NEGATIVE FINDINGS
WETLAND DELINEATION REPORT

PREPARED FOR:

Lexington Homes
1731 N. Marcey Street,
Suite 200
Chicago, Illinois 60614

STUDY AREA:

The Federal Life Companies Building
3750 Deerfield Road
Riverwoods, Lake County Illinois
Latitude 42.168484 - Longitude -87.918725

November 22, 2021

MIDWEST
ECOLOGICAL

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NEGATIVE FINDINGS WETLAND DELINEATION REPORT

EXECUTIVE SUMMARY

In response to the request of Lexington Homes Inc., Midwest Ecological, Inc. (MEI) has performed and completed a Wetland Delineation for the approximate 9.5-acre parcel. The study area is located within Section 26, Township 43 North, Range 11 East of the Third Principal Meridian within Riverwoods, Vernon Township, Lake County, Illinois. Utilizing the methods and criteria established by the U.S. Army Corps of Engineers (USACE) in their Corps of Engineers Wetlands Delineation Manual (1987), Midwest Regional Supplement (2008), United States Department of Agriculture/Natural Resource Conservation Service, in their Wetland Mapping Conventions – NRCS, Illinois (1998) a wetland investigation of the property was performed.

Based on the on-site investigation using the information obtained from the field samples Midwest Ecological, Inc. (MEI) **did not** identify a jurisdictional wetland, Waters of the United States or an Isolated Wetlands of Lake County within the study area.

PURPOSE OF VISIT

The purpose of the site visit is to determine if any Wetlands (various types), Open water pockets, Creeks or Rivers exist on-site and to determine their approximate size, location, quality and jurisdiction. Wetlands encountered were delineated using standard methods sanctioned by the United States Army Corps of Engineers in their Corps of Engineers Wetlands Delineation Manual (1987), Regional Supplement (2008) and Wetland Mapping Conventions – NRCS, Illinois (1998).

DEFINITION OF A WETLAND

The U.S. Army Corps of Engineers (USACE) and the U.S. Environmental Protections Agency (EPA) define wetlands as:

> "areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions..." (33 CFR 328.3[b], 1977).

Although not defined by regulation, "normal circumstances" are interpreted by both the USACE and the Natural Resources Conservation Service to be "the soil and hydrologic conditions that are normally present, without regard to whether the vegetation has been removed" (7 CFR 12.31[b][2][*i*]).

METHODOLOGY

Prior to visiting the site, Midwest Ecological, Inc. (MEI) performed a review of the aforementioned National Wetland Inventory map, Lake County Soil Survey map and aerial photograph in order to determine existing site conditions. Site visits were then conducted by an

Environmental Wetland Specialist from MEI on September 28 and October 26, 2021. The USACE Wetland Delineation Manual, dated January 1987, identifies the mandatory technical criteria for wetland identification. The three essential characteristics of a wetland are: 1) hydrophytic vegetation; 2) hydric soils; and 3) wetland hydrology. These characteristics are described below:

Hydrophytic Vegetation: The hydrophytic vegetation criterion is based on a separation of plants into five basic groups:

1) Obligate wetland plants (OBL) almost always occur (estimated probability >99%) in wetlands under natural conditions;
2) Facultative wetland plants (FACW) usually occur in wetlands (estimated probability 67-99%), but occasionally are found in non-wetlands;
3) Facultative plants (FAC) are equally likely to occur in wetland or non-wetlands (estimated probability 34-66%);
4) Facultative upland plants (FACU) usually occur in non-wetlands (estimated probability 67-99%), but occasionally are found in wetlands (estimated probability 1-33%); and
5) Obligate upland plants (UPL) almost always occur (estimated probability >99%) in non-wetlands under natural conditions.

Within each data point, vegetation is sampled in plots of varying size based on the type of vegetation being sampled. The following plot sizes are recommended by the 2010 Regional Supplement to the Corps of Engineers Wetland Delineation Manual for the Midwest Region:

Trees	- 30-ft radius
Saplings/Shrubs	- 15-ft radius
Herbaceous Plants	- 1 m2 plot
Woody vines	- 30-ft radius

If greater than 50% of the plants present in each stratum or layer of the plant community are FAC, FACW, or OBL the subject area is considered a wetland in terms of vegetation (Dominance Test). If the vegetation does not meet the requirements of the Dominance Test, the Prevalence Index (PI) should be utilized.

