer in Hennepin County (Figure 1). In 1890, the John Orth Brewing Company merged with three other breweries to form the Minneapolis Brewing and Malting Company, which was the parent company of Grain Belt Breweries, Inc. The location of the former Orth Brewery is within the Minneapolis Brewing Historic District and the archaeological site (21HE0318) is recognized as contributing to the district.

The Minneapolis Heritage Preservation Commission (HPC) requested, as a condition of the Certificate of Appropriateness (COA) for the Grain Belt Premium Lofts development, that a licensed archaeologist document the exact location, depth below grade, and dimensions of the Orth Brewery foundation and assess whether the project's proposed plaza design would have any adverse effect on the foundation (Greg Mathis, City of Minneapolis, to Ross Fefercorn, Sheridan Development Company, letter, March 28, 2006). This letter provides a summary of the results of the archaeological investigations performed in response to the HPC's request.

Project Background

In anticipation of the Grain Belt Redevelopment Project, the Minnesota State Historic Preservation Office (SHPO); Minneapolis Community Development Agency (MCDA); The Minneapolis City Coordinator; the Minneapolis Heritage Preservation Commission (HPC); and the Sheridan Neighborhood Organization entered into a Programmatic Agreement (PA) to ensure that the Section 106 consultation process was followed for the project. In 2000, in fulfillment of Stipulation 5 of the PA, the MCDA contracted with Hemisphere Field Services (Hemisphere) to conduct archaeological investigations for the Grain Belt Redevelopment Project. In January of 2001, Hemisphere Field Services (Hemisphere) conducted limited archaeological testing of the area where the Orth Brewery was formerly located "in order to determine the presence/absence

of the original historic brewery foundations and/or basements intact under the present ground surface” (T.W. Fassler and D. Johnson, *Additional Investigations of Orth’s Addition (21HE0318), Block 1, within the Minneapolis Brewing Company Historic District, Hennepin County, Minnesota*, Hemisphere Field Services Reports of Investigations Number 647, March 2001, p. ii). Hemisphere selected as the target of their investigations the main brewery building because it was believed to be the only portion of the brewery constructed of stone and it would, therefore, likely have intact remains (*Ibid.*, p. 8). The Hemisphere staff excavated three backhoe trenches and exposed intact floors and foundations that were identified as three walls (north, west, and south) of the original Orth Brewery building (*Ibid.*, p. ii). Hemisphere staff did not verify the location of the east wall of the building through archaeological investigations, but rather inferred an eastern boundary for the rectangle outlining “the original brewery” in their report (*Ibid.*, Figure B-2) (Figure 2). The eastern boundary selected corresponded to an interior wall within the brewery complex as documented on historic maps and photographs and not the rear wall of the main brewery building.

Based on the results Hemisphere’s archaeological investigations, the Orth Brewery was recommended as eligible for listing on the National Register of Historic Places (National Register) and for inclusion in the Minneapolis Brewing Company Historic District (*Ibid.* p. ii). The Minnesota State Historic Preservation Office (SHPO) concurred with this recommendation and concluded that the Orth Brewery Site (21HE0318) “constitutes a contributing element of the historic district” and that “project development in this area should avoid impacting the historical elements of this site” (Dennis Gimmestad, SHPO, to Jerry LePage, City of Minneapolis, letter, April 23, 2001).

Subsequent to the completion of the Hemisphere archaeological investigations, development plans for the Grain Belt Premium Lofts have provided for the protection of a rectangular area (~90 x 100 foot [ft.]) encompassing the location of the original Orth Brewery as described in the Hemisphere report. Development plans called for the creation of a plaza over the foundations that would serve to both protect and interpret the site. In reviewing the project plans, the HPC requested in March of 2006 that the location, depth, and dimensions of the Orth Brewery foundations and their relationship to the proposed plaza design be determined by a licensed archaeologist.

Archaeological Fieldwork

In May of 2006, Two Pines undertook an archaeological investigation of the Orth Brewery site in response to the HPC’s request. The goal of this investigation was to locate the corners of the main brewery building outlined by Hemisphere as well as to explore the foundations of the contiguous portions of the brewery complex. Sanborn Fire Insurance Maps from 1885 and 1890, and historic images from 1874 and c.1880, indicate that the Orth Brewery foundations, including those of the main building that Hemisphere identified as the original portion of the Orth Brewery building, extend more easterly than the Hemisphere report indicated (*Ibid.*, Figure B-2). Furthermore, the brewery was a structural complex comprised of integral elements that extended beyond the boundaries identified by Hemisphere (see Figure 2). Therefore, particular emphasis was placed on locating the eastern wall of the brewery which was most proximate to the proposed development and not defined during the 2001 field investigations.

