

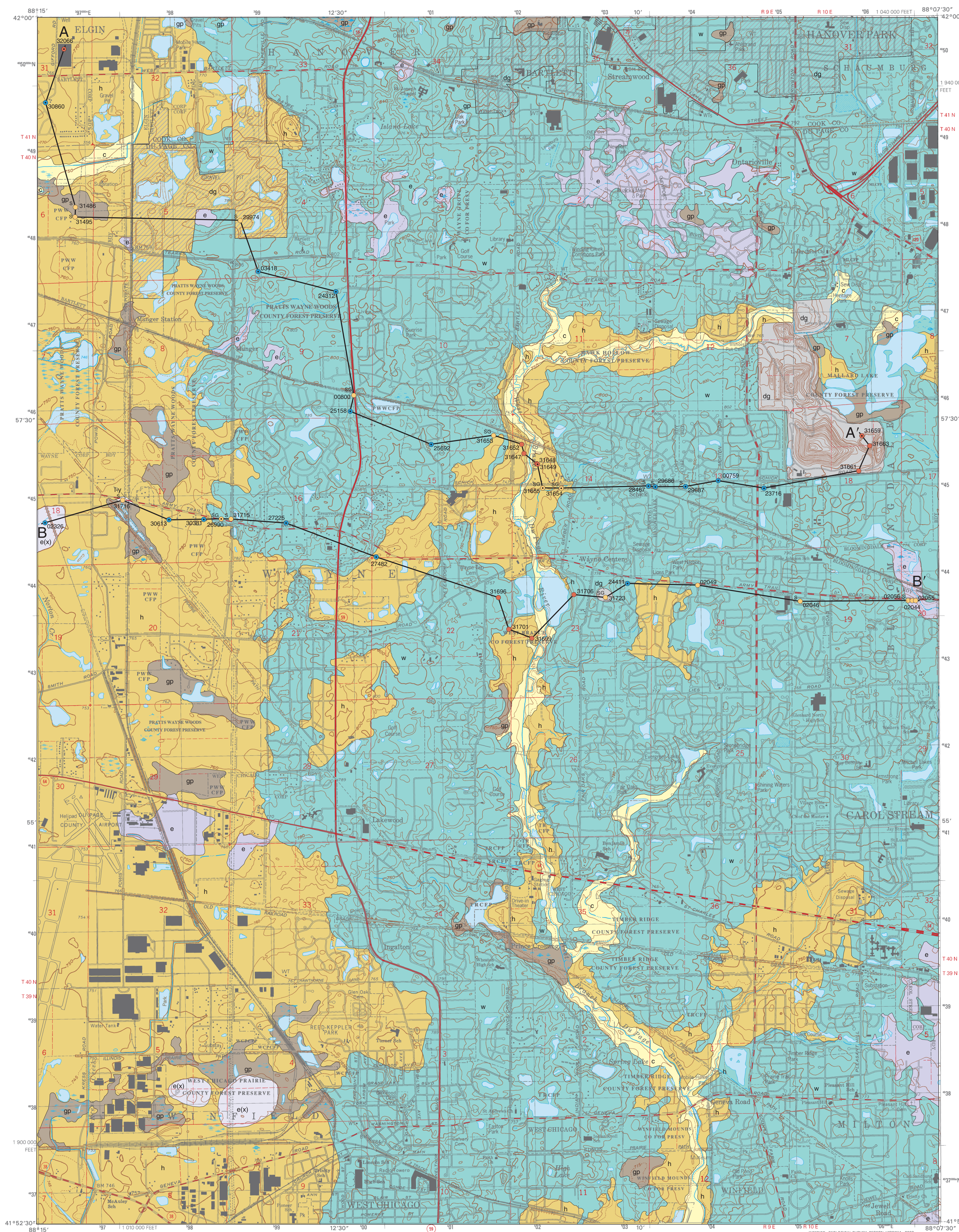
SURFICIAL GEOLOGY OF WEST CHICAGO QUADRANGLE