The PI evaluates the coverage, on a weighted basis of coverage over all strata, of the vegetation within the plot. The PI ranges between 1.0 and 5.0, with a 3.0 or less indicating hydrophytic vegetation is present. If the PI is greater than 3.0, the dominance test is failed, but there are still hydric soil and wetland hydrology presence, the observation of morphological adaptations by vegetation can be used to indicate that the hydrophytic vegetation criteria is met.

Morphological adaptations are changes in the structure of vegetation in response to conditions outside the normal character of the plant. These adaptations include adventitious roots, multi-stemmed trunks, shallow root systems developed at or near the surface, and buttressing in tree species. To meet this indicator, more than 50% of the individuals of FACU species must exhibit the morphological adaptations. Care must be given that the adaptations observed are due wetter conditions that the species is used to as opposed to other factors such as shallow roots present because of erosion of the surface.

Hydric Soils: Hydric soils are defined in the manual as "soils that are saturated, flooded or ponded long enough during the growing season to develop anaerobic conditions in the upper part." Hydric soil indicators are distinctive characteristics that persist in the soil during both wet and dry periods, and are used to identify hydric soils in the field. Field indicators include color, mottling, gleying, and sulfidic odor. A specific set of indicators has been developed by the USDA Natural Resource Conservation Service (Field Indicators of Hydric Soils in the United States) which provides a detailed description of how to identify the indicators in during a site visit. A soil meets the definition of a hydric soil if it exhibits at least one of these indicators.

Wetland Hydrology: Indicators of hydric soil and hydrophytic vegetation typically reflect the middle and long-term conditions of a site, but not the short-term conditions. The wetland hydrology criterion is often the most difficult to determine because of climatological variation. Typically, the presence of water for a week or more during the growing season creates anaerobic conditions indicative of wetland hydrology. Anaerobic conditions lead to the prevalence of wetland plants. The 2010 USACE Regional Supplement for the Midwest Region provides specific indicators in four different groups for wetland hydrology: Observation of Surface Water or Saturated Soils, Evidence of Recent Inundation, Evidence of Current or Recent Soil Saturation, and Evidence from Other Site Conditions or Data. If a site exhibits 1 primary indicator or 2 secondary indicators, then it meets the hydrology criteria for a wetland.

REFERENCE MATERIALS

The following materials were reviewed and utilized to assist in the field reconnaissance and completion of this report. See Appendix A for the Reference Materials noted below.

Location

The 9.5-acre study area is found at common address 3750 Deerfield Road. Geographically the site is located within Section 26, Township 43 North, Range 11 East of the Third Principal Meridian within Riverwoods, Vernon Township, Lake County, Illinois (Latitude 42.168484 - Longitude -87.918725).

National & Lake County Advanced Identification Wetland Inventory Maps

The National & Lake County Advanced Identification Wetland Maps were reviewed to determine the location of wetland areas on the subject site. It should be noted that these maps are only large-scale guides, actual wetland locations and types may vary. Ultimate qualification occurs during field reconnaissance.

Per our review of the NWI map the study area contains two open water areas identified as PUBGx.

Palustrine, Unconsolidated Bottom, Intermittently Exposed, Excavated

Per our review of the Lake County Advanced Identification Map, two wetland polygons are found within the study area. Both of these areas were reviewed and the one noted on the NW corner was not observed in the field and the one located at the SW corner is identified as the on-site stormwater management basin. An off-site wetland ditch is located to the east and an excavated pond is noted to the north. The wetland ditch was flagged and picked up by the surveyor, however the off-site pond was not flagged.

Lake County Soil Survey Map

The Soil Survey of Lake County, Illinois was investigated to determine the location of hydric soils on the subject site. Mapped hydric soils can indicate wetland areas. The following soils were found to be present on the subject site during our investigation.

325 A – Dresden silt loam, 0-2% slopes (well drained)
325 B – Dresden silt loam, 2-4% slopes (well drained)

United States Geological Survey Map

The United States Geological Survey Map & Hydrological Atlas (HA-71) as illustrated on the Wheeling Quadrangle U.S.G.S. Map and Hydrological Atlas. These maps were reviewed to determine the historical local drainage patterns. Upon review of this drainage pattern, the site drains east to the Des Plaines River.

