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June 14, 2018

Mr. Bhooshan Karnik, P.E.
Senior Project Manager
McClure Engineering Company
1740 Lininger Lane
North Liberty, IA 52317

Re: US BUILD Grant, Cultural Resources Evaluation
City of Clinton
Clinton County
Local Systems
Technical Report 774

Dear Mr. Karnik:

On May 7, 2018, you (Karnik 2018) requested that I review the above referenced project to determine whether an archaeological survey would be warranted. The project proposes the reconstruction of Manufacturing Drive and Bluff Boulevard in the City of Clinton from U.S. 30 to 7th Avenue North (Figure 1). The project passes through Sections 15, 14, 11, 12, and 1, T81N-R6E, and ends in Section 6, T81N-R7E, Clinton Township (Figures 2a and 2b). While much of the reconstruction will be restricted to the existing rights-of-way of Manufacturing Drive and Bluff Boulevard, major right-of-way acquisitions will be needed at Springdale Drive and 4th Avenue North, and 13th Avenue South and Bluff Road. There may be smaller acquisitions at Manufacturing Drive and South 19th Street. It may also be decided to cut into the bluff between Woodlawn Drive and Crescent Drive. Smaller acquisitions may also be necessary along Bluff Boulevard at 8th Avenue South, 5th Avenue South, 3rd Avenue South, 3rd Avenue North and 5th Avenue North. All of these locations are shown on Figures 2a and 2b. Temporary construction easements will likely be necessary throughout the project. At this early stage in the project development, the exact amount of additional right-of-way that will be required is unknown.

The proposed project is located within the Iowa landform region known as the Iowan Surface (Figure 1, inset). This terrain was formed during the Wisconsinan period by intense cold-climate weathering and erosion on Pre-Illinoian landscapes, and is characterized by low relief, dendritic drainage systems, stepped hillslopes, and the widespread distribution of erratic boulders. Loess thickness is variable on the highly weathered erosional landscape. In northern sections, rock outcrops and karst topography are common surface features. Prominent elongated ridges and isolated elliptical hills called paha, oriented northwest-southeast parallel to river valleys, are scattered across the southern third of the region. The paha are erosional remnants of the Pre-Illinoian landscape on which thick strata of Wisconsinan loess and sand accumulated. These eolian deposits are underlain by gray Yarmouth-Sangamon or reddish Late Sangamon paleosols developed in Pre-Illinoian till (Prior 1991:69–73).

Holocene alluvial valley fills in Iowa are subdivided on the basis of lithology and stratigraphic relationships into the Gunder, Corrington, Roberts Creek, and Camp Creek members of the DeForest Formation (Bettis and Littke 1987). Gunder Member alluvium and Corrington Member alluvial fans may contain Paleo-Indian through Woodland components; Roberts Creek Member deposits may contain Late

Archaic through early historic components; and Camp Creek Member alluvium may contain buried and unburied historic archaeological components, and may bury older surfaces.

The project area itself occupies Mississippi River floodplain deposits on its southern end (Manufacturing Drive) and then follows the base of the bluffs overlooking the Mississippi River valley on Bluff Boulevard, crossing upland footslope and toeslope deposits, Wisconsinan and Holocene terrace deposits and alluvial fans as it continues to the northeast. Landscape positions such as these possess a moderate to high potential for containing precontact and historic period archaeological deposits.