COOK AND DUPAGE COUNTIES, ILLINOIS

Illinois Department of Natural Resources
ILLINOIS STATE GEOLOGICAL SURVEY
William W. Shilts, Chief

STATEMAP West Chicago-SG

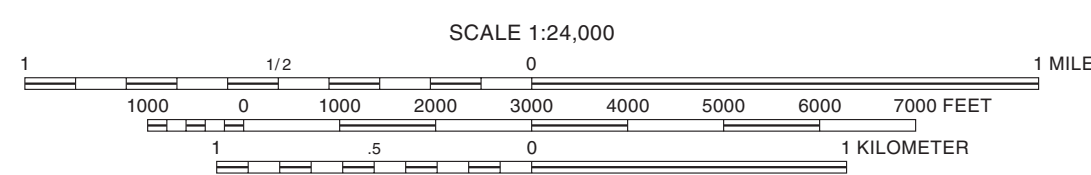
B. Brandon Curry
2007



QUATERNARY DEPOSITS		
Description	Unit	Interpretation
HUDSON EPISODE (~14,700 years before present (B.P.) to today)		
Fill (disturbed earth material); primarily material reworked from underlying deposits	Disturbed ground dg	Disturbed land; embankments and mounds (gray); pits and quarries (diagonal lines)
Peat and muck; black and brown; interbedded sand and silt; clay (gray) and marl (white to light gray); less than 15 feet thick in most places	Grayslake Peat gp	Decomposed wetland vegetation and sediment in depressions and on slopes
Sand and gravel; well-sorted sand and lenses of peat, grading laterally to organic-rich fossiliferous silt and clay; less than 10 feet thick in most places	Cahokia Formation c	Floodplain alluvium along rivers and streams
HUDSON EPISODE (~14,700 years B.P. to today) and WISCONSIN EPISODE (~29,000–14,700 years B.P.)		
Silt, clay, and fine sand; layered (laminated) to massive; gray to brown; fossiliferous in many places; no more than 15 feet thick in most places	Equality Formation e	Lake deposits in kettles and in valleys tributary to the West Branch DuPage River
WISCONSIN EPISODE (~29,000–14,700 years B.P.)		
Succession of laminated, fossiliferous silt (3 to 10 feet thick), and upper weathered sand and gravel (0 to 10 feet thick); as much as 15 feet total thickness	Equality Formation (complex) e(x)	Ice-walled lake deposits forming low level terraces; formed of sorted sediment of the Mason Group, including sand and gravel of the Henry Formation and very fine sand, silt, and clay of the Equality Formation
Sand and gravel, or sand; lenses of silt and clay or diamicton; yellowish brown to brown; as much as 65 feet thick in northwestern part of map	Henry Formation h	Channelized proglacial outwash along valley of West Branch Du Page River; proglacial outwash deposited in deltas and alluvial fans as outwash plains downslope of West Chicago Moraine
Diamicton; silty clay and silty clay loam; loam and silt loam diamicton near base; gray, oxidizing to yellowish brown with interbeds of sand and gravel increasing in thickness and relative proportion (with respect to diamicton) towards the west; generally less than 40 feet thick west of the West Branch Du Page River, and as much as 120 feet thick east of the river	Wadsworth Formation w	Till and debris flow deposits associated with the West Chicago Moraine
Diamicton; sandy loam, loam, silt loam; dolomite-rich; yellowish brown to gray; as much as 15 feet thick	Haeger Member, Lemont Formation (cross sections only) h-h	Till and debris flow deposits associated with the West Chicago Moraine
Sand and gravel below the Haeger Member and Wadsworth Formation; the coarse facies is mostly stratified sand and gravel as much as 50 feet thick; the fine facies is laminated fine sand and silt as much as 65 feet thick	Beverly Tongue, Henry Formation (cross sections only) h-b	Proglacial lake sediment and outwash deposited in lakes, deltas, and alluvial fans
Diamicton; clay, silty clay, and silty clay loam, gray, oxidizing to yellowish brown; includes layers of sand and gravel, silt, and silty clay; as much as 70 feet thick	Yorkville Member, Lemont Formation l-y	Till and debris flow deposits
Diamicton; sandy loam to loam with abundant cobbles; gray to grayish brown, with layers of sand and gravel or silt and sorted sediment; as much as 75 feet thick	Bateson Member, Lemont Formation (cross sections only) l-b	Till, debris flow, and outwash deposits
Diamicton; clay loam to loam matrix (roughly equal amounts of sand, silt, and clay) with lenses of sand and gravel, or sand; reddish brown; as much as 25 feet thick	Tiskilwa Formation (cross sections only) t	Till and debris flow deposits
WISCONSIN EPISODE (~55,000–29,000 years B.P.)		
Silt and clay; organic-rich, black to brown; leached of carbonate minerals; contains wood fragments; less than 5 feet thick; described from only a few well records	Robein Member, Roxana Silt (cross sections only) rr	Accretionary paleosol; A-horizon of Farmdale Geosol; deposits accreted in low-lying areas
ILLINOIS EPISODE (~200,000–130,000 years B.P.)		
Sand and gravel; rarely encountered in subsurface	Pearl Formation (cross sections only) pl	Outwash
PRE-QUATERNARY DEPOSITS		
Description	Unit	Interpretation (from Graese 1991)
SILURIAN SYSTEM (~440–410 million years B.P.)		
Dolomite; microcrystalline; white, light gray, and light greenish gray; cherty in places; thin beds of green shale (Kankakee and Joliet Formations) about 60 feet thick	Wilhelm, Elwood, Kankakee, and Joliet Formations (cross sections only) s	Dolomitized carbonate bank deposits