Flood Insurance Rate Map

The Flood Insurance Rate Maps (F.I.R.M.), for Lake County, Illinois, Community Panel No. 17097C0266 K effective date September 18, 2013, were reviewed to determine the location of regulatory floodplains and floodways within the subject site. Mapped floodplains can be indicative of wetland hydrology.

Based on the F.I.R.M. Map, the study area does contain both Zone AE and X flood plain within the study area.

WETLAND FIELD DELINEATION

An on-site wetland delineation of the property was conducted on September 28 and October 26, 2021. Wetland boundaries were determined using the USACE guidelines and the United States Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS) guidelines, as stated previously. The routine method of wetland delineation was used, incorporating information on vegetation, hydrology and soils. The full width of the property was traversed and when a suspected wetland was encountered, the plant species present were determined by making several random passes through the area. If wetland plant species were found to be comprised of 50% or more of plant cover (i.e., wetland vegetation was dominant), the suspected wetland was further examined for the necessary field indicators of hydric soil and hydrology. The wetland boundaries were then defined and all observed plant species were recorded.

The plant taxonomic nomenclature and the Natural Area Index (NAI) used in this report follow's the Chicago Region FQA Index (2017). A more detailed survey would be necessary for a more complete plant list and while more species might be obtained from additional surveys, this would not change the areas delineated as wetlands.

Study Area: The Federal Life Companies building was constructed in the late 1970's. The Federal Life Building demolished a previous building and graded the remaining property. A ditch was observed on historical aerial photographs but was impacted up to the east property line. One office building, parking lot and stormwater management basin was constructed. Currently, most of the open space areas are manicured turf grass with scattered shade trees. The north property line is un-maintained woods which serves as a buffer to the neighboring residential area.

The stormwater management basin is an open water pond that is manicured turf grass within the exception of the 2:1 side-slopes. In addition to the basin accommodating the on-site stormwater needs, the basin accepts flows from the south side of Deerfield Road and conveys flow to the East. The on-site stormwater basin was constructed for the stormwater purposes when the overall project was constructed and is maintained as such. This stormwater management area should not be considered or regulated as a wetland.

Off-site Review

Off-site Ditch: A wetland ditch is found off-site to the NE. At the time of our investigation, the ditch was inundated and contained wetland vegetation. A flared-end-section from on-site (3750 Deerfield Road) was observed within the boundary of the wetland ditch. The ditch appears to be the remnant drainage conveyance that directly connects to the Des Plaines River. Minor erosion, siltation, sediment, and other debris was noted within the observed boundary. Shoreline collapse was also noted on both sides of the ditch along with visible 2:1 and 3:1 slopes. The boundary was flagged and is noted on the attached existing conditions exhibit under appendix A. The wetland ditch is 6' off the east property line.

Off-site Pond: An open water pond is found off-site to the north. The pond is part of Meadows Lake Residential Subdivision. The pond has a defined shoreline and is 12' lineal foot off of the north property line. The pond was excavated in the early 1960's.

CONCLUSIONS

The site was evaluated using U.S. Army Corps of Engineers and USDA guidelines for identifying wetlands. After evaluation of all data obtained, the study area does not contain an Waters of the United States, Jurisdictional Wetland or Isolated Wetland of Lake County. It should be noted that the off-site ditch and pond may be regulated by Lake County Stormwater Management and/or the Chicago Districts Corps of Engineers. Off-site wetland buffers may be required depending on the overall project.

LAKE COUNTY REGULATIONS

Wetland buffers are required for most Isolated Wetlands of Lake County. Wetland buffers can originate from off-site areas to the required widths. Buffer width requirements for water bodies are as follows:

1) For all water bodies or wetlands with a total surface area greater than one third (1/3) acre but less than one (1) acre, a minimum buffer width of thirty (30) feet shall be established.
2) For all water bodies or wetlands with a total surface area greater than or equal to one (1) acre but less than two and one half (2 ½) acres, a minimum buffer width of forty (40) feet shall be established.
3) For all water bodies or wetlands with a total surface area greater than or equal to two and one half (2½) acres, a minimum buffer width of fifty (50) feet shall be established.
4) Non-linear high quality aquatic resources shall have a minimum buffer width of one hundred (100) feet.