Soils mapped in the project area include Finchford Sandy Loam, Coyne Fine Sandy Loam, Chaseburg Silt Loam, Nevin Silty Clay Loam, Sawmill Silty Clay Loam, Fayette Silty Clay Loam, Raddle Silt Loam and Orthents (Boeckman and Sabata 1981). Finchford soils are classified as Entic Hapludolls; Entisol-like, typical humid climate Mollisols, or prairie soils (USDA, NRCS 2018). They are very deep, excessively drained soils that formed in alluvium or glacial outwash on terraces under prairie vegetation, and exhibit Ap/A1/A2/C1/C2/C3 profiles. Artz (2005) characterizes them as glaciofluvial soils. Coyne soils are classified as Typic Argiudolls; typical, clayey, humid climate Mollisols. They are very deep, well drained soils that formed in loamy sediments on terraces under prairie vegetation, and exhibit Ap/A1/A2/BA/Bw/2Bt1/2Bt2/3C profiles. They are also characterized as glaciofluvial soils. Chaseburg soils are classified as Typic Udifluvents; typical, humid climate, fluvially deposited Entisols, or recent soils. They are very deep, well drained soils that formed in silty and loamy alluvium and colluvium on footslopes, toeslopes and alluvial fans under prairie vegetation, and exhibit A/C1/C2/C3/C4 profiles. Chaseburg soils are characteristic of the Camp Creek Member of the DeForest Formation. Nevin soils are classified as Pachic Argiudolls; thick mollic horizoned, clayey, humid climate Mollisols. They are very deep, somewhat poorly drained soils that formed in silty alluvium on terraces under prairie vegetation, and exhibit Ap/A1/A2/A3/BA/Btg1/Btg2/Btg3/BC1/BC2 profiles. Nevin soils are characteristic of the Gunder Member of the DeForest Formation. Sawmill soils are classified as Cumulic Endoaquolls; accumulating, groundwater saturated Mollisols. They are very deep, poorly drained soils that formed in accumulating alluvium on floodplains under mixed vegetation, and exhibit A1/A2/AB/Bg/Btg1/Btg2/Cg profiles. Sawmill soils are characteristic of the Roberts Creek or Gunder Members of the DeForest Formation. Fayette soils are classified as Typic Hapludalfs; typical humid climate Alfisols, or forest soils. They are very deep, well drained soils that formed in loess on uplands and high terraces under forest vegetation, and exhibit A/E1/E2/BE/Bt1/Bt2/BC/C profiles. Artz (2005) characterizes them as loess mantled terraces soils. Raddle soils are classified as Typic Hapludolls; typical humid climate Mollisols. They are very deep, well drained soils that formed in silty local alluvium on footslopes and terraces under prairie vegetation, and exhibit Ap/A/BA/Bw1/Bw2/Bw3/BC/C profiles. Raddle soils are characteristic of the Gunder Member of the DeForest Formation. Orthents are defined as Entisols that lack horizon development due to either steep slopes or parent materials that contain no permanent weatherable minerals. Typically, Orthents are exceedingly shallow soils.

The National Register of Historic Places listed Castle Terrace Historic District abuts the project area at Bluff Boulevard's intersection with 8th Avenue South (Figure 2a). Any design changes on the north side of Bluff Boulevard and/or 8th Avenue South at this location will require consultation with the State Historic Preservation Office (SHPO). The Iowa Site File at the Office of the State Archaeologist revealed one recorded archaeological site located near the project are, site 13CN146. The site represents the potential archaeological remains of an early mill located on Mill Creek downstream from the project area. The site was recorded by Kayla Resnick, of the Office of the State Archaeologist, in 2009, based upon the mill's appearance on the 1838 General Land Office original survey plat of the area. The site has never been field checked to determine whether any archaeological remains of the mill are actually present at that location. Professional archaeological surveys that crossed the project area (Merry 1987; Snyder 1999; Weichman et al. 1976) encountered no archaeological remains or features in the project area.

The 1838 General Land Office original survey plats for T81N-R6E (Office of Secretary of State 1979a [1838]]) and T81N-R7E (Office of Secretary of State 1979b [1838]) showed the mill designated as archaeological site 13CN146 discussed above, but no other structures, fields or trails located near the