Base map compiled by Illinois State Geological Survey from digital data (Raster Feature Separates) provided by the United States Geological Survey, Topography compiled 1988. Planimetry derived from imagery taken 1998. Public Land Survey System and survey control current as of 1991. Boundaries current as of 2002.

North American Datum of 1983 (NAD 83)
Projection: Transverse Mercator
10,000-foot ticks: Illinois State Plane Coordinate system, east zone (Transverse Mercator)
1,000-meter ticks: Universal Transverse Mercator grid system, zone 16



BASE MAP CONTOUR INTERVAL 10 FEET
SUPPLEMENTARY CONTOUR INTERVAL 5 FEET
NATIONAL GEODETIC VERTICAL DATUM OF 1929

Released by the authority of the State of Illinois: 2007

Geology based on field work by B. Curry in 1988, 2005, and 2006 and by B. Curry and N. Webb in 2007.

Digital cartography by J. Carrell, N. Webb, Z. Golshani, and J. Domier, Illinois State Geological Survey.

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Data Type

- Stratigraphic boring
- Water well boring
- Engineering boring

SG 26211
Labels indicate samples (s) or geophysical log (c).
Boring labels indicate the county number.
Dot indicates boring is to bedrock.

— Contact
A—A' Line of cross section

Note: The county number is a portion of the 12-digit API number on file at the ISGS Geological Records Unit. Most well and boring records are available online from the ISGS Web site.

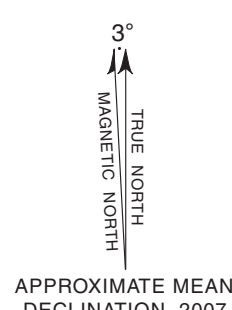


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ADJOINING QUADRANGLES
1 Elgin
2 Streamwood
3 Palatine
4 Geneva
5 Lombard
6 Aurora North
7 Naperville
8 Wheaton



ROAD CLASSIFICATION	
Primary highway, hard surface	Light-duty road, hard or improved surface
Secondary highway, hard surface	Unimproved road
U.S. Route	State Route