Linear buffers shall be designated along both sides of all channels meeting the definition of Wetlands of Lake County. The buffer width shall be determined as follows:

1) When the channel has a watershed greater than 20-acres but less than one square mile, the minimum buffer shall be 50 feet on each side of the channel.
2) When the channel has a watershed greater than one square mile, the minimum buffer shall be 30 feet on each side of the channel.
3) Linear high quality aquatic resources and streams with an Index of Biotic Integrity (IBI) greater than 40 shall have a minimum buffer width of 100 feet on each side of the channel. (Initial IBI based on IEPA Illinois Water Quality Report, biannual. A site-specific IBI assessment may override this report.)

Should you have any questions, please do not hesitate to contact our office.

Sincerely,

Midwest Ecological, Inc. (MEI)

Robert L. Vanni
Senior Environmental Resource Specialist

APPENDIX A

Exhibits

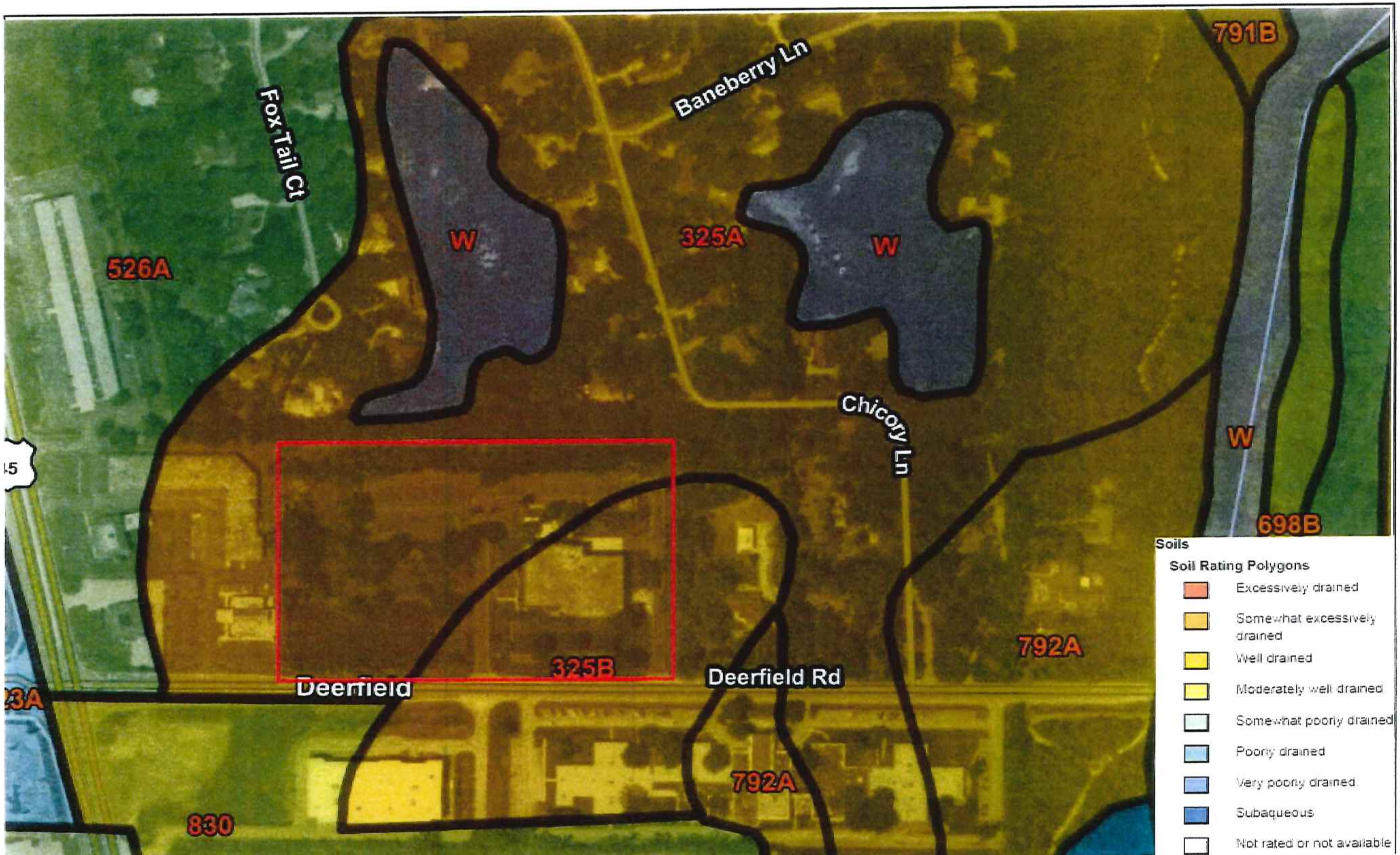
Source: Lake County Advanced Identification Map (Vernon Township)