project area. All other historic maps consulted (Anderson 1925; Andreas 1970:31, 122; Harrison and Warner 1874; Huebinger 1904:161; North West Publishing Company 1894; Security Abstract and Title Company 1905; Thompson and Brother 1865) showed Bluff Boulevard passing through the project area on its current alignment. None of these maps showed Manufacturing Drive present, however, Security Abstract and Title (1905) and Anderson (1925) both showed the Iowa and Illinois Railroad line occupying the alignment that would later become Manufacturing Drive. The Sanborn Map and Publishing Company (1885) fire insurance maps of Clinton did not cover the project area. The Sanborn-Perris Map Company (1890, 1897) and Sanborn Map Company (1902, 1909, 1917, and 1925) maps all showed Bluff Boulevard present through the project area, but did not show it in detail. The Sanborn Map Company (1925–1967) map first showed the northern end of Manufacturing Drive being present, bud did not show the area in detail. County histories consulted (Allen 1871; Chapman Brothers 1886; Clarke Publishing Company 1901; Clinton County Historical Society 1976; Western Historical Company 1879; Wolfe 1911) revealed no historically significant people, events or structures associated with the project area.

Due to this project's large size, it's relatively high potential for containing precontact archaeological deposits, the longtime existence of Bluff Boulevard within Clinton and the subsequent potential for the remains of early Clinton buildings to exist outside of its current right of way, it is recommended that a Phase I archaeological survey be conducted for this project. To assist you in locating a qualified consultant to conduct the survey, the Association of Iowa Archaeologists consultants list can be found at: http://aiarchaeologist.org/consultants-list-1/. The list is provided for information purposes only, and the selected consultant need not be on the list. Any archaeologist who meets the Secretary of the Interior's guidelines would be appropriate. In addition, any design changes involving Bluff Boulevard and its intersection with 8th Avenue South will require SHPO consultation due to their potential effect upon the Castle Terrace Historic District.

Sincerely,

Blane H. Nansel, RPA 10103
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The University of Iowa
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blane-nansel@uiowa.edu

cc: Matt Donovan, Office of Location and Environment, Iowa Department of Transportation
Kent Ellis, District 6, Iowa Department of Transportation

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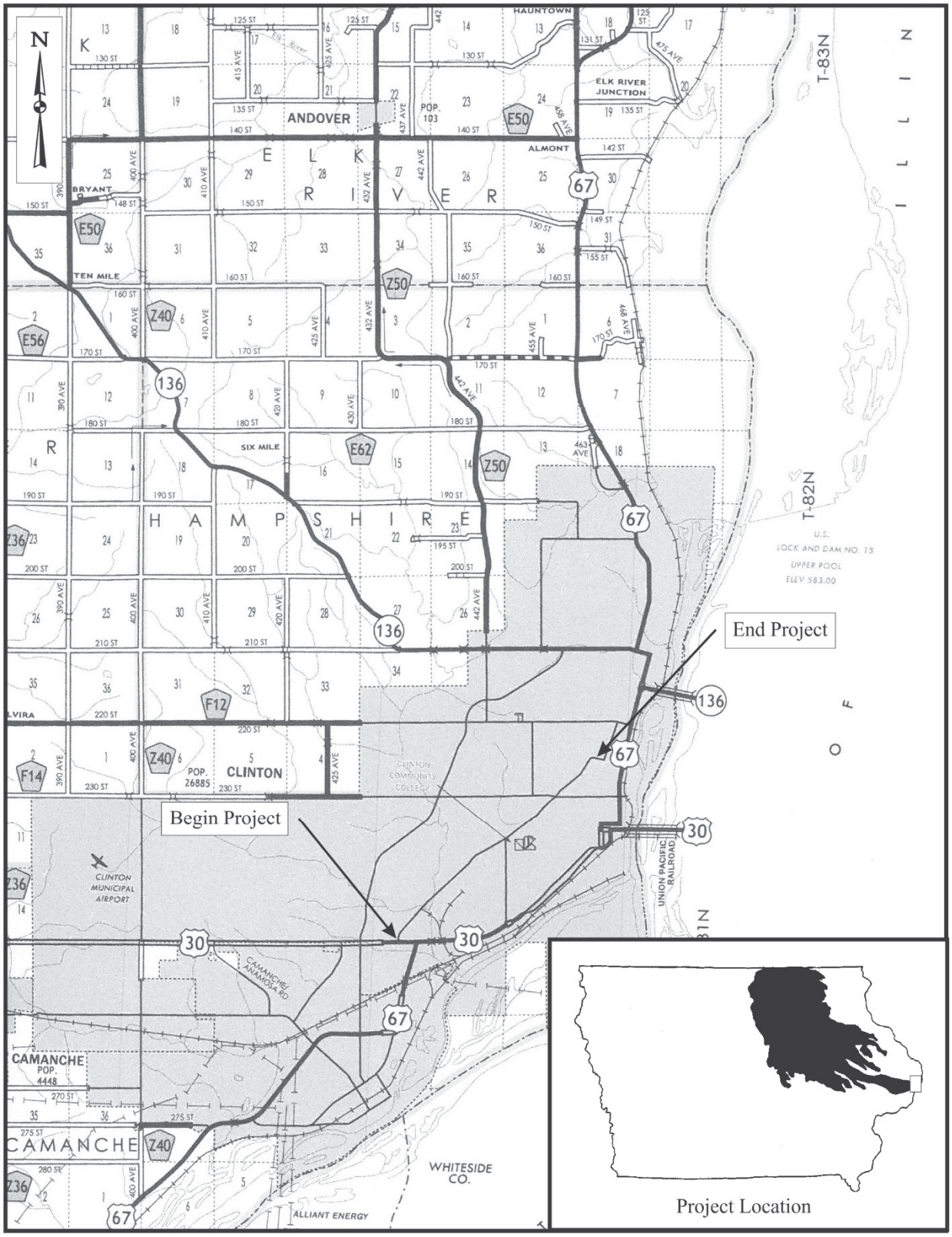