Fieldwork techniques consisted of the excavation of backhoe trenches using a toothed backhoe bucket to remove the asphalt, and a smooth bucket to remove subsequent layers once the asphalt and Class 5 sublayer had been removed. As foundations were exposed, further clearing was accomplished through hand excavation using shovels and trowels. Excavations did not go deeper than the height of the exposed foundations so as to not disturb any intact deposits surrounding the foundations. Exposed foundations were mapped (in plan and profile) and photographed, and their locations recorded with a GPS unit (Trimble Pro XR). Loucks Associates also surveyed the foundations for incorporation into the project documents. Upon completion of the mapping, the trenches were backfilled to original grade.

Two Pines' investigation of the Orth Brewery site commenced with a visual reconnaissance of the project area. Hemisphere's test trenches were still visible on the surface of the asphalt parking lot that covers the site (Figure 3). According to Hemisphere's report, these trenches marked the locations of the north, west, and south walls of the main brewery building. Excavation commenced with a trench (Trench 1) located to the east, and parallel to, Hemisphere's Trench C, in order to relocate the south wall of the main building. The excavation of Trench 1 did not reveal the south wall of the brewery, but rather the broken edge of the interior floor of the brewery caused by a twentieth-century utility trench. Hemisphere staff misidentified this edge as the southern wall of the brewery, and furthermore, the northern wall of the "rectangle" located by Hemisphere was actually the outer wall of the brewery's engine room not the "original" wall of the main building as depicted in their report (see Figure 3). This error in the previously recorded north and south wall locations, places the main brewery building approximately 20 ft. further to the south than the southern boundary of the rectangle protected by the development plan (see Figure 3).

Through additional trenching Two Pines located all four corners of the main building of the brewery complex (90 ft. x 55.5 ft.) and exposed the entire length of the east wall. The north-south orientation of the brewery complex is aligned 30 degrees to the west of magnetic north. The foundations are constructed of limestone and are 2 ft. thick. A 2-centimeter (cm) thick, smooth plaster facing was noted on the interior of the foundation during excavation at the northwest corner of the main building. Interior floors consist of smooth lime over stone rubble with occasional brick underlayment. In the area of the utility trench that had broken through the first floor of the brewery building, the exposed edge of the interior floor was 12 cm (5 in.) thick and constructed atop a bed of sand laid directly on a dark grayish brown (10YR 4/2) subsoil mottled with inclusions. As the surface of the asphalt parking lot over the site slopes from the east towards the west, the amount of fill over the foundations increases towards the east. Only 45 to 50 cm (~18 to 20 inches [in.]) of fill is present over the foundations at the southwest and northwest corners of the main building, while there is 80-90 cm (~32-36 in.) of fill over the majority of the eastern foundations. The ruins of the southeast corner of the main building, though, rise to within 16 in. of the lot's surface.

The typical soil profile over the foundations consists of a 5-cm (2-in.)-thick layer of asphalt over 10 to 20 cm (4 to 8 in.) of yellow (10YR 7/6) Class 5 gravel, which gives way to a laminated, black (10YR 2/1) oily loam most likely associated with a former oiled parking surface. This oily layer varies in thickness from 10 to 30 cm (4 to 12 in.) and is thicker towards the eastern side of the site. In the eastern portion of the site the oily loam gives way to a very dark grayish brown (10YR 3/2) to brown (10YR 4/3) coarse sand fill with cobbles that varies in thickness from 10 to