MIDWEST ECOLOGICAL

ADID Map

Client: John Agenlian, Lexington Homes
1731 N. Marcey Street, Suite 200
Chicago, IL., 60614

N W E S



Source: Websoil Lake County Draiange Class Soil Survey Map

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Lake County Drainage Class Map

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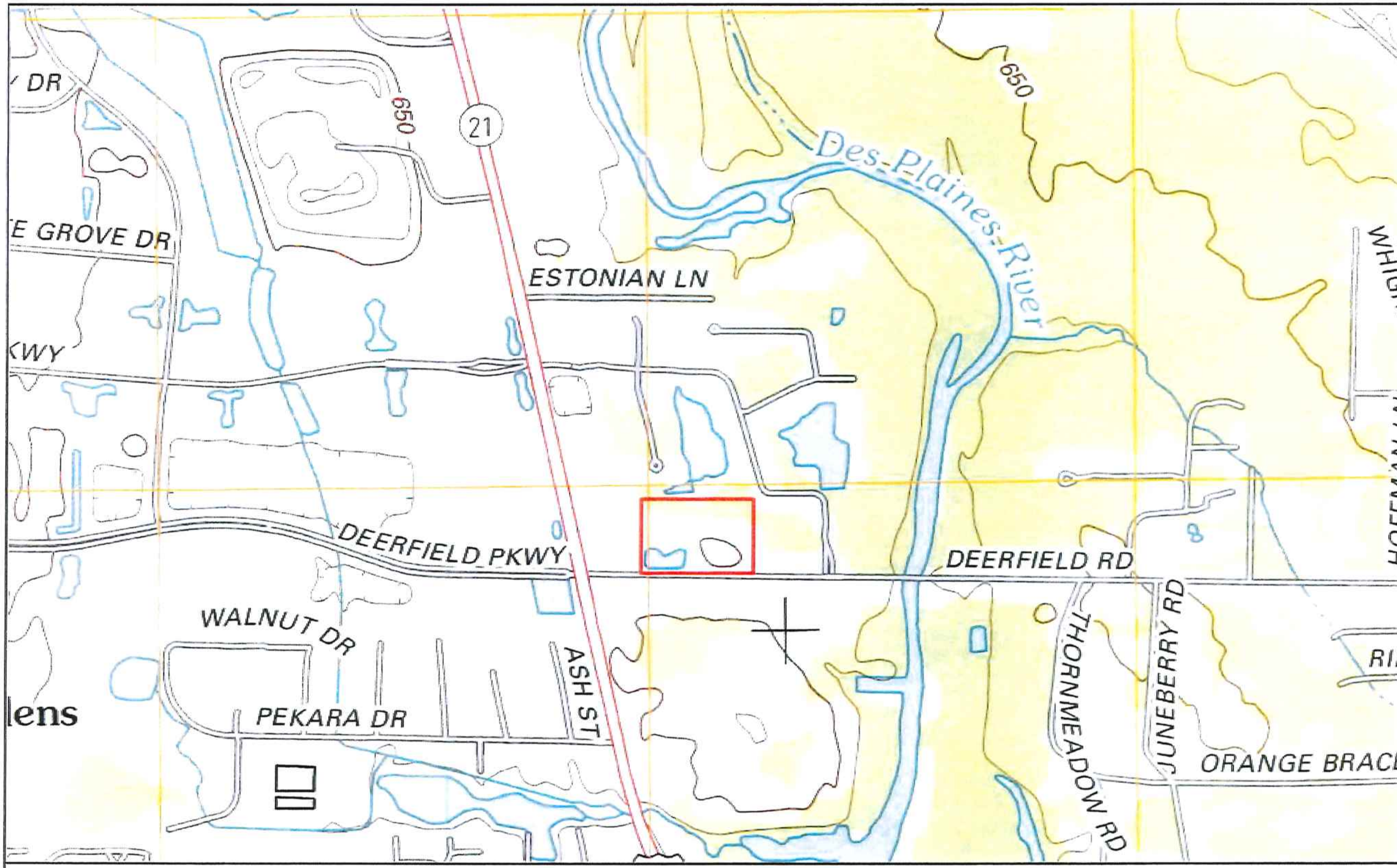
N W E S