Figure 1. Project location (from General Highway and Transportation Map, Clinton County, 2015; inset from Prior 1991).

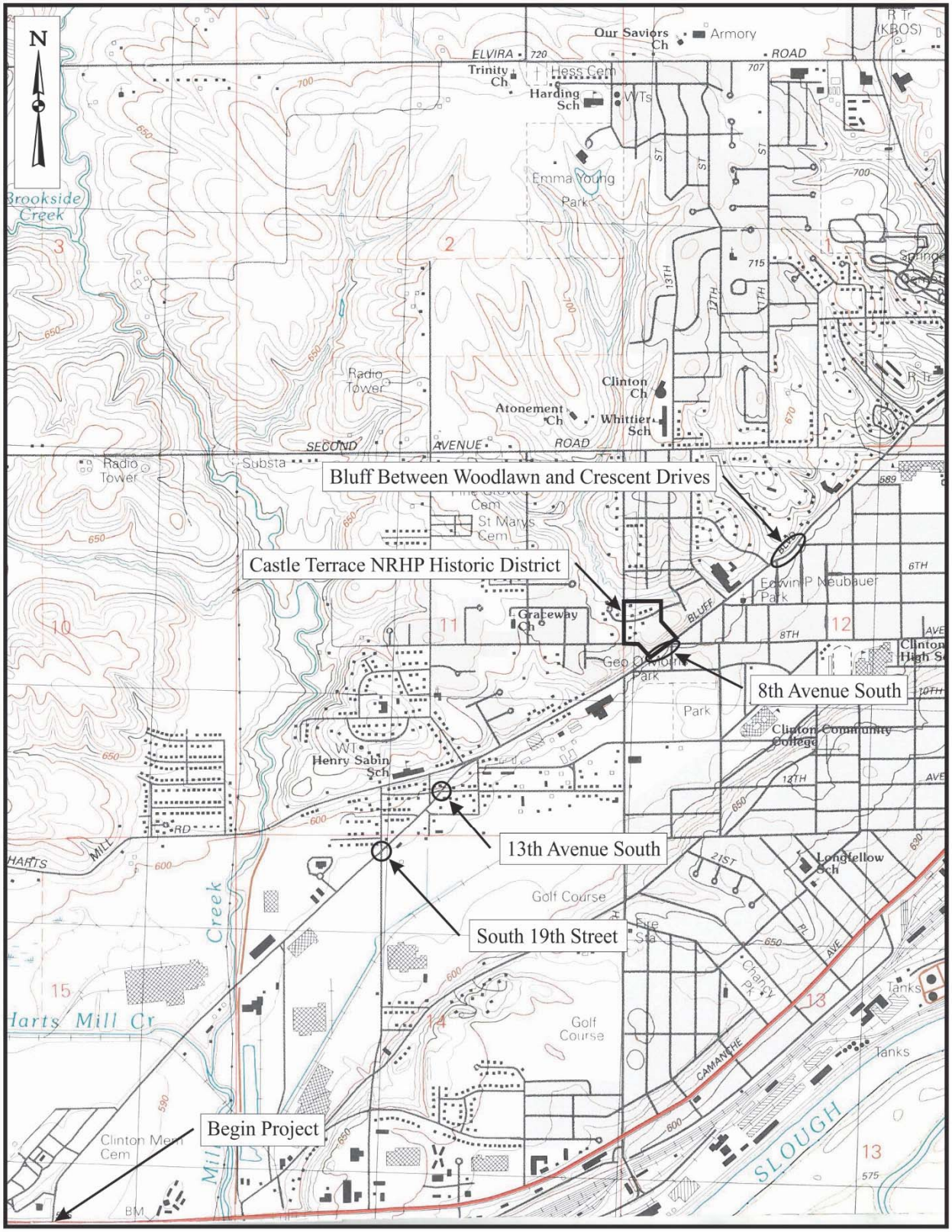

Figure 2a. Southern portion of project area in relation to surrounding topography (from USGS Clinton, Iowa-Ill., 1991, 7.5′ series quadrangle map). Scale = 1:24,000.