35 cm (4 to 14 in.). This coarse sand gives way to a 10 to 25 cm (4 to 10 in.) thick layer of very dark grayish brown (10YR 3/2) to brown (10YR 4/3) sandy loam that directly overlies the foundations in some areas, while in others a black (10YR 2/1), 10-cm (4-in)-thick debris layer is present above the foundations. Within the trenches for the northwest and southwest corners of the main building, the oily loam strata was underlain by a thin lens of light brownish gray (10YR 6/2) silty sand that gave way to a 15 to 20 cm (6 to 8 in.) thick, very dark grayish brown (10YR 3/2) sandy loam debris layer containing brick fragments and rubble. This debris layer directly overlay the foundations. Few artifacts were present in the strata above the foundations, but artifacts (nails, glass, wood, etc.) were noted on the surfaces of the strata immediately surrounding the foundations. For example, *in situ* wood elements with distinguishable nail patterns were discovered adjacent to the boiler room foundations. These elements were plan-mapped and photographed, but not removed. The profile and artifact deposits indicate that after the demolition of the structure the site accumulated a small amount of natural deposits before a fill layer of sand and cobbles was brought in to level the site. A ca. 1900 photograph in the MHS collections indicates that the lot is level and grassy (MHS Negative No. 30184). Subsequent to the introduction of fill the lot was apparently used for an oiled parking surface. This site usage is likely associated with the Caswell Warehouse building, which was constructed in 1951.

In the process of delineating the foundations of the brewery, Two Pines located additional contributing elements to the brewery including an intact brick paving in the boiler room; the yellow fire-brick pad of the boiler; and a previously undocumented length (~44 ft.) of limestone wall extending from the northeast corner of the brewery towards the location of the former bottling house (see Figure 3). Testing was also conducted in the vicinity of the malt kiln in order to assess if there were intact deposits associated with this feature that would be impacted by a proposed stormwater containment system. A trench at the location of the malt kiln was excavated to a depth of 75 cm below the surface at which depth intact cultural deposits (a layer of cinders and wood) were encountered and the excavation was halted.

Overall, the Orth Brewery site exhibits excellent integrity and site preservation in keeping with a site that has been capped since its demolition. Not only are the structural foundations well preserved, but the presence of *in situ* nails, wood elements, other artifacts, and kiln cinders were also noted. Soil deposits around the brewery are intact and living surfaces were observed proximate to the exposed foundations. A 10-12 ft. wide twentieth century utility trench that serviced the former Caswell Warehouse building was the only significant disturbance noted during the investigations (see Figure 3). Stratigraphy in the vicinity of the rear entrance and northeast corner indicates that the area to the exterior of the east wall of the brewery may have been impacted by the construction of the warehouse, but these impacts have not disturbed the foundations as the entirety of the east wall was intact with the exception of the area removed by the above-mentioned utility trench.

A more detailed and complete reporting of the May 2006 archaeological investigations will be incorporated into the planned data recovery report.

Project Impacts and Mitigation Plans

Based on the results of the archaeological fieldwork, Two Pines determined that the proposed Grain Belt Premium Lofts development plan would adversely affect the entirety of the intact foundations and archaeological deposits associated with the John Orth Brewery (21HE0318) including both the “original” brewery rectangle targeted by Hemisphere as well as newly located elements. Impacts would result not only from building construction, which would overlap with the easternmost foundations, but the proposed final plaza elevation was lower than the elevation of the historic foundations. Furthermore, a proposed stormwater storage facility would impact the south wall of the main building (which was 20 ft. further to the south than previously documented) as well as the location of the malt kiln and the building that was likely Orth’s first building on the site (according to an account in Atwater’s 1893 *History of the City of Minneapolis, Minnesota*).

Subsequent to the completion of the archaeological fieldwork, the development team has met with staff of the HPC, SHPO, City of Minneapolis, and Sheridan Neighborhood Organization to discuss the results of the fieldwork; options for the Grain Belt Premium Lofts project; and an acceptable treatment plan for the Orth Brewery site. The development team has proposed revisions to the project plan (raising the elevation of the plaza and moving the stormwater storage system) that would result in the preservation of the majority of the Orth Brewery site. Due to the unanticipated extent of the brewery foundations to the east, the development plans can not be modified to fully avoid impacts to the Orth Brewery foundations. In order to accommodate the construction of the Short Bar Building “A,” an approximately 10 ft. buffer will need to be mitigated along the front of the building. As the proposed building overlaps with foundations of the Orth Brewery by approximately 5 ft., the easternmost 15 ft. of the 90 ft. long central building will be removed. Other features within this area that will be impacted include the previously undocumented “addition” discovered during Two Pines’ fieldwork, as well as the chimney base and portions of the bottling house.

The development team and Two Pines are currently consulting with the HPC, SHPO, City of Minneapolis, and Sheridan Neighborhood Organization regarding revisions to the plaza design and the development of an appropriate mitigation plan for those portions of the Orth Brewery site that will be impacted by the Grain Belt Premium Lofts development.

If you have any questions regarding the content of this report, please feel free to contact me.