Source: United States Geological Survey (2015)

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USGS Map

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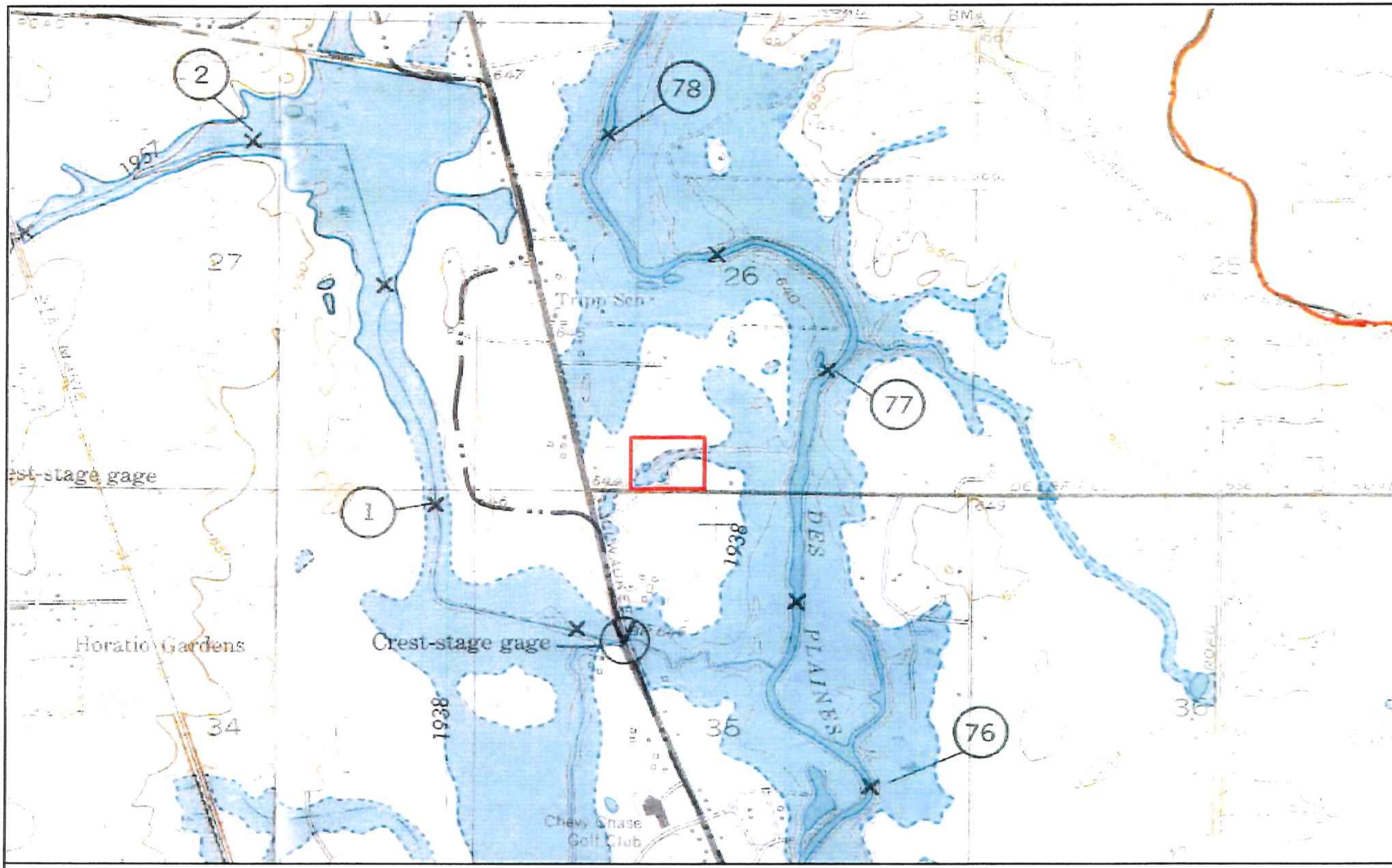
N W E S



Source: United States Geological Survey, Hydrological Atlas Map 1963 (HA-71)