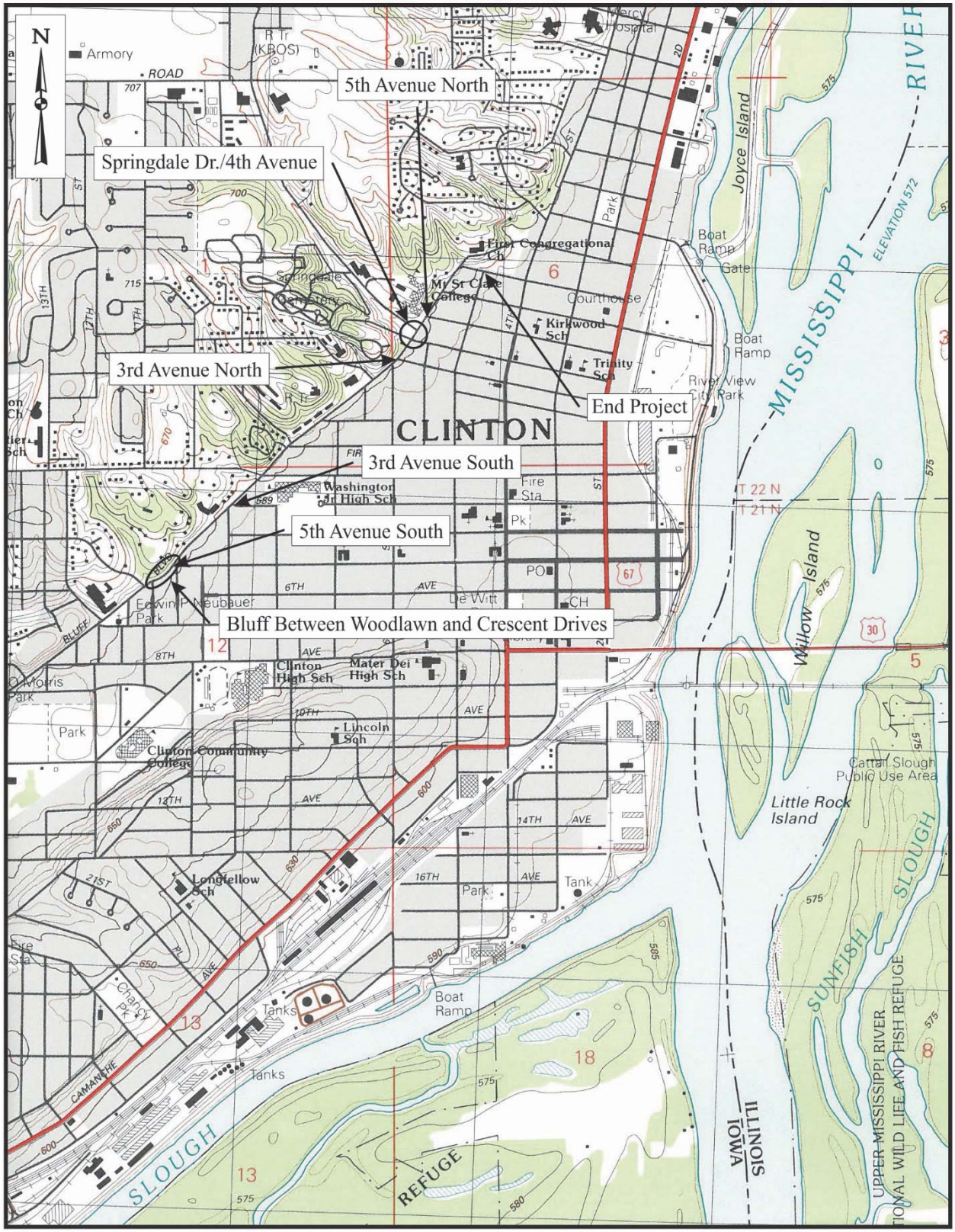

Figure 2b. Northern portion of project area in relation to surrounding topography (from USGS Clinton, Iowa-Ill., 1991, 7.5′ series quadrangle map). Scale = 1:24,000.

Database Doc Number_____

NATIONAL ARCHEOLOGICAL DATABASE – REPORTS: DATA ENTRY FORM

1. R and C #: _____
2. Author Blane H. Nansel _____ .
   Year of Publication: 2018
3. Title: US BUILD Grant, Cultural Resources Evaluation, City of Clinton, Clinton County, Local Systems

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4. Report: Title: Technical Report 774
   Volume #: _____ Report #: _____ NTIS: _____
   Publisher: Office of the State Archaeologist, The University of Iowa
   Place: Iowa City, Iowa

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5. Unpublished:
   Sent From: _____
   Sent To: _____
   Contract #: _____

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6. Federal Agency: FHWA

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7. State: Iowa
   County: Clinton
   Town: Clinton

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8. Work Type: 35

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9. Keyword:

0 – Types of Resources / Features		1 – Generic Terms / Research Questions	
2 – Taxonomic Names		3 – Artifact Types / Material Classes	
4 – Geographic Names / Locations		5 – Time Periods	
6 – Project Names / Study Unit		7 – Other Key Words	
Iowan Surface	[4]		[}
Northeast Iowa Rivers Basin	[4]		[}
No Resources	[0]		[}
	[]		[}
	[ ]		[}
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10. UTM Zone:

15	Easting:	Northing:	
15	Easting:	Northing:	
15	Easting:	Northing:	
15	Easting:	Northing:	

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11. Township: 81N 81N
    Range: 6E 7E

12. Monograph:
Name: _____
Place: _____

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13. Chapter: In: _____ First: _____ Last: _____

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14. Journal Volume: _____ Issue: _____ First: _____ Last: _____

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15. Dissertation:
Degree: Ph.D. LL.D. M.A. M.S. B.A. B.S. Institute: _____

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16. Paper: Meeting: _____
Place: _____ Date: _____

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17. Other:
Reference Line: _____
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18 Site #: _____ _____ _____ _____ _____ _____

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19 Quad Map:
Name Clinton, Iowa-Ill._____ Date: 1991_____