Sincerely,
TWO PINES RESOURCE GROUP, LLC



Michelle M. Terrell, Ph.D.
Principal Archaeologist and Historian

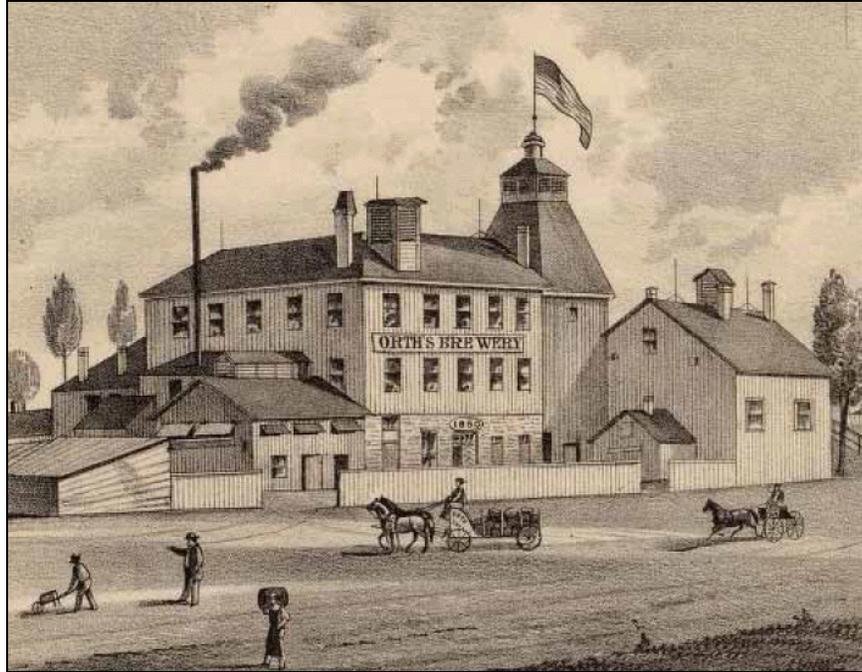


FIGURE 1. 1874 ILLUSTRATION OF THE ORTH BREWERY COMPLEX FROM ANDREAS' *ILLUSTRATED HISTORICAL ATLAS OF THE STATE OF MINNESOTA*