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Hydrological Atlas Map

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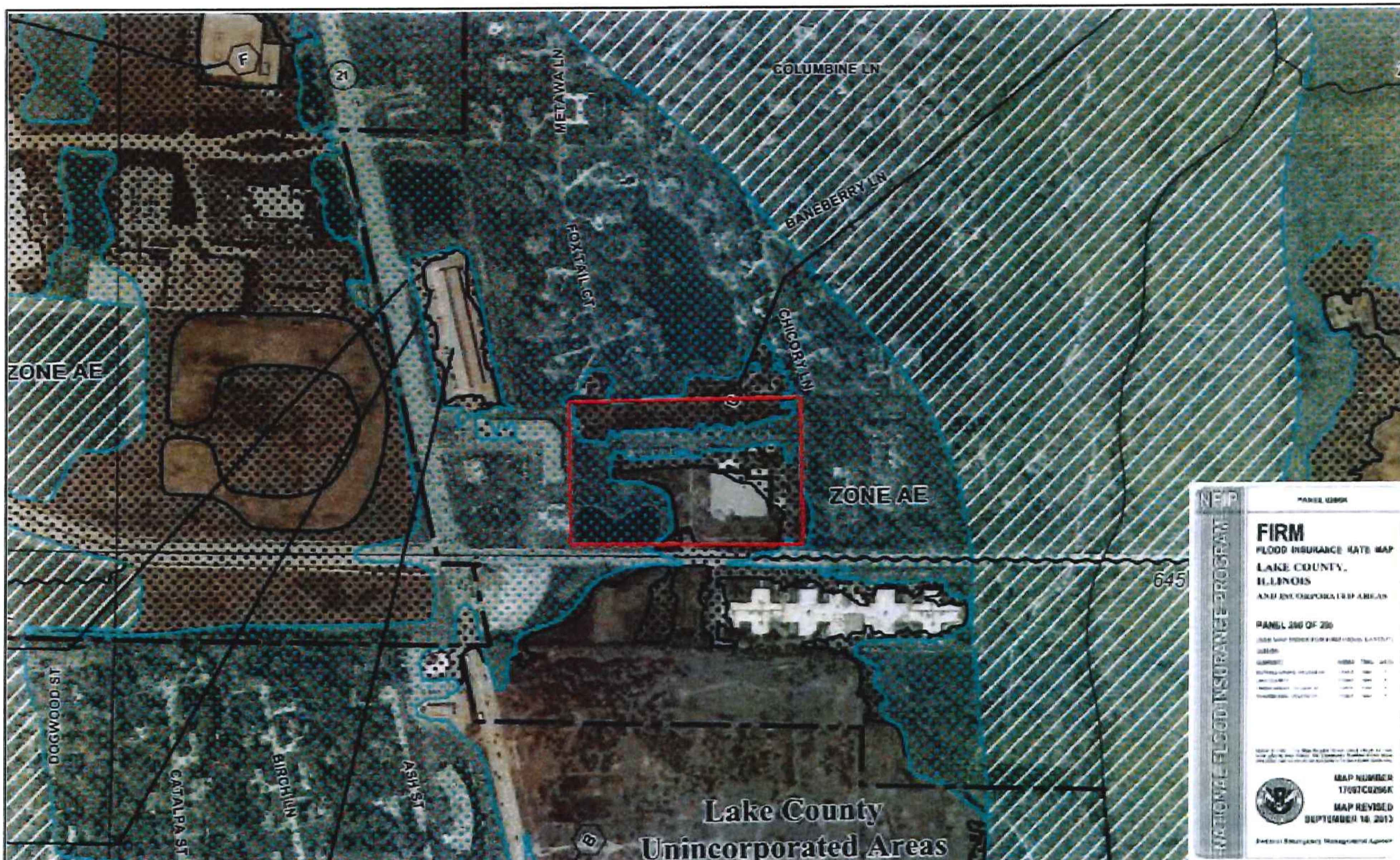

Source: Flood Insurance Rate Map

MIDWEST ECOLOGICAL

F.I.R.M.

Client: John Agenlian, Lexington Homes
1731 N. Marcey Street, Suite 200
Chicago, IL., 60614

N W E S

APPENDIX B

Photographs

The majority of the landscaping is manicured lawn.

The north property line is un-maintained woods.

A stormwater manhole structure is found on the NE corner of the site.
The structure drains to a flared-end-section to the wetland ditch to the east.

Off-site wetland ditch that is found within the rear yards of the neighboring residential homes of the Meadow Lake Subdivision to the east.

Existing stormwater management basin for the Federal Life Insurance Development.

Off-site pond found within the Meadow Lake Subdivision, located north of the study area.