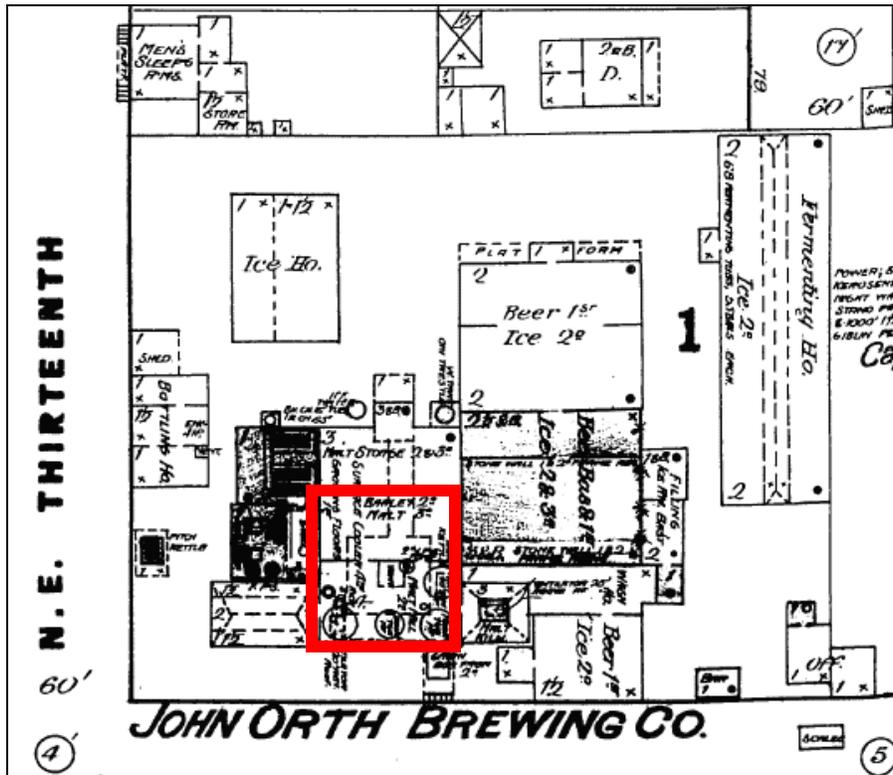
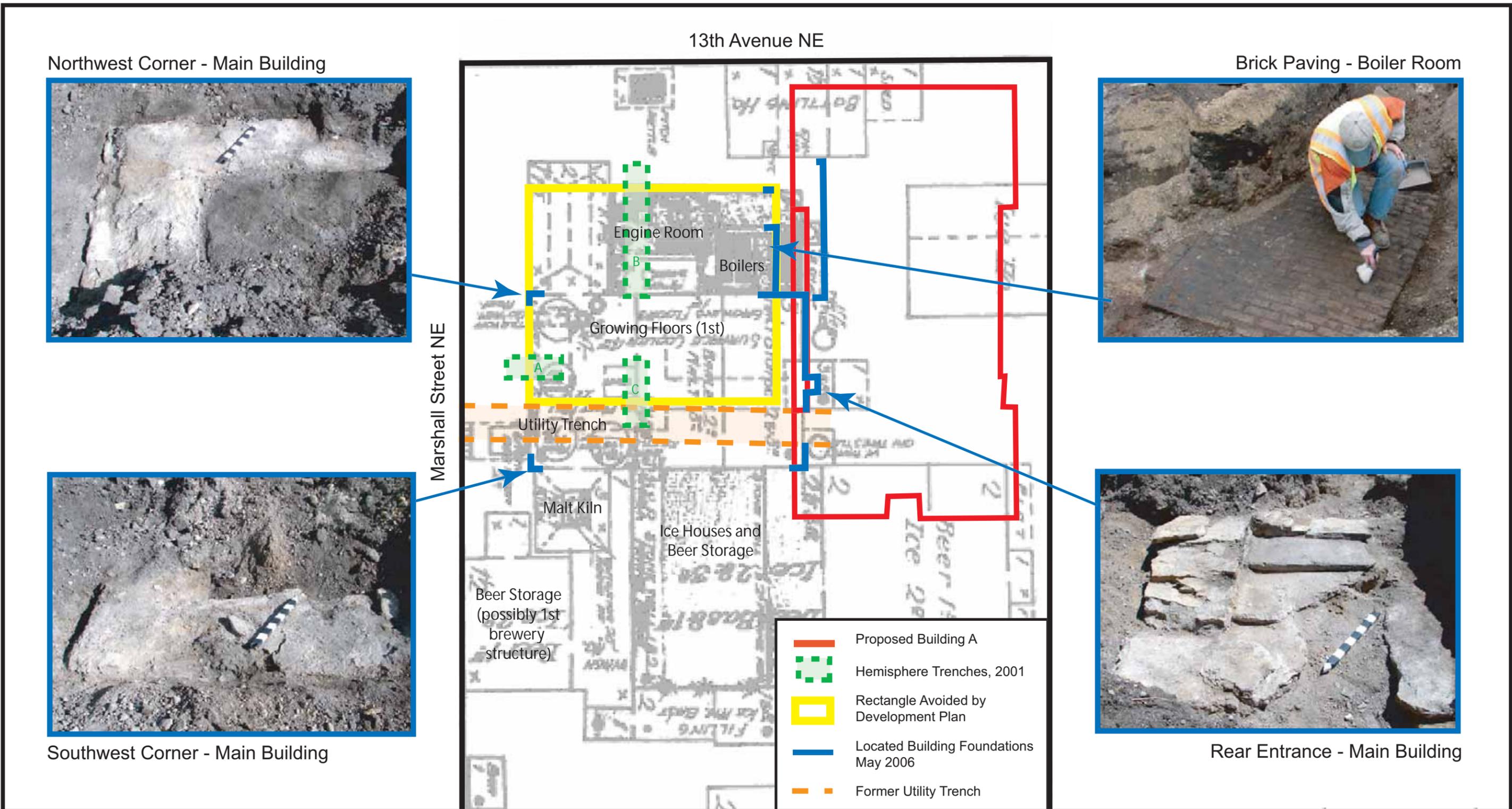


FIGURE 2. JOHN ORTH BREWING COMPANY COMPLEX ILLUSTRATED ON THE 1885 SANBORN MAP COMPANY'S FIRE INSURANCE MAP WITH HEMISPHERE'S "ORIGINAL" BREWERY LOCATION OUTLINED



Northwest Corner - Main Building



Southwest Corner - Main Building

Brick Paving - Boiler Room



Rear Entrance - Main